ATIONAL GOLDEN SPIKE CENTENNIAL COMMISSION OFFICIAL PUBLICATION

The Last Spike is Driven

GOLDEN SPIKE

CENTENNIAL CELEBRATION COMMISSION

"What is past is prologue. . . ."

Shakespeare's words epitomize the spirit of the nation's railroads as they look to the challenges of the future while celebrating the centennial of an achievement that still stands as one of the great milestones in American history.

That event was the completion of the first transcontinental railway system with the Driving of the Golden Spike at Promontory, Utah, on May 10, 1869. It was hailed at the time as an impossible dream come true. And, indeed, it was.

Its significance was summarized by the late President John F. Kennedy when he said:

"We need not read deeply into the history of the United States to become aware of the great and vital role which the railroads have played in the opening up and developing of this great nation. As our frontier moved westward, it was the railroads that bore the great tide of America to areas of new opportunities and new hopes."

The railroad industry is justly proud of its past and its contribution to the growth, development and economic might of America. But, again, what's past is prologue.

Railroadmen see vast changes occurring in their industry. Today — a hundred years from Promontory — the Iron Horse has lost most of his passenger train glamour. But he's still the workhorse of the transportation stable, hauling almost as much freight as all the newer modes combined. New all-time freight records in 1968 are a significant keynote to the future in railroading.

Railroadmen accept this as an inevitable by-product of transportation progress. They know they can no more compete with jet aircraft for cross-country travel than the stagecoach of yesteryear could compete with the railroads.

So, while they cherish the past with re-enactment of the Golden Spike ceremonies and dedication of the track-linking site as a National Historic Shrine, they look to the future with confidence, enthusiasm and an arsenal of electronic equipment and computerized concepts of operation right in step with the Space Age.

They're familiar with predictions that our population will reach 300 million in one more generation. They know what this means in terms of production and transportation needs. They know the scope of the job ahead. And they're getting ready for it.

It's challenges like these that fire the excitement of railroadmen as they look forward to the next hundred years from the vantage point of historic Promontory.

Thomas M. Goodfellow

Chairman

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STATE OF UTAH

Executive Department

PROCLAMATION

WHEREAS, May 10, 1869, represents to every American the historic climax in a long struggle to bind together this nation with the iron rails which reached from ocean to ocean; and

WHEREAS, May 10, 1869, stands as a tribute to those men of vision who foresaw the greatness of an empire which should stretch from coast to coast, bound together not only with iron rails, but also with common interests in trade and communications; and

WHEREAS, May 10, 1869, serves as a reminder to all citizens of this nation of the singular achievement of those laborers of the past who survived the heat of the desert, the cold of the mountains, and untold problems to make possible for the first time a transcontinental railroad in America:

NOW, THEREFORE, I, Calvin L. Rampton, Governor of the State of Utah, do hereby officially proclaim the Year May 9, 1968, to May 10, 1969, as

GOLDEN SPIKE CENTENNIAL YEAR

in Utah, and urge all citizens to join with me in this observance.

IN WITNESS WHEREOF, I have hereunto set my hand and caused to be affixed the Great Seal of the State of Utah. Done at the State Capitol in Salt Lake City, Utah, this 9th day of May, 1968.

Calvin Rampton
Governor

ATTEST:
Secretary of State

The "Jupiter" engine and train carrying the Leland Stanford party past the Great Salt Lake en route to Promontory. This scene typified the coming of a new era in transportation, and the passing of an old. Photograph gift of the Southern Pacific Railroad Company.

The Transcontinental Railroad and the Development of the West

BY LEONARD J. ARRINGTON

One of the most modern of the Union Pacific trains, the "City of Los Angeles," runs between Los Angeles, California, and Chicago, Illinois. This photograph was a gift of the Union Pacific Railroad Company.

In his widely read book, *The Stages of Economic Growth*, W. W. Rostow declares that the construction and use of railroads has been historically the most powerful single initiator of economic growth. "It was decisive," he wrote, "in the United States, France, Germany, Canada, and Russia; it has played an extremely important part in the Swedish, Japanese and other cases."[1] If this was true of the nation, it was even more true of the American West. Without dependable rivers or the possibility of constructing transportation canals, the West could hardly have been settled to any degree of completeness without the railroad. By lowering the costs of transporting agricultural products and mineral ores from the western interior to the manufacturing East, the railroad furnished food for the burgeoning urban population, supplied raw materials for an expanding industry, and generated much of the capital which financed America's industrialization. By opening the West for settlement, the railroad also widened the market for eastern industry and brought a rich resource base into productivity. More than any other single agency the railroad converted a nation of diverse sections into "one nation, indivisible."

Concept of the Pacific Railroad

By the commencement of the Civil War in 1861, a substantial network of railroads had spread throughout the region east of the Mississippi.[2] During the thirty years after the pioneering "Baltimore and Ohio" was placed in operation in 1830, the nation had constructed some 31,000 miles of railroads. These reached out to Wisconsin, Iowa, Missouri, and Texas. To the west lay an enormous land mass, largely uncharted, consisting of the Great Plains, Rocky Mountains, Great Basin, and California. Some, like Horace Greeley who crossed it in 1859, thought the region so uninviting — so short of water, timber, and game — that a hundred years would be required to settle it. Others recognized that the

Dr. Arrington is professor of economics at Utah State University and president of the Western History Association. He is grateful to the Utah State University Research Council for assistance on this and other research projects.

[1] Walt W. Rostow, *The Stages of Economic Growth* (Cambridge, England, 1960), 55.

[2] In preparing this introductory essay, I have used: John F. Stover, *American Railroads* (Chicago, 1961); George Rogers Taylor and Irene D. Neu, *The American Railroad Network, 1861–1890* (Cambridge, Massachusetts, 1956); Erward C. Kirkland, *A History of American Economic Life* (New York, 1951), 339–78; Oscar O. Winther, *The Transportation Frontier: Trans-Mississippi West, 1865–1890* (New York, 1964); Alfred D. Chandler, Jr., ed., *The Railroads: The Nation's First Big Business* (New York, 1965); Robert E. Riegel, *The Story of the Western Railroads* (New York, 1926); Robert W. Fogel, *The Union Pacific Railroad: A Case in Premature Enterprise* (Baltimore, 1960); John D. Galloway, *The First Transcontinental Railroad: Central Pacific, Union Pacific* (New York, 1950); Wesley S. Griswold, *A Work of Giants: Building the First Transcontinental Railroad* (New York, 1962); Leland H. Jenks, "Railroads as an Economic Force in American Development," *Journal of Economic History*, IV (March, 1944), 1–20; and chapters in various western histories.

initial requisite was the laying of a band of steel which would tie the region militarily, politically, culturally, and economically to the expanding Republic. The prime obstacle to the realization of this goal was the division between the North and South. Powerful southern leaders argued for a road which ran across the southern portion of the nation, to connect St. Louis, Memphis, and New Orleans with Los Angeles or San Diego. Northerners and midwesterners contended for a road which began at Chicago or St. Louis and spanned the northern or central portion of the continent. The secession of the South in 1861 and the strong desire to assure a connecting link with California led to the passage of the Pacific Railroad Act.

Signed by Abraham Lincoln on July 5, 1862, the Pacific Railroad Act provided a bold two-pronged effort. The Union Pacific Railroad Company was organized to construct a railroad westward from the Missouri River port of Council Bluffs, Iowa;[3] the Central Pacific Railroad Company was authorized to construct a road east from Sacramento, which subsequently connected with San Francisco in late 1869. Each company was granted ten alternate sections of public lands (increased to twenty sections in 1864) for each mile of track laid. In addition the two corporations were to receive a thirty-year government loan, the amount of which varied with the terrain. The government agreed to lend each company $16,000 for each mile of track across the Plains, $48,000 for each mile in high mountain areas, and $32,000 for each mile in the Great Basin. Each company was authorized to issue first-mortgage bonds up to the amount of the government loan.

The Civil War, however, precluded extensive railroad construction. Labor was scarce, materials had a higher priority in other uses, and financial resources were slow in forthcoming. Of the two thousand shares of stock which the Union Pacific Railroad Company was authorized to sell, only thirty-one were subscribed during the first year of the canvass, and five of these were purchased by Brigham Young on behalf of the Mormon church. (Brigham Young was made a director of the company in 1865). With the end of the war, both companies mobilized to accomplish the gigantic task.

The Race to Complete the Road

Leader of the Union Pacific forces was Dr. Thomas C. Durant, a railroad promoter who employed General Grenville M. Dodge as chief

[3] Council Bluffs (and Omaha, Nebraska) was apparently a compromise midway point between Chicago and St. Louis, which were the principal contenders for "Rail Hub of the Nation."

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engineer. Their construction army, directed by General Jack Casement and his brother Daniel, consisted of a motley crew of ex-soldiers from both the Union and the Confederate armies, ex-convicts, youthful Irish and German immigrants, and a scattering of settlers along the route. As many as ten thousand workers came to be involved in the labor of grading, bridge-building, and laying track, with an equivalent number of horses and mules. Their pay ranged from $2.50 to $4.00 per day, and they lived on "buffler" meat, bacon, beans, hard-tack, and coffee.[4] The term "construction army" is not an exaggeration, for the chief of each unit was usually a former Union officer, and the men worked near stacks of carbines held in readiness to cope with surprise attacks by Indians who objected to this symbol of permanent trespass upon their hunting ground.

Writers made much of the "hell on wheels" construction base camps with their crude shacks for offices and supplies, and hundreds of tents for workmen augmented by those of saloonkeepers, gamblers, and prostitutes.[5] But the work accomplished belies the impression of generalized dissipation. Following the route of the Mormon Trail, the U.P. track, by the end of 1866, had been laid almost as far as North Platte, Nebraska, 300 miles west of Omaha. By the end of 1868, track had been laid through Wyoming and into Utah, as the company hurried to build as much subsidized road as possible.

Meanwhile, the Central Pacific was building eastward from Sacramento. This enterprise was the brain-child of the young railroad engineer Theodore Judah. At great personal sacrifice Judah had surveyed a route, advanced a proposal to build a road over the Sierra, and lobbied for congressional approval. He had finally induced four Sacramento merchants to support the project. They were Leland Stanford (later the governor of California), Collis P. Huntington, Mark Hopkins, and Charles Crocker. When their Central Pacific was given the "go ahead" in the Pacific Railroad Act, Judah had expected to superintend the construction. He soon became convinced that the primary motive of his partners was to maximize construction profits, even at the cost of sound engineering, so he sold his interest.

Charles Crocker, who replaced Judah as construction boss, found it difficult to employ workmen until he thought of the Chinese. Hiring them by the hundreds, often directly in Canton, Crocker had 8,000

[4] There arose the practice of hiring frontiersmen to shoot buffalo. One of these, a former U.S. Army scout named William ("Buffalo Bill") Cody, killed some 4,280 of them over an 18-month period.

[5] Robert Louis Stevenson described the camps as "roaring, impromptu cities full of gold and lust and death." Stover, *American Railroads*, 71.

Orientals in his employ by the end of 1866, and perhaps 2,000 Caucasians. The work was perhaps the most challenging in the history of American enterprise. All of the steel and rolling stock had to be shipped 15,000 miles by sea to San Francisco and by riverboat or barge to Sacramento, a task which required 10 months. More than 200 miles of the Central Pacific roadbed was above 6,500 feet. Although paid only $25.00 to $35.00 per month, the hardy Chinese drilled away week after week at the numerous tunnels through the granite cliffs of the Sierra. Under the necessity of building some 37 miles of peaked snowsheds for protection against the threatening avalanches of snow, "Crocker's Celestials" laid only 39 miles of track in 1867. More than a year was required to cut the 1,650-foot tunnel at Donner Summit. Even this task was substantially shortened by the introduction (by the Scottish scientist James Howden) of the first nitroglycerine made in America. Blasting operations used up 400 kegs of powder a day.

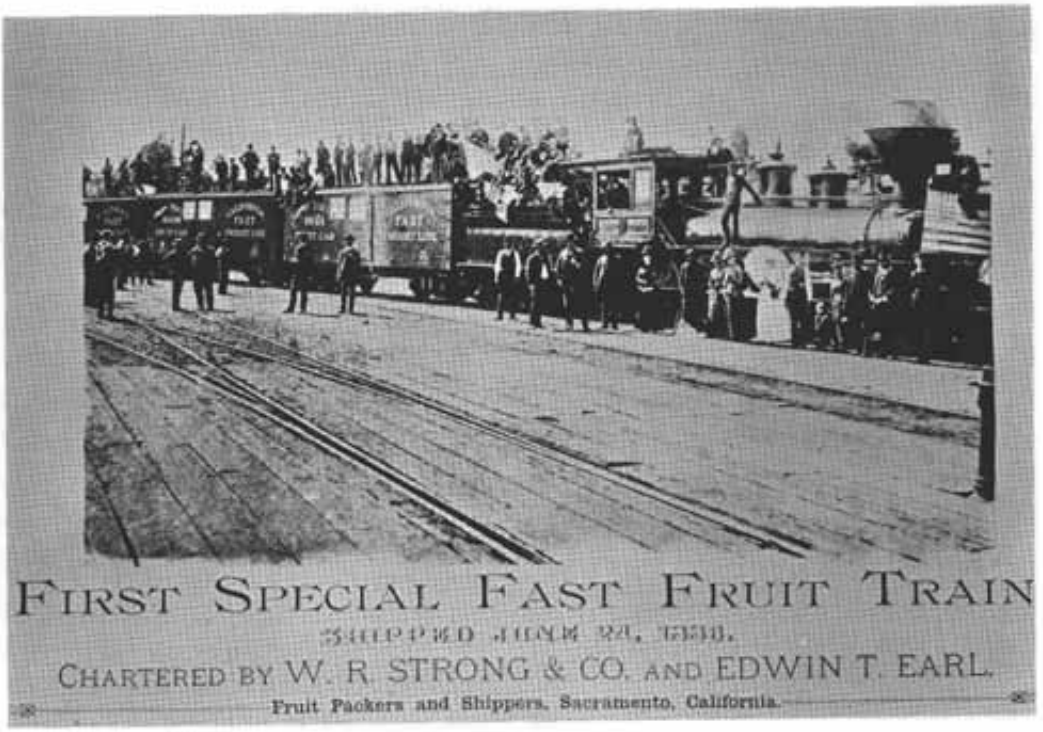
When the difficult passage over the Sierra was completed in 1868, Huntington requisitioned every available ship on the Eastern Coast to carry supplies, and Crocker's men hurriedly laid track across the sun-blistered ridges and deserts of Nevada. They had less trouble with the Indians than their Union Pacific counterparts because Huntington insisted that the Indians be permitted to ride. "We gave the old chiefs a pass each, good on the passenger cars," he recalled, "and we told our men to let the common Indians ride on the freight cars whenever they saw fit."[6]

Observing the companies building parallel grades for track, Congress named Promontory Summit as the meeting place on April 9, 1869. (Central Pacific agreed to buy forty-eight miles of track which Union Pacific had built to that point from Ogden.)

By May 10, 1869, Union Pacific had laid 1,086 miles of track and the Central Pacific 690. On that day the two companies participated in a joining of the rails ceremony which marked the completion of one of the most colossal and daring enterprises in American history — an achievement comparable only with the construction of the Erie Canal and the laying of the Atlantic cable.

In the wake of the first transcontinental railroad there followed four other transcontinentals. The Northern Pacific was constructed westward from Minneapolis across central Minnesota, southern North Dakota and Montana, western Washington, and northern Oregon to Portland. It

[6] *Ibid.*, 72–73.



The fast freight permitted the transportation of produce across the continent. The citrus fruits and vegetables of California found a ready market in the East. Photograph gift of Union Pacific Railroad Company.

was completed in 1883. In the same year the Atchison, Topeka, and Santa Fe was completed from eastern Kansas through Colorado, New Mexico, Arizona, and southern California to Los Angeles. Likewise in the same year the Southern Pacific was completed from New Orleans through southern Louisiana, Texas, New Mexico, Arizona, and California to San Francisco. Finally, the Great Northern Railway was completed in 1893, and ran from St. Paul to Seattle, across Montana, Idaho, and Washington. Any one of these five systems was a major undertaking by any standards. That all should have been built within thirty years after the Civil War demonstrates American ingenuity in solving many complex problems of engineering and finance. All told, more than seventy thousand miles of railroad were built in the trans-Mississippi West during the quarter century after the Civil War.

"Mormon" Railroads

It has been commonly supposed that the first transcontinental railroad was built primarily by the Chinese and the Irish. While this is gen-

erally correct, it overlooks the role of the pioneer settlers of Utah. The grading, most of the bridge-building, trestlework, tunneling, and the furnishing of ties for the railroad built in Utah for both the Union Pacific and Central Pacific were done essentially by Mormon crews under contracts entered into between the respective company superintendents and leading Mormons. An estimated five thousand Utahns worked under these contracts, and if newspaper reports can be relied upon, U. P. and C. P. superintendents were complimentary of the work done and the effectiveness of the bishops in maintaining such standards as no swearing, no drunkenness, and no work on Sunday. The contracts not only added to the incomes of Utah workers, but provided valuable experience which gave Mormon leaders confidence in launching a number of local cooperative railroads which would connect Utah settlements with the transcontinental line.

The first of these "Mormon" lines was constructed from Ogden to Salt Lake City — a distance of thirty-seven miles — during the summer and fall of 1869. Indeed, at the very moment that the Union Pacific and Central Pacific officers and crews were celebrating the joining of the rails at Promontory, Mormon leaders were in Salt Lake City planning the organization of the Utah Central Railroad. Labor on the Utah Central was recruited and supervised by the bishops of the various Mormon settlements along the line, to whom small contracts were let so as to distribute the work uniformly and add an element of friendly competition. In some cases the labor was performed in return for stock and/or bonds in the Utah Central; in other cases, railroad tickets were the only pay. Most of the labor appears to have been done by Latter-day Saint immigrants who adopted this way of repaying the church for furnishing their transportation to Utah. One worker stated: "Most of the pay I got from the railroad, like others with whom I worked, came in the form of merchandise. We didn't care, though, in what form it was given. We wanted a railroad and we didn't hesitate to work to that end." Another described his activity as follows:

> I drove an ox team hauling dirt for the roadbed. I made a dollar a day. This, however, was not in cold cash. I had to take my pay in transportation from Woods Cross to Salt Lake. The fare was 70 cents round trip. Thus I would work nearly all day for my railroad fare.[7]

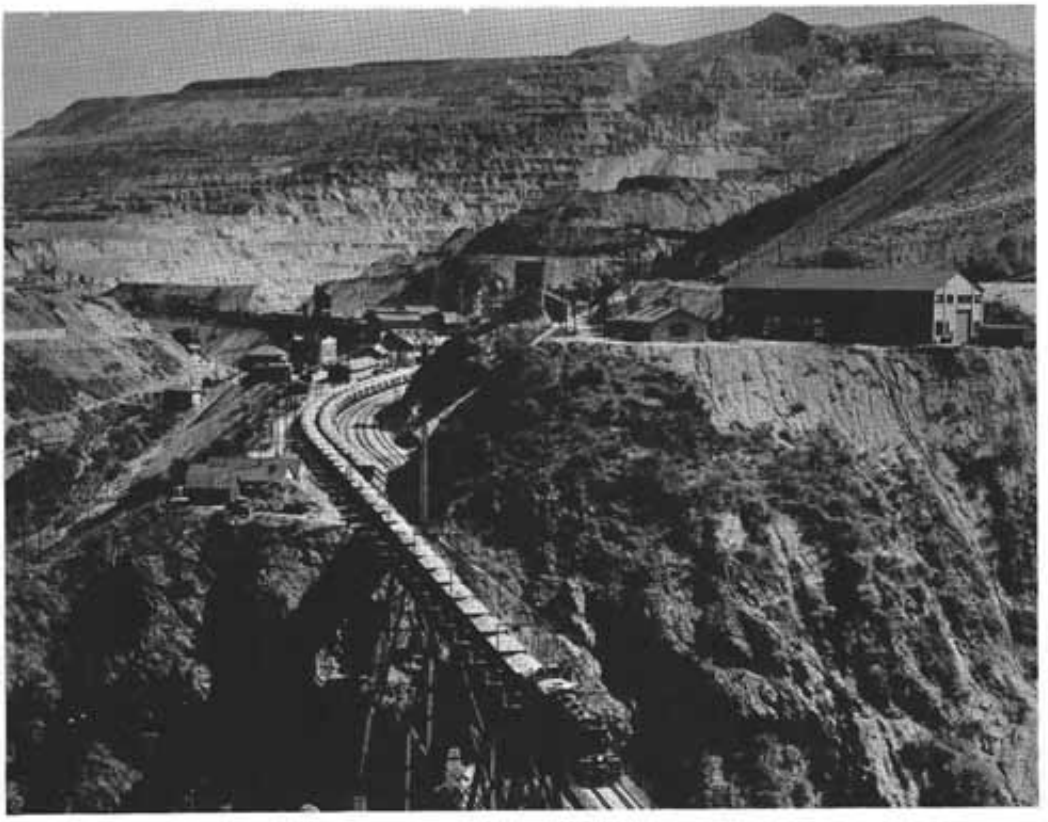
The first rails were laid at Ogden on September 22, and seventy men laid a mile of track every other day during October and November. The

[7] Kate B. Carter, ed., *Treasures of Pioneer History* (6 vols., Salt Lake City, 1952–1957), I, 26.

last spike, made of Utah iron at the church blacksmith shop on Temple Square in Salt Lake City, was driven by Brigham Young on January 10, 1870, at a celebration attended by more than fifteen thousand people. Both the spike and the mallet (also made of Utah iron at the church shop) bore the emblem of a beehive and carried the legend "Holiness to the Lord." Brigham Young's address on the occasion was typical of the pioneer leader:

> Since the day that we first trod the soil of these valleys, have we received any assistance from our neighbors? No, we have not. We have built our homes, our cities, have made our farms, have dug our canals and water ditches, have subdued this barren country, have fed the stranger, have clothed the naked, have immigrated the poor from foreign lands, have placed them in a condition to make all comfortable and have made some rich. We have fed the Indians to the amount of thousands of dollars yearly, have clothed them in part, and have sustained several Indian wars, and now we have built thirty-seven miles of railroad. . . .

The railroad permitted the development of the vast mineral resources of the West. Without railroad transportation, the low-grade ores of the Utah Copper Mine could not have been profitably exploited. Photograph gift of Kennecott Copper Corporation.



> I . . . thank the brethren who have aided to build this, our first railroad. They have acted as Elders of Israel, and what higher praise can I accord to them, for they have worked on the road, they have graded the track, they have laid the rails, they have finished the line, and they have done it cheerfully "without purse or scrip."[8]

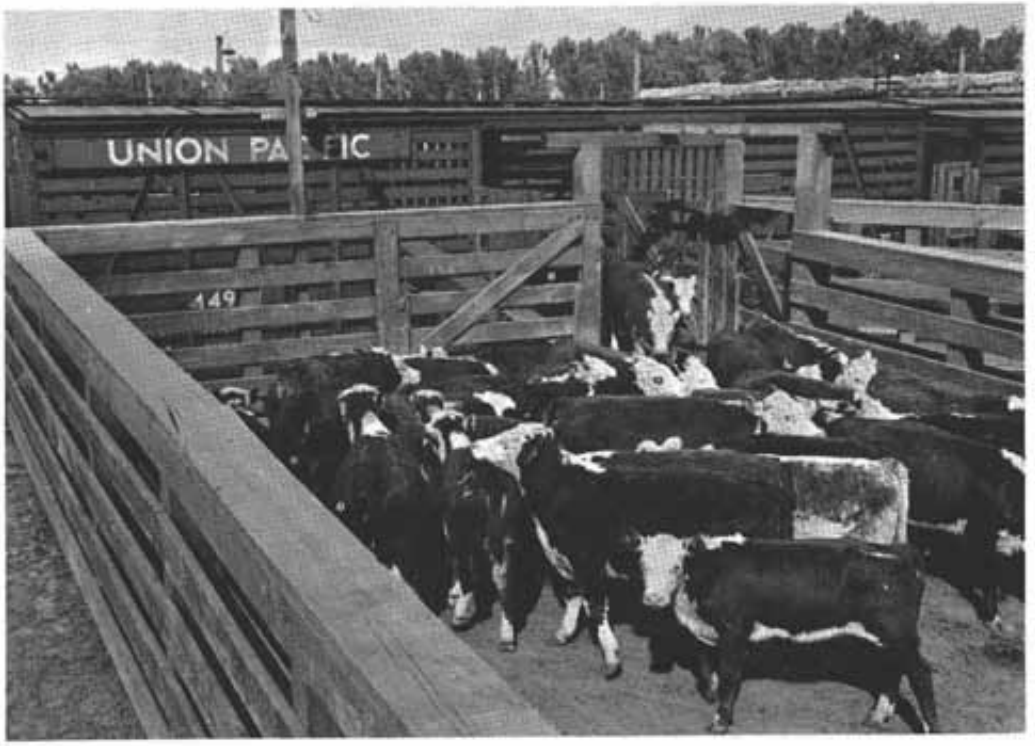
In a similar "cooperative" manner Utah's settlers built three additional branch lines in the 1870's to connect outlying settlements with the Utah Central and the transcontinental line. First to be completed was the Coalville and Echo, which tapped some of Utah's coal mines. This line was later renamed the Utah Eastern and extended to Park City where it serviced the rich silver and lead ores at that location. The Utah Southern Railroad pushed south from Salt Lake City to Sandy (a narrow gauge was then constructed eastward to the church's granite quarries in Cottonwood Canyon in order to transport the rock from which the Salt Lake Temple was built). Later it was built to Utah Valley to serve a rich agricultural region, was extended on to York, Nephi, and eventually to Milford to connect with a rich mining region. The Utah Northern Railroad was constructed from Ogden to Logan, then to Franklin, Idaho, and eventually, in the early 1880's, to Garrison, Montana, where it connected with the Northern Pacific. In each of these instances, eastern capitalists furnished the iron and rolling stock while local residents contributed labor and other supplies. By thus using in railroad construction the same kind of "cooperation" which redeemed the wilderness and built the economy of Mormon Country, Utah's pioneers were able to connect their isolated settlements and potential mining districts with production and consuming centers in the East and on the Pacific Coast.[9]

Impact of the Railroad

The transcontinental railroads and their many local "feeders" promoted the development of the West in four major ways: (1) The construction of the railroads brought income to western residents which made possible developmental investments such as the purchase of machinery, the construction of homes, and the financing of immigration; (2) the completion of the railroad network facilitated western colonization and settlement; (3) the completion of the railroad and its feeders stimulated the development of cattle grazing, mining, and other industries which required transportation services for their profitability; and (4) the exten-

[8] *Deseret News* (Salt Lake City), January 11, 1870.

[9] An annotated discussion of "Mormon Railroads" is found in Leonard J. Arrington, *Great Basin Kingdom: An Economic History of the Latter-day Saints* (Cambridge, Massachusetts, 1958), 257–92.



Until the railroad permitted transportation of beef to eastern markets, the economic potential of western grasslands remained unrealized. Photograph gift of Union Pacific Railroad Company.

sion of the railroads westward made it profitable to locate factories nearer to the sources of raw materials and encouraged the development of western manufacturing activity. The expansion of these industries in turn brought an industrial population close to western farming regions, providing large new markets close at hand for the produce of the farms.

An estimated $500 million was expended by the Union Pacific-Central Pacific during the four years the Pacific Railroad was under construction. Without being too precise one supposes that each of the other transcontinental lines and several of the "feeder" networks expended an equal amount, if not more. Much of this, of course, went in the form of contracts for iron, steel, and other products to firms in the East. But substantial sums also went into the pockets of western laborers, farmers, freighters, and businessmen. Draft animals, meat products, grain and flour, fruit and vegetables, water, timber, and ballast were among the provisions and supplies which came almost inevitably from western territories, as did much of the labor involved in grading the roadbed. Coal mines were opened to supply locomotives with fuel, and hundreds of local supply

houses were established to meet the special demands of the railroads. The construction of the roads provided the training and discipline to prepare local labor power for various kinds of industrial endeavor. The needs of the roads also led to the strengthening and development of financial institutions which could handle and manipulate large sums of capital. Once the technique of raising and handling large sums of capital was learned, the same technique was applied to manufacturing and other forms of endeavor. Businessmen learned the advantages of the corporate form of business organization, local stock exchanges arose, and new business enterprises multiplied in the wake of the railroad.

Perhaps most important of all, by outrunning the course of settlement the railroad changed the nature of pioneering:

> It was now possible to travel with comparative ease into the midst of the government domain, to secure provisions and supplies while the land was put under cultivation, and to grow specialized products for markets in the United States or in Europe. Coupled with the inducements of the government land system, the railroads settled the West with the rapidity of a prairie fire.[10]

Within twenty years after the completion of the transcontinental railroad, the population of Nebraska rose from slightly more than 100,000

The railroad provided western transportation and a means of communication heretofore unavailable. Political candidates and various campaigns were carried across the country on a vast network of rails that soon built up following the joining of the rails at Promontory. Photograph gift of the Union Pacific Railroad Company.

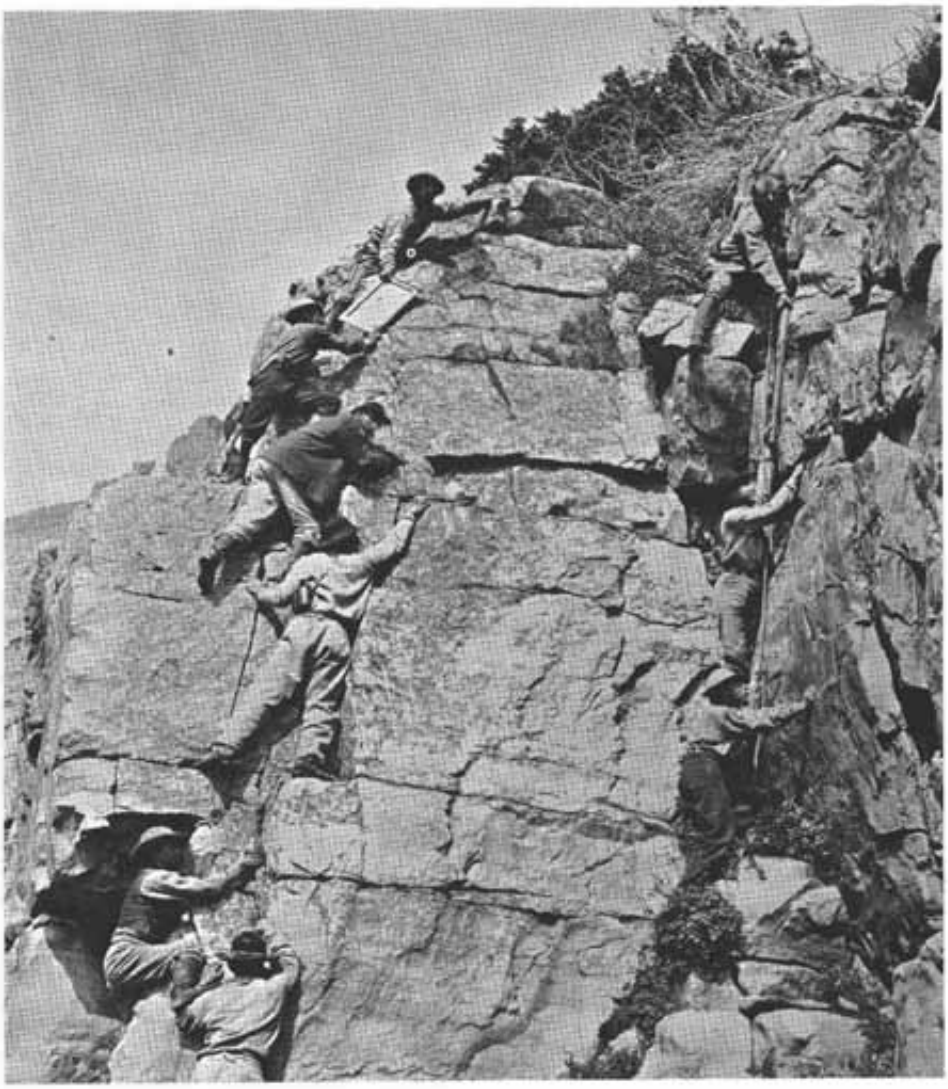
[10] Kirkland, *History of American Economic Life*, 339.

to more than a million. Similarly, the population of the Dakotas rose from less than 15,000 in 1870 to more than 500,000 in 1890. Colonization was rendered more successful as the various railroads promoted new techniques of farming, introduced new crops and varieties of livestock, and transported new types of agricultural machinery. The geography of the nation's agriculture was revolutionized; the center of crop production moved from Indiana and Illinois to Iowa, Kansas, and Nebraska. New areas were opened up for dry farming and irrigation, and westerners used the railroad to market their farm products. That the number of farms in the nation increased from two million in 1860 to six million in 1900 is largely attributable to the construction of western railroads.

Expanding rail lines also played a major role in the development of the western cattle and mining industries. Millions of Texas-bred cattle were shipped over these lines, as were millions of tons of western silver, lead, and copper. Nor has the era of railroad promotion ended. To give the example of just one company, current programs of the Union Pacific Railroad Company include the production and distribution of educational films, the granting of scholarships and funds for research, the sponsorship of educational trains, the development and maintenance of recreational resorts and national parks, and an industrial development program in which plots of ground in various western cities are acquired and improved, serviced with trackage and utilities, and leased or sold to industrial interests for the construction of factories and warehouses and for other purposes.

America's New Frontier

The railroad was a catalyst, an exciter, a pump primer which speeded up the processes of settlement and escalated the West's income from agriculture, trade, and industry. Completion of the first transcontinental line set in motion a chain reaction of developments which culminated in the advanced economies of such great western cities as Los Angeles, San Francisco, Salt Lake City, Denver, Phoenix, and Omaha. But the railroad was more. It was a medium of cultural interchange and excitement. Trains brought visitors from Boston, New York, London, Berlin, and Tokyo to observe the "New America." They were impressed and they wrote books — tons of them. While the railroad helped to build the western economy, it also helped to create the "myth" of the West — a myth which has been preserved in thousands of novels, movies, and television serials. The West of imagination and the West of reality were both products of the joining of the rails at Promontory, Utah, on May 10, 1869.



Mormon surveyors at work on the construction of the Union Pacific Railroad in the Wasatch Mountains. This photograph was taken by Charles R. Savage and is a gift of the Union Pacific Railroad Company.

Contracting for the Union Pacific

BY ROBERT G. ATHEARN

ALTHOUGH THE PREDOMINANTLY Mormon Territory of Utah was in many ways unique, it also possessed characteristics that were common to other infant western communities. One of these was a shortage of ready cash. Historically, American frontier settlements had at least a small supply of money at the time of their founding and this, combined with the boom spirit that pervaded them, gave the appearance of prosperity. Very often, when the first flush of optimism had passed, there followed a period of depression that sometimes reduced those engaged in commerce to barter, much of the cash having been drained off for the purchase of necessities.

By 1867 the Mormon settlements in Utah were approximately two decades old. They had prospered through energetic application of muscle to the land, and through trade carried on with passersby and mining camps, particularly those of Montana. By now the Montana placer boom was tapering off, its floating population having commenced to move on, and there was a general decline in the war-born prosperity that affected American business in general. The Mormons, faced by smaller agricultural exports and by the ravages of grasshoppers to their crops, were beginning to experience economic distress. Therefore, the coming of the railroad promised not only to reduce high transportation costs for their imports, and thus reduce prices, but it also offered the Mormons a chance to earn money by working on the construction crews of that project. The prospect of employment generated the most immediate excitement, for it held out the promise of an early injection of money into an economy where there was little of that commodity.

During the summer of 1867, at a time when the Union Pacific terminus had progressed no farther west than North Platte, Nebraska, there came the first hints that perhaps Mormon boys would be able to find employment with the railroad. On July 26, Brigham Young, Jr., and his family arrived at Chicago, en route to Salt Lake City from Europe, and while visiting a newspaper office he learned that a number of important Union Pacific figures were about to leave for the end of track in a car described as being "most elegantly fitted up." Sidney Dillon, whom Young identified as a man "who seemed to be one of the chief directors," invited the Youngs to share the accommodation and provided them "with one of their magnificent compartments." On the

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way to Omaha, Dillon, government director Springer Harbaugh, Senator John Sherman (brother of the famous general), and Governor Jacob Cox of Ohio "conversed freely" with the son of Utah's spiritual leader. Before long the reason behind the elaborate courtesies was revealed by Dillon, who, as Young wrote in his diary, "wants our assistance in laying out the U.P.R.R. and building the road." Later that year Young mentioned the trip in a letter to Franklin D. Richards, calling it "my good fortune to travel from Chicago to Omaha with the directors, and several other gentlemen who were largely interested in the railroad between the former city and New York." Those with whom he traveled assured him that they wished to show the son of Brigham every possible accommodation because "they were anxious to awaken a real interest in the minds of our people to push this railroad through our Territory." Upon arriving at Omaha, Young had no difficulty in borrowing $1,500 from a local bank, which ran his indebtedness there to $3,500, before he proceeded to the railhead at North Platte.[1]

No specific request for assistance was presented to the Mormon leader until May 6, 1868, at which time Thomas C. Durant telegraphed Brigham Young from Fort Sanders (near Laramie), and asked him if he would take a contract to prepare a road grade from the head of Echo Canyon toward Salt Lake. Apparently there was to be no haggling over price; Durant simply asked Young to name the figure, per cubic yard and depending upon the character of the material to be worked, for which he was willing to assume the task. "We propose to give you the preference on work near your settlements if your reply is satisfactory," said the railroad executive. Young would have some three weeks to make his decision and to get his crews organized because late snow storms had held up the movement of supplies between Omaha and Green River. No time was lost in contemplation at Salt Lake City; Durant had an affirmative answer to his telegram the same day he made his request.[2]

Within two weeks a contract was signed at Salt Lake City between Samuel B. Reed, Union Pacific superintendent of construction, and Brigham Young. It provided that the Mormons would grade the road from the head of Echo Canyon toward the Salt Lake Valley for fifty-four

[1] Brigham Young, Jr., Diary (32 vols., Church of Jesus Christ of Latter-day Saints Historian's Library, Salt Lake City), VII; B. Young, Jr., to Richards in *The Latter-day Saints' Millennial Star*, XXX (Liverpool, England, 1868), 27.

[2] Telegrams from Durant to Young, and from Young to Durant, May 6, 1868, Union Pacific Railroad Papers (L.D.S. Church Historian's Library). In writing to his wife, Jack Casement said the road had been blocked for three days and he commented: "I never saw a worse storm." Casement to his wife, in Painesville, Ohio, May 8, 1868, J. S. Casement Collection (University of Wyoming Western History Research Center, Laramie).

miles, and if it were determined that the tracks were to be laid around the north end of the lake, Young was to have the contract as far as the lake. Work was to commence within ten days, to be completed by November 1. The railroad agreed to carry men, teams, and tools from Omaha free and to provide powder, steel, shovels, picks, sledges, wheelbarrows, scrapers, crowbars, and other necessary tools at cost plus freight charges no higher than those paid by other contractors. For their work the Mormons were to be paid at the rate of 30 cents a cubic yard for excavations where earth was hauled less than 200 feet away from the cuts, and 50 cents for greater distances. Cuts made in sandstone or limerock were to earn $3.00 a yard, granite $4.00 a yard, and shale or loose rock $1.75. The cost of tunneling was set at $15.00 a yard. Masonry in bridge abutments was to bring $15.00 a yard, but if rubble masonry, laid in cement, was used the figure was reduced to $8.50. Estimates of work costs were to be made monthly with 80 per cent of the estimate to be paid on the twentieth of each month.[3]

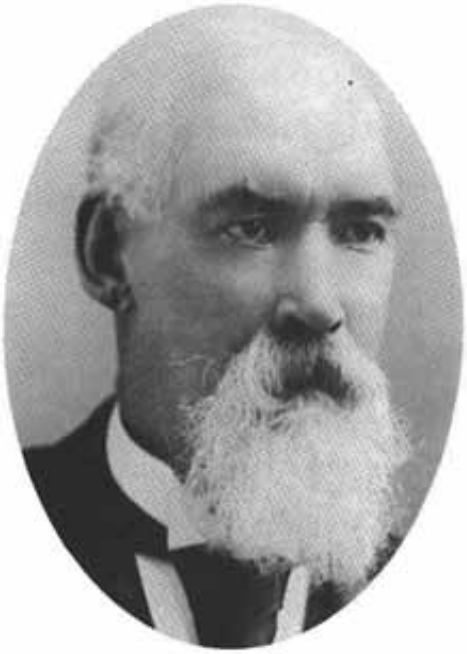
At the time of the Young contract there was a widely held impression that the Mormon leader was to undertake all the Union Pacific grading in Utah. Actually, the work east of Echo Canyon, for about fifty miles in the direction of Bridger, was awarded to J. F. Nounnan and Company, a non-Mormon organization. This section of grading was commenced in mid-July 1868. Here the work was paid for on the basis of classifications and measurements made by Union Pacific engineers, in the total amount of $276,334.95. Later, the company sued the railroad for $280,746.87, claiming that the contract was broken because of delays chargeable to the Union Pacific for the non-delivery of promised materials and for the non-payment of grading done at rates the contractors fixed as opposed to figures submitted by railroad engineers.[4]

Brigham Young was happy to have a contract for even part of the Utah portion of the road. Commenting upon the extent of indebtedness among his people and the possibility of turning a surplus of labor into money, he called the opportunity a God-send.[5] The *Deseret News* publicized the development and took care to point out that the leader himself

[3] Contract between Brigham Young and Samuel B. Reed, May 21, 1868, Union Pacific Railroad Papers.

[4] *Cheyenne Leader*, June 16, 1868; A. J. Poppleton to Oliver Ames, August 18, 1869, Miscellaneous Letters to Oliver Ames, August–October, 1869 (Union Pacific Archives, Omaha). *The Illustrated London News*, LIII (August 29, 1868), 190, for example, reported that Brigham Young had taken the contract for "the Utah portion of the Pacific Railroad."

[5] Young to Franklin D. Richards, May 23, 1868, *Millennial Star*, XXX (1868), 428.



John Sharp
(1820–1891)

Brigham Young
(1801–1877)

Mormons held contracts for construction on both railroads. These men were two of the principal contractors for the Union Pacific.

did not intend to employ any workers, but that this would be done by various responsible Mormons who were now urged to come forward and take sub-contracts. Not only would employment help to reduce indebtedness, said the newspaper, but it also would provide "the necessary funds to send for machinery and establish mercantile houses in the various settlements." Prospective employees were warned not to expect 1864 or 1865 wages, but to be grateful for a good daily wage at a time when money was so scarce in Utah. "If we do not exert ourselves with perseverance and energy to take advantage of the opportunities presented to us, we shall have proved ourselves unworthy of our blessings," concluded the local editor, in a sermon-like admonition.[6] According to Jack Casement, of the brother team that became so famous in Union Pacific construction, some four thousand Mormons responded to the initial call.[7] Others would follow during the summer.[8] Apparently the Union Pacific also was satisfied with the arrangement for Durant wrote to Reed direct-

[6] *Deseret Evening News* (Salt Lake City), May 21, 1868.

[7] Casement to his wife, May 8, 1868, J. S. Casement Collection.

[8] George Pine, *Beyond the West* . . . (Utica, New York, 1871), 345, wrote that over one thousand Mormons had worked off part or all of the money they owed the church for passage money already advanced by their railroad employment.

Grenville M. Dodge
(1831–1916)

Thomas C. Durant
(1820–1885)

These two men were the guiding force in the construction of the Union Pacific, with Dodge as chief engineer in the field and Durant the principal promoter of the Union Pacific.

ing him to hire five hundred additional teams from Brigham Young, as of July 15.[9]

The *News* reflected the church's further satisfaction over such an arrangement when it stressed the fact that Mormon boys now would not have to range very far from home to find work.[10] On the other side of the coin was an equally attractive picture. As one of the local churchmen explained it, the contract would "obviate the necessity of some few thousand strangers being brought here, to mix and interfere with the settlers, of that class of men who take pleasure in making disturbance wherever they go."[11]

While Brigham Young was happy for the opportunity to put surplus labor to work, he thought that Union Pacific needs might require more men than could be spared from Utah fields. Accordingly, he wrote to Franklin D. Richards, president of the European Mission at Liverpool,

[9] Durant to Reed, June 8, 1868, and Reed to Durant, June 9, 1868, Union Pacific Railroad Papers.

[10] *Deseret Evening News*, May 21, 1868.

[11] Samuel W. Richards to his brother Franklin D. Richards, May 24, 1868, *Millennial Star*, XXX (1868), 410.

requesting that the annual migration be dispatched early enough so that the emigrants arrived at the rail terminus no later than the middle of July. Anxious that no able-bodied man remain idle for a moment, Young remarked that if the wagon trains sent forth to get the immigrants should reach the terminus first, their members could work for the railroad until their passengers arrived; likewise, if the immigrants arrived first, they were to hire on as construction workers until the wagon trains came up. Under an arrangement made with the Union Pacific, all Mormon immigrants able to work would be passed free from Omaha to the terminus. This, said Young, meant that a larger migration than normal could be sent forth because the mission money would go further. The contract, beneficial to both parties, was used by the Mormons to benefit themselves in a number of ways.[12]

By early June Salt Lake City newspapers carried notices calling for anyone who wanted employment to report to Joseph A. Young, Brigham Young, Jr., or to John W. Young (all sons of Brigham), who were now ready to let sub-contracts. It was rumored that as many as ten thousand men might be wanted. Samuel B. Reed told Durant that Brigham Young was sending five hundred teams out to meet the annual immigration and after they had completed this assignment, probably before August 1, the animals could be added to the force at work near Echo.[13] For the time being there was no need for a large force of workers. By mid-June Bishop John Sharp had a crew of eighty men at work in Weber Canyon, but already he had been obliged to refuse employment to others because the defile in which the men were working was too narrow to accommodate any more. Once that point was passed, the bishop said that he could use as many as five hundred men. Meantime, Joseph Young forwarded lumber for temporary shacks to house the additional crews.[14]

While a number of prominent Mormons took grading contracts in varying amounts, four men stood out as important participants in the work. They were three of Brigham's sons — Joseph A., John W., and Brigham, Jr. — and Bishop John Sharp. The latter, who was close to the spiritual leader, would remain an important Utah railroad figure for

[12] Young to Richards, May 23, 1868, *ibid.*, 428. Mormon dependents were given a special rate because of the grading contract. Durant told Webster Snyder, superintendent at Omaha, to transport passengers on Young's order at the same rate charged contractors, allowing one hundred pounds of baggage to each and collecting half of this fare from children between the ages of five and thirteen. Durant to Snyder, June 8, 1868, Tuttle Correspondence, 1867–1869 (Union Pacific Archives).

[13] Reed to Durant, June 9, 1868, Union Pacific Railroad Papers.

[14] *Deseret Evening News*, June 16, 1868.

two decades. Joseph A. Young associated himself with Sharp in a firm known as Sharp & Young, in which the pair undertook large grading contracts and the boring of several tunnels. The younger Brigham, according to his father, was assigned the role of superintending and coordinating all the sub-contracts "as my representative." Before the end of 1868, the firm of Sharp & Young alone had 1,400 men at work in Echo Canyon. By then, said the elder Young, the workmen were working together well and accomplishing much more than at first. As he said, "they have got used to the labor."[15]

Meanwhile as the work got under way that spring, Mormon leaders at Salt Lake City began to publicize the part their people were to play in the great national project. Early in June a mass meeting was held in the new tabernacle at which Brigham Young made the principal address. He told his people that he had always wanted the railroad and that he would help to build it, provided he was well paid. Despite the fact that Young had said this many times before, there seemed to be doubts among his followers that he really meant it. Upon hearing his comments, one of his followers wrote: "We felt much better after he did that; we feared he might not be willing and we'd never have a road." Even at this late date Young professed to believe that the line would be built around the south end of the lake, thus serving the Mormon capital, for in his speech he spoke of the coming of rail service to Salt Lake City. A Wyoming newspaper criticized him for it, saying that a more northerly route was sixty or seventy miles shorter, but it admitted that Brigham Young probably would have his way because "There is more political strength and influence united in him than in any other one person in America."[16]

His enemies overestimated the Mormon leader's influence. General Grenville M. Dodge, chief engineer of the Union Pacific, later wrote that Young exerted great pressure to have the road built through Salt Lake City, but that in his judgment, and that of other engineers, the northerly route was superior. According to Dodge, Brigham Young then tried to get the Central Pacific to use the south end of the lake as its approach, thus forcing the Union Pacific to alter its decision, but here again he failed. "He even went so far as to deliver in the Tabernacle a great sermon denouncing me, and stating a road could not be built or run without the aid of the Mormons," wrote the general. The decision having

[15] B. Young to Heber Young, October 22, 1868, Letterbooks of Brigham Young (L.D.S. Church Historian's Library); *Deseret Evening News*, December 15, 1868.

[16] *Cheyenne Leader*, June 17, 18, 1868.

been made, Young accepted it, and he "returned to his first love, the Union Pacific."[17]

The association between the Mormons and the Union Pacific generated a jealousy in other sections of the country that was to continue for some time to come. A correspondent from the *Cincinnati Commercial* charged that while Young had taken the contract for 30 cents a yard, he paid his sub-contractors only 27 cents, "and the Prophet pockets the odd million."[18] In neighboring Wyoming the feeling was so strong that a Cheyenne paper openly called the contract outright slavery. Each Mormon ward, said that journal, was called upon to furnish manpower in accordance with its population and the draftees were obliged to work at prices set by the leader. Workers were said to be given store orders in lieu of cash, these being good at either the tithing stores or with Salt Lake City merchants with whom Young had made previous arrangements. "To make the settlement final, and completely Mormon," said the editor in deep scorn, "ten per cent of the entire earnings of the laborer is deducted for tithing to 'the church' which is another name for Brigham Young." The Wyoming newspaper's real complaint was suggested in its charge that the Union Pacific was pampering the Mormons, and that it was "the settled policy of the railroad company to give large contracts to Brigham," despite the fact that Gentiles allegedly had offered to work for less.[19] Outsiders, jealous of such apparent favoritism, contented themselves by saying that the Mormons were, in effect, digging their own graves, for ultimately the Union Pacific would serve as an instrument that would one day extinguish Brigham Young and Mormonism itself.[20]

The Mormon leader may have returned to his first love, as General Dodge expressed it, but before his part of the work was completed he had experienced some disenchantment with that company. After three months of effort, during the summer of 1868, many of the men had not

[17] Major-General Grenville M. Dodge, *How We Built the Union Pacific Railway and Other Railway Papers and Addresses* (Denver, 1965), 34. In an address delivered in the tabernacle on August 16, 1868, Young said the road might or might not come through Salt Lake City, but either way "it is all right because God rules and He will have things as He pleases. We can act, but He will over-rule." *Deseret Evening News*, September 11, 1868.

[18] Quoted in *Deseret Evening News*, September 15, 1868.

[19] *Cheyenne Leader*, June 15, 1868. Mormon records substantiate the charge of paying in kind. A merchant of Gunnison, Utah, wrote: "I deem it proper to acquaint you with the fact that people leaving work on the railroad grading at John Reidhead's contract are complaining of not getting their month paiment [*sic*] in cash, according to agreement, but goods is offered, in pretended absence of money. This seems not to be agreeable to the progress of the work on President Young's contract and if there is any improper speculation in it, on the part of John Reidhead I, as his partner in trade . . . , have no part therein." Christian A. Madsen to Bishop A. M. Musser, from Salt Lake City, October 11, 1868, Union Pacific Railroad Papers.

[20] *Omaha Herald*, quoted in "Journal History" (L.D.S. Church Historian's Library), October 25, 1868.

been paid, although Young himself advanced sizable sums of money to keep them at their work. "The men are exceedingly anxious to get their pay for day work performed last June and since," he wrote to Reed in September.[21] Part of the money was forthcoming, but not enough to cover Young's advances. By early October the Union Pacific had paid him $243,478.76, all of which was turned over to the sub-contractors; however the church leader still had $46,860 of his own money invested in wages to the men.

Some of the workers did go home in disgust, partly because of time lost in waiting for necessary supplies and partly because the monthly estimates were thought to be about a third to a half of the value of work performed. To hold the rest sub-contractors had borrowed money at two per cent a month to meet their payrolls.[22] The dissatisfaction, said a Cheyenne paper sneeringly, arose from the fact that some of the workers were "weak in the faith," or were, perhaps, of "Gentile independence," but in the main they tended to stay at their posts because "Brother Brigham holds the whip as well as the reins, and whither he would drive they go, although it may be in unwilling silence."[23] The Mormon press admitted that there was some unrest by publishing a rumor that some of Bishop Sharp's men had struck for higher wages. Sharp promptly denied it, and the local editor swore that "the brethren have the best of feelings, and work with good spirits and with a desire to do all that is asked of them."[24]

Despite various hindrances, the Mormon crews continued to work for the Union Pacific. Although some of the problems were solved, that of finance continued to plague the railroad and, in turn, the various contractors working for it. By January 1869, Brigham Young was pressing the railroad for back payments. In asking about the amount due for November, Young's chief clerk, T. W. Ellerbeck, admitted: "We are pretty well cornered and hope that you will be able to do something for us without delay, as the men are not to be appeased without money."[25] When Durant responded by placing $100,000 to Young's credit in New York, the Mormon leader said that he had already drawn checks for

[21] Young to Reed, September 22, 1868, Letterbooks of Brigham Young.

[22] Unsigned letter, October 8, 1868, *ibid.* The letter appears to be in the handwriting of T. W. Ellerbeck, chief clerk in Young's office. The church library contains thirteen volumes of receipt books showing disbursements to sub-contractors and of monthly estimates for work to be done.

[23] *Cheyenne Leader*, June 15, 1868.

[24] *Deseret Evening News*, June 16, 1868.

[25] Ellerbeck to C. L. Frost, assistant cashier at Echo, January 4, 1869, Letterbooks of Brigham Young.

nearly that amount, hence the deposit granted only a temporary relief. Young estimated the work done in November to be worth $376,690.89, and while he had received $281,677.21 from other Union Pacific payments, he still owed $97,013.68 for November and $33,592.12 for October, or more than $130,000 in all. "I have expended all my available funds in forwarding the work," wrote the worried contractor, "and if I had the means to continue would not now ask for any assistance. These explanations must be my apology for troubling you in the matter."[26] A further complication was indicated in a request he made that the estimates be paid in currency. This commodity was in such short supply that Utah banks were paying a one per cent premium for it, "making it almost impossible for me to procure the amounts necessary to pay the men."[27] The difficulty persisted, giving Young "a good deal of extra trouble," as his clerk expressed it. By February there still remained an unpaid balance of $30,000 for November, not to mention the amounts due for January and the current month.[28]

As the Union Pacific construction phase neared completion, the financial situation became critical. Brigham Young was extremely concerned. In January he had praised Durant, saying that the nation was deeply indebted to the doctor for his "energy & go-ahead-itiveness," but by April he was writing to the same individual saying that the time had come for final settlement of the grading debt. Complaining that some of the contracts adjacent to his had brought sums up to forty per cent higher for the same work, the church leader said that he had done his best, under the circumstances, and now he wanted his money. No remittances had been forthcoming for the months of January and February and, "as the men are very clamorous for their pay, . . . I am exceedingly anxious to settle up the business."[29] While Young strove for a settlement, he counseled patience to his people. Some of the Mormon workers, desperately in need of money, were exchanging their due bills for merchandise at discounts up to fifty per cent. On one occasion Young wrote to two of them, advising that they hold their paper, for it would be worth more when the railroad remitted the rest of the amounts due.[30] Meanwhile, railroad officials made every effort to find the money necessary to pay off outstanding obligations. "The U.P. seems rather disposed to

[26] Young to Durant, January 16, 1869, *ibid.*
[27] Young to W. P. Kennedy, cashier at Echo, January 27, 1869, *ibid.*
[28] T. W. Ellerbeck to W. P. Kennedy, February 10, 1869, *ibid.*
[29] Young to Durant, April 2, 1869, *ibid.*
[30] Young to Jens L. Jensen and Nels Hansen, April 8, 1869, *ibid.*

Most of the grading between the Utah-Wyoming border and Promontory was done by Mormon contractors. Deep cuts, tunnels, and bridges were built. These two scenes show such construction. The photograph on the left is from the Widtsoe Collection of the Utah State Historical Society, and the one on the right was furnished by the Union Pacific Railroad Company.

retrenchment," remarked the *Deseret News* in a story that told of recent reductions in wages paid to some of its workers. "Their pertinacity in clinging to funds is not a very sweet *morceau* to squads of contractors, some of the enterprising mercantile gents of Echo being rather crusty over it," concluded the newspaper.[31]

During the final weeks of construction, the great speed with which the work was driven forward, combined with a deepening concern over financial matters, began to wear on the nerves of those involved. Early in March Jack Casement told his wife that his tracklaying crews had just reached the Salt Lake Valley proper, having passed through some "very wild looking country" during the approach. The earlier excitement of construction was fading away and Casement looked forward to the day his work was finished. "I wish we were done now," he said. "I am homesick. . . . I have not been to Salt Lake City and don't know as I will. I have no desire to toady Brigham."[32] Casement's annoyance derived from the Mormon's suggestion that he lay track even faster. "I sent him word [that] all he would have to do would be to come where we were at work and open His Eye," growled the Ohio contractor. Brig-

[31] Correspondent to the *Deseret Evening News*, quoted in "Journal History," May 5, 1869.
[32] Casement to his wife, March 3, 1869, J. S. Casement Collection.

ham accepted the invitation, but Casement ignored him. "I think so little of him and his pretensions that I did not stay to receive him," he admitted to his wife.[33]

Ogden was reached just before noon on March 8, when the track layers "hove in sight of this city," as a newspaperman recorded the event. By 2:30 P.M. an engine steamed into town, its moaning whistle answered by the blare of a brass band and the cheers of onlookers. Later in the afternoon Mayor Lorin Farr and Elder Franklin D. Richards made speeches of welcome from a hastily erected platform, after which the band played the "Star Spangled Banner," signifying the triumphant completion of rail service to one of Utah's important business communities.

The tracklayers moved beyond Ogden with high hopes of completing their work soon, but they were still uncertain as to their goal. "Durant has not made his appearance here as yet, there is no meeting point fixed yet," wrote Casement in mid-March. The "California people," as he referred to the Central Pacific crews, were grading miles to the east of him by then, and as he viewed the parallel lines across the countryside he commented: "I am afraid we will have trouble in agreeing upon a meeting point." Gloomily he concluded that "There is neither pleasure, glory nor much proffit [*sic*] left in the concern."[34] Congress was aware of the problem and by a joint resolution of April 10, 1869, the meeting point was fixed at Promontory Summit.[35] By the end of April Union Pacific crews were hard at work, completing the last fifteen miles of grading and tracklaying to the site where, within a few days, the official junction was to take place.[36]

On May 10, 1869, the completion of the Pacific Railroad — Union Pacific and Central Pacific elements — was celebrated at Promontory as engines of the two companies stood "facing on the single track, half a world behind each back," to borrow a line from Bret Harte's description

[33] Casement to his wife, March 12, 1869, *ibid.*

[34] Casement to his wife, March 12 and 16, 1869, *ibid.*

[35] Nelson Trottman, *History of the Union Pacific: A Financial and Economic Survey* (New York, 1923), 64. By an agreement dated April 9, 1869, the Union Pacific and the Central Pacific assented to a meeting place at "some point within eight miles west of Ogden to be hereafter mutually agreed on by said companies." The companies were to share any townsite at the junction. The Union Pacific was to complete tracklaying to the summit of Promontory, but the Central Pacific was to pay the Union Pacific the cost of the road from the terminus near Ogden to Promontory, allowing the Union Pacific to draw bonds as far as the junction of the roads. Any disagreements were to be put in the hands of three referees, one chosen by each road and the third named by the first two. The agreement was signed in Washington, D.C., by C. P. Huntington for the Central Pacific and by Rowland G. Hazard, Samuel Hooper, and Grenville Dodge for the Union Pacific. Copy in Hammond-Rollins Correspondence, Letters Sent, 1868–1869 (Union Pacific Archives).

[36] *Deseret Evening News*, April 23, 1869.

of the scene. It was a busy day for the participants, each of whom saw the events from a different vantage point. The climax of the event was the driving of the last, symbolic spikes.[37]

For the residents of Salt Lake City, who had so eagerly anticipated the completion of the railroad, there was only a moderate amount of excitement. At 12:32 P.M. a signal was received that the rails had been joined, after which the national flag was unfurled in several places, brass bands around the city blared their approval, artillery salutes were fired, and Governor Charles Durkee made a speech. To further honor the occasion most of the city's important business houses closed their doors. The *Deseret News* spoke of the wedding of the West to the commercial East, using the Mormon term "seal" to indicate the long-desired consummation. The Mormon press called the completion of the railroad project "of more significance and interest than to any other portion of their fellow citizens of the Union."[38]

The chief Mormon, however, was not at Promontory, or even at the celebrations in Salt Lake City. As oratorical salutes sent their echoes rolling from the place where metal touched metal, Brigham Young spent the day at Nephi, driving over to Payson for dinner, quietly conducting church business and seemingly oblivious to the celebrations that were under way.[39] Bishop Sharp, his right-hand man in railroad affairs, represented Young at Promontory.

So far as Brigham Young and others of the church leadership were concerned, the junction of the rails at Promontory was an event of significance, but it did not solve all of their problems. Utah businessmen were happy that the two companies had met somewhere within their territory. They had earlier feared that the Union Pacific would be built a hundred miles beyond Salt Lake City, as a rumor once had said it might, and Mormon merchants would have no choice between western and eastern markets because the Union Pacific surely would put such prohibitive rates on freight to the West that traffic in that direction would be throttled.[40] Now that this potential danger had been averted,

[37] For a comprehensive account of the materials used and the ceremony, see J. N. Bowman, "Driving the Last Spike at Promontory, 1869," in this issue. For more details about the events of May 10 see Robert M. Utley, "The Dash to Promontory," *Utah Historical Quarterly*, XXIX (April, 1961), 98–117 and Bernice Gibbs Anderson, "The Driving of the Golden Spike — The End of the Race," *U.H.Q.*, XXIV (April, 1956), 149–64. The standard works, such as Wesley S. Griswold, *A Work of Giants: Building the First Transcontinental Railroad* (New York, 1962); James McCague, *Moguls and Iron Men: The Story of the First Transcontinental Railroad* (New York, 1964); and Robert West Howard, *The Great Iron Trail: The Story of the First Transcontinental Railroad* (New York, 1962), also provide colorful details.

[38] *Deseret Evening News*, May 11, 14, 1869.

[39] "Journal History," May 10, 1869; *Deseret Evening News*, May 11, 1869.

[40] *Deseret Evening News*, August 18, 1868.

there were other suspicions about the Union Pacific, probably arising out of the ill-feeling generated by that railroad's apparent unwillingness to pay its debts in Utah.

As John Sharp told one of his fellow churchmen, "The U.P.R.R. is finished, but . . . the worst part of it is to be done yet, that is, getting our pay."[41] Young had pressed for money for months before the road's completion, getting driblets now and then, but never enough to pay off the clamorous workers with whom he had contracted. He wrote to Ames on May 19, saying that he had completed his grading, but he still was not able to obtain from the company the final estimates, although railroad cars had been running over the section in question for months. There was a balance of approximately three-fourths of a million dollars due, said Young, and he wanted the matter settled at once. In response, Ames wrote a vague letter in which he said Young's contract was not made with the Union Pacific, but was a sub-contract and that the road hoped to adjust all balances due to contractors in the near future.[42]

In mid-July Young again wrote to Ames, explaining that differences in opinion that had arisen between the two parties, with regard to the amount owed, arose from a promise made by Durant to the effect that Union Pacific engineers had no authority to fix prices for the various work contracts undertaken. For example, said Young, the contract price for tunnel work was $15.00 a yard, "but when they were opened they were found to be hard rock and it requires $5.00 additional even to make expenses. The total for such overage came to $274,250.98."[43] Samuel Bowles, who had examined the work, publicly stated that construction west of Green River, Wyoming, was the hardest of any section on the line, "for here are real mountain ranges to be crossed, to be scaled, to be descended," where "deep cuts, heavy embankments, numerous tunnels are found in the pathways of the track."[44]

Cornelius Bushnell, a member of the Union Pacific's board of directors, promised Young that he would stop at Salt Lake City on his way to California, at which time, he said, he was authorized to settle the claims for grading and other work on the line. Young put his accounts

[41] Sharp to Albert Carrington, August 3, 1869, *Millennial Star*, XXXI (1869), 549.

[42] Young to Samuel Reed, March 20, 1869, and Young to Oliver Ames, May 19, 1869, Letterbooks of Brigham Young. Ames to Young, June 4, 1869, Union Pacific Railroad Papers. Ames was wrong. The contract now held by the L.D.S. Church Historian's Library clearly shows that it was drawn between Brigham Young and "The Union Pacific Rail Road Company, by their Agent, Samuel B. Reed, superintendent and engineer of construction . . . ."

[43] Young to Ames and Board of Directors, July 17, 1869, Letterbooks of Brigham Young.

[44] Samuel Bowles, *Our New West. Records of Travel Between the Mississippi River and the Pacific Ocean* (Hartford, 1869), 57.

in order and waited for the appointed day, but the director failed to appear. Determined to have a showdown in the matter, the church leader sent John Sharp and T. W. Ellerbeck to Ogden where, on July 19, they intercepted Bushnell on his return trip, "but he paid nothing," alleging that such an important matter must be considered by the entire board.[45] "To say the least, it is strange treatment of my Account," wrote Young, in bitter complaint. "It is not for myself that I urge, but for the thousands that have done the work, and have been waiting from half to three quarters of a year for their pay."[46]

The failure of the Ogden conference left Brigham Young in a pessimistic mood. "I feel well assured that the prospect for receiving money from the Company is very poor indeed," he wrote to his son, Joseph. Under the circumstances, he explained, it had been decided that the next best course was to take iron and rolling stock for the Salt Lake City branch as part of the anticipated settlement. Accordingly, Young armed Bishop Sharp with power of attorney and sent him to Boston to confront the board. The bishop was instructed to do his mightiest, pressing first for cash, then a very scarce item in Utah, and accepting equipment only after he had obtained every dollar he could from the company. Young gave him one more bargaining card, that of accepting transportation for Mormon immigrants over the Union Pacific system, or even from New York City, as partial payment of the debt. In closing he warned Sharp against letting the railroad company get any hold, directly or indirectly, over the proposed branch.[47]

In the discussions held at Boston the Union Pacific representatives fought a stubborn rearguard action. They agreed to furnish 4,000 tons of rails, but when $150.00 a ton was demanded Young called the figure "extravagantly high." He alleged that on the rails alone the inflation of price amounted to $120,000 more than the market price. While prices on other materials were padded to a lesser degree, he estimated that here too an additional sum was laid on. Nevertheless, said Young to Bishop Sharp, he would agree to the proposition provided that there be a speedy and equitable settlement of all other claims, that the materials purchased be delivered at Ogden without delay, and that the Union Pacific grant to

[45] D. McKenzie to Joseph A. Young (who was in New York City), July 18, 1869, Letterbooks of Brigham Young. McKenzie was a member of Young's office staff.

[46] Young to Oliver Ames, August 12, 1869, *ibid.*

[47] B. Young to J. A. Young, July 21, 1869, and B. Young to John Sharp, July 21, 1869, *ibid.* In September one of the Mormons commented that cash was so scarce that "we have returned, almost entirely, to barter in our trading." Comments of Joseph Hall, from Ogden, September 7, 1869, "Journal History," September 7, 1869.

the proposed branch the free use of its road from Echo Station to the terminus at Ogden for a five-year period. This would allow the Utah Central, as the Mormon road was named, to haul fuel from the coal beds to Salt Lake City for its own profit.[48] Fearful that the Union Pacific might take this opportunity to rid itself of worn-out equipment, the wily church leader suggested that no locomotives be accepted until his son, Joseph, had determined that they were in good working order.[49]

The Youngs were caught in something of a dilemma, as Brigham's correspondence reveals. The Union Pacific, annoyed by the squeeze play being executed, tried to exact the highest prices for equipment it offered. The Mormon claimants stubbornly clung to their demands, but time was of importance to them. It was better to settle now than to delay any longer Brigham wrote to one of his sons; freight and passenger revenues from the Utah Central for even a six months' period promised to be substantial. Also, he said, use of Union Pacific tracks between Echo and Ogden was a significant item in the proposed agreement and he wanted to take advantage of it as soon as possible. At a very modest estimate he calculated that during the period of free usage the Utah Central could make $156,000 in the coal traffic.[50]

By a memorandum agreement of August 31, between Sharp and the Union Pacific authorities at Boston, it was agreed that the company would pay $940,138.15 of Young's claim. Since he had asked for $1,139,081.89, there remained nearly $200,000 in dispute. It was agreed that each of the two parties would choose a disinterested person as a referee and that they should meet at Omaha within thirty days to adjudicate the claims. Young chose Judge Elias Smith, of Salt Lake City, as his referee. Meanwhile, Ames directed Colonel C. G. Hammond, the road's general superintendent in Omaha, to deliver to Young at Ogden the mentioned 4,000 tons of rails plus the appropriate number of sufficient spikes, splices, bolts, frogs, and switches. Apparently complaints about the proposed overcharge on rails had their effect, for in this memorandum rates were scaled down to the market price. The rolling stock included four passenger cars (first class), four passenger cars (second class), three mail and express cars, ten flat cars, twenty box cars, and

[48] The little Coalville and Echo road, four and two-thirds miles long in 1869, tapped the Coalville mines. It had a capital stock of $250,000 and was headed by Bishop W. W. Cluff. "The building of this line was undertaken by the counsel and advice of President Young," said the *Deseret News* of October 21, 1869. For the story of this enterprise see Leonard J. Arrington, "Utah's Coal Road in the Age of Unregulated Competition," *Utah Historical Quarterly*, XXIII (January, 1955), 35–63.

[49] Young to Sharp, August 25, 1869, Letterbooks of Brigham Young.

[50] B. Young to Joseph A. Young, August 25, 1869, *ibid.*

Charles R. Savage, one of the photographers at the joining of the rails, also photographed scenes of the construction of the transcontinental railroad. Many of these photographs were made into stereoscopic views which sold widely. Above are two scenes of construction camps in Weber Canyon. The top one is an engineers' camp and below are the offices of Sharp and Young, contractors for the Union Pacific Railroad. Photographs from the Utah State Historical Society.

seven hand cars. The total value of the track equipment and rolling stock was set at $599,460.[51] On September 4 Brigham Young acknowledged that he had received word from Bishop Sharp of a favorable settlement

[51] Memorandum Agreement, August 31, 1869, between John Sharp and the Union Pacific, Union Pacific Railroad Papers; Ames to C. G. Hammond, September 2, 1869, Union Pacific Railroad Papers and in Correspondence, Office of the President, Letters Sent, September 1869–June 1870 (Union Pacific Archives).

and that equipment for the Utah Central would be started for Utah very shortly.

The controversy between the Union Pacific and the Mormons, over the grading contracts, was not evidence of any disagreeableness on the part of either party, but rather it pointed up the difficulty of concluding a construction campaign whose magnitude was then unsurpassed in American history. Similar to the American experience in warfare, all efforts had been bent in the direction of an early conclusion, and in the process money was spent recklessly. There were misunderstandings, delays, and a lack of communication that inevitably led to difficulties. Joseph F. Nounnan and J. M. Orr, Gentile contractors, sued the railroad for over $175,000 for unpaid bills and for delays that cost the contractors money in wages. Captain Thomas H. Bates sued for nearly $40,000 for ties furnished and for money disbursed while he was employed as division engineer.[52]

That the railroad was much in arrears in its payments is evident in its own records. In his first official letter, as general superintendent at Omaha, C. G. Hammond stated that in July 1869, he was confronted by unpaid payrolls for March, April, May, and June that amounted to $770,090, and the sum due for July was $320,000. By August the road would owe $1,090,090 for labor expended, and this was only a part of the construction debt. He explained to his superiors that such a situation made it very difficult for him because "a moiety of labor is secured from men distressed and harrassed for want of their pay." Unless at least $250,000 could be raised at once there would be trouble. As he explained it: "In this frontier world which abounds in adventurers and where municipal, state or territorial justice is to a great extent deficient or unknown, many fear a stoppage if not injury to our trains from those disaffected by delay of payment."[53] Further proof of such fears is seen in a telegram from Oliver Ames regarding a train wreck in which he asked: "Do you think the train run off by misplaced switch was done by discharged employees or by Mormons who have lost cattle and want to be settled with for Land Damages?"[54]

[52] Specifications of the Nounnan and Orr suit in Miscellaneous Letters to Oliver Ames, August–October 1869 (Union Pacific Archives). For the Bates suit see the account in the *Deseret News*, September 16, 1869.

[53] Hammond to Oliver Ames, July 27, 1869, Office of the President, Miscellaneous Letters Received, 1869 (Union Pacific Archives).

[54] Ames to Sickels, November 14, 1870, Secretary-Treasurer, Letters Sent, June 1870–April 1871 (Union Pacific Archives).

Union Pacific officials were painfully aware that the termination of contractual relationships associated with completion of the work was a matter fraught with difficulties. When Bushnell visited Utah in July 1869, he estimated that various contractors in the area had made about $750,000 but, he added, "I do not think there has been but a very small proportion of dishonesty practised on us of what I had expected to unearth." The greatest loss, in his eyes, was "our crazy attempt" in sending men far in advance of the road's probable terminus to capture territory that might produce land grant bonds. The effort would have been far better spent in concentrating on the Utah section of the road, thought that board member.[55] Benjamin Ham, of the president's staff, lamented the fact that more care had not been taken in settling the various claims in Utah. He said that if an agent had gone among those people with an expressed intention of staying on the ground for six months, if necessary, to investigate each and every claim, a great deal of money would have been saved. More than that, there had been an unhealthy speculation in drafts that had been sold by discouraged claimants at large discounts. "I have talked with a person who has just returned from there," wrote Ham, "and who will make $250,000 out of the drafts he has purchased."[56]

For their part the Mormon church leaders were not going to cease their efforts to secure payment of the unsettled debts. Early in October of 1869, Brigham Young wrote to Bishop Sharp, who was then in Omaha, saying that the railroad had failed to comply with the spirit of the contract. He wondered if there was some undiscovered loophole in the document by which the company hoped to escape its obligations; if this were true there was good cause for concern in Salt Lake City. Young's disillusionment grew out of the fact that the proposed arbitration was stalled when the railroad's representative failed to appear at the Nebraska terminus. Gloomily Young directed Sharp to wait only a reasonable time and then to get affidavits showing that he had been on the ground, ready to negotiate, as proposed in the Boston agreement.[57] The railroad reluctance to settle up apparently was explained by Samuel Reed, who told Oliver Ames that in his view all claims for delays and damages had been settled in Boston, and that even though Durant had made some promises,

[55] C. S. Bushnell to J. M. S. Williams, July 5, 1869, Office of the President, Miscellaneous Letters Received, April–July, 1869 (Union Pacific Archives).

[56] Ham to J. M. S. Williams, July 12, 1869, *ibid.*

[57] Sharp to Young, September 30, 1869, John Sharp Papers (L.D.S. Church Historian's Library); Young to Sharp, October 7, 1869, Letterbooks of Brigham Young.

Casement brothers construction train at end of track near Bear River. A. J. Russell photograph from the American Geographical Society.

the company had paid fairly and liberally for Young's work.[58] Meanwhile, Sharp and Bishop John Taylor arrived in Boston and notified the president's office, in writing, that the agreement had been broken. "I don't think the breach is such a one as to entitle them to any damages," wrote Ames, but, he said, he would consult the company's lawyer in the matter at once.[59]

Unable to get the company to come to terms in cash, so desperately scarce in Boston, Young continued in his efforts to effect a settlement by barter. In late September he asked for a thirty-ton locomotive for use on the Utah Central, and C. G. Hammond, superintendent in Omaha, sent one to him along with a bill for $13,000. When Hammond learned that the Mormons proposed to deduct the sum from the railroad indebtedness he asked Boston: "Is this all right?"[60] In another instance the company

[58] Reed to Ames, October 8, 1869, Samuel B. Reed Letterpress Book, April–November, 1869 (Union Pacific Archives).

[59] Ames to Grenville Dodge, October 16, 1869, Office of the President, Letters Sent, September 1869–June 1870 (Union Pacific Archives).

[60] Young to Hammond, September 30, October 25, 1869, Letterbooks of Brigham Young. Hammond to Oliver Ames, October 11, 1869, Miscellaneous Letters to Oliver Ames, August-October, 1869 (Union Pacific Archives).

submitted a bill for Mormon transportation in the amount of $15,826.16, and the redoubtable church leader responded by saying he would subtract it from a Union Pacific promissory note he held for a similar amount, one that was a year overdue.[61] Hammond agreed to this. Next, Young asked if amounts his people owed for freight on coal and railroad ties could be deducted from monies owed by the Union Pacific. Hammond, in this instance, demanded cash, but he said that if other arrangements could be made with Boston it was all right with him.[62] If money was short in the Union Pacific coffers, so was it short in Zion.[63] Young complained that because he had been obliged to pay out of his own funds for labor performed on the grading contract near Echo, he was hard-pressed to finish the Utah Central. Worse, the Union Pacific had compounded the difficulty by not forwarding the material agreed upon at Boston. In one instance he wrote that there had been but a half day's work that week

[61] Young to Hammond, November 25, 1869, Letterbooks of Brigham Young.

[62] Young to Hammond, October 20, 1869, Miscellaneous Letters to Oliver Ames, August–October, 1869 (Union Pacific Archives).

[63] During these hectic days Union Pacific Treasurer John M. S. Williams confessed to one of his colleagues: "My care & anxiety make me sick." Williams to Benjamin F. Ham, October 1, 1869, Office of the Treasurer, Letters Sent, July–November, 1869 (Union Pacific Archives).

due to the lack of iron, at a cost of some $1,000 a day to pay 225 idle men. The people of Utah were depending upon this branch to bring in their winter coal, he said. Unless the Union Pacific lived up to its promises, Mormon families would suffer.[64]

The Utah Central branch, begun in May, was completed to Salt Lake City in January 1870, providing the much desired connection with the Union Pacific tracks at Ogden. Its completion occasioned a good deal of local satisfaction, much being made of the fact that the grading, tieing, and tracklaying were done by Mormon workers, but in their hour of triumph church leaders remained bitter over the delays that originated in Boston. The line, about forty miles in length, would have been completed two months earlier, said one of them, had it not been for the failure of Union Pacific officials to live up to their agreement.[65] The annoyance was compounded by the continued inability of Young's representatives to get a final settlement of the railroad grading contract. Despite the coming of the main line, and the completion of a branch to Salt Lake City, Utah's commercial life lagged. Wheat sold for 90 cents a bushel, beef at 12½ cents a pound, coal at $12.00 a ton and trout could be had for 15 to 20 cents a pound. "Business is very dull, money is scarce, and the usual number of men, under such circumstances, are out of work," complained Elder George Teasdale. Unable to find employment, and disappointed at not getting the money due from Union Pacific grading work, laborers were in an unhappy mood. "Some are apt to get the blues," Teasdale admitted.[66]

Determined to get a satisfactory settlement from the Union Pacific, Young once more sent Bishop Sharp to Boston with orders to stay with railroad officials until they paid up. The bishop arrived there on May 5, 1870, and went at once to the railroad's offices where he was well received. Oliver Ames professed a willingness to negotiate, at which Sharp said that he had been ready to do so for some time, but nothing encouraging had transpired. The board of directors, just having met, was in the process of dispersing, and while Ames and Sharp were discussing matters Cornelius Bushnell and Thomas C. Durant came into the room. They both greeted the bishop warmly "and laughed heartily at the idea of me coming hear [*sic*] for more money, and after some considerable talk Mr. Bushnell offered me ten thousand Dollers [*sic*] and call

[64] Young to Hammond, November 12, 29, 1869, Letterbooks of Brigham Young.

[65] George A. Smith to N. S. E. Elderkin, January 8, 1870, "Journal History," January 8, 1870. Smith was a councilor in the First Presidency of the church.

[66] George Teasdale to Albert Carrington, March 21, 1870, *ibid.*, March 21, 1870.

it even and I might turn arond [*sic*] and go home tonight, but I told him I would stay over night, and perhaps he would be more liberal in a day or two." Durant remarked that the Union Pacific people had allowed "all that they considered right in the first place and did not expect to hear from us again. He wanted a proposition from me as Bushnell had made and I made one for $198,942.68 which was another grand laugh, and after a great deal of talk and gas the Doctor wanted to act as referee for the Co. and myself for Brigham Young, and wherein we could not agree Mr. Bushnell would decide." When the bishop promptly called the bluff, Durant backed down, which Sharp found "rather amusing, it being his own proposition."

The Utah emissary took up the negotiations again the following day, urging Ames and John Duff to pay up, but they insisted that they had paid the Mormons all that was due them. The railroad officers agreed, however, to call the directors together again in a day or so. On May 12 Sharp reported that he was still waiting, but that Ames and Duff would not do anything without the other board members, particularly Durant, who was now out of town. The determined bill collector then went to New York City in search of Durant, only to learn that the doctor had gone to Saratoga. Back at Boston again, he talked with Sidney Dillon, but with no result. "So you see," he told Brigham Young, "that although the Doctor holds no office of the Co. he holds a mighty influence over them, so will have to wait patiently until he returns." During the early days of June the determined bishop stubbornly sat in the Union Pacific offices, waiting, and commenting grimly to those present that Durant was purposely avoiding him. Ames denied this, and promised that in a few days the missing doctor would turn up, but the discouraged Sharp left for the West, resolved to return and to fight another day.[67]

By early July Sharp was back in Boston, apparently armed with new instructions for, on the seventh of that month, he reported to Young that he had made a settlement. "They decided to pay $35,000 in cash and $35,000 in notes payable in 3 months which I accepted," he told Brigham Young. "The notes I have had made out in $5,000 each, payable to your order." The compromise was made for a good deal less than Young had contended for, but it was not for any lack of persistence on his part, or that of John Sharp. Meanwhile, the pair kept up their drumfire of requests, Sharp mentioning in the letter that told of settlement that he was going to stay on "to labor with the committee in relation to your

[67] Sharp to Young, from Boston, May 5, 6, 12, June 1, 3, 1870, John Sharp Papers.

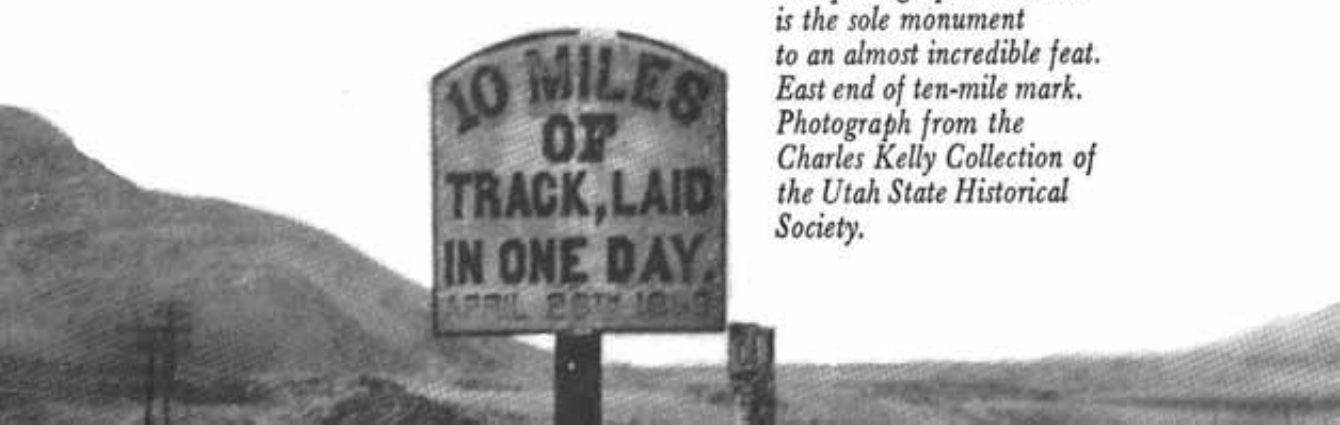
claims for reduction on Iron. . . ." At the time of the Utah Central's completion the Union Pacific had failed to deliver all the iron and equipment agreed upon in August 1869, but Young was not ready to give up in his efforts to get it. He and his sons were interested in building more Utah branches and in the Union Pacific they had found a source of supply. The Mormon boys would grade and tie; the Union Pacific would find rails and cars to complete the job.[68]

The Mormon contract with the Union Pacific was mutually beneficial. Although the railroad had great difficulty in finding money to pay off its contractual agreements with the men of Zion, matters were settled in a generally amicable manner. Both Brigham Young and John Sharp were persistent in their efforts to gain a settlement satisfactory to them, but in the lengthy negotiations that developed they conducted themselves well, never antagonizing the Bostonians unduly, yet pursuing their quest with a doggedness that generated more admiration than annoyance among railroad executives. The Young family used its railroad money well, spreading an iron network outward from their religious capital and, in so doing, they generally benefitted the Union Pacific Company. John Sharp, whose rustic ways often amused officials of the larger road, became a trusted friend and his relationship with the company lasted for years. In contrast with other western communities, whose leaders later entered into bitter controversies with the Union Pacific, the Mormon community accepted the coming of the road and used it to every advantage, countering any moves that might be regarded in the business world as shrewd with home-grown financial maneuvers that brought applause from the sophisticates of the financial East.

[68] Sharp to Young, July 7, 1870, *ibid.* In May 1870 Young was still trying to get Hammond to deliver the rest of the iron earlier promised. Hammond sought permission to do so from Ames. Hammond to Ames, May 11, 1870, Office of the President, Letters Received, April–August, 1870 (Union Pacific Archives).

Chinese Laborers and the Construction of the Central Pacific

BY GEORGE KRAUS



The photographed marker is the sole monument to an almost incredible feat. East end of ten-mile mark. Photograph from the Charles Kelly Collection of the Utah State Historical Society.

THE STERN TASK FACED by Central Pacific's "Big Four" in driving the nation's first trancontinental railroad over the High Sierra and across the Nevada plains and desert to join with Union Pacific at Promontory Summit, Utah, would have taken much longer were it not for the Chinese laborers who played such a significant role in building the railroad. Charles W. Crocker — known as the organizer, construction genius, and leader of men among the Central Pacific's Big Four — was the man responsible for recruiting the Chinese, first in California, and later in Canton Province and bringing them to California.

Due to a shortage of money, Central Pacific was able to field only three hundred workers during the extremely mild Sierra winter of 1864 compared with the twelve thousand they would have on the payroll two years later.[1] But on January 2, the California Supreme Court reaffirmed the constitutionality of the state legislature's act providing for payment by California of interest on $1.5 million in bonds for the hard-pressed Central Pacific at the rate of seven per cent. This made the bonds immediately salable and gave the railroad instant relief from long and agonizing financial strain.

Four days later, the Sacramento *Union* carried a Central Pacific advertisement calling for "5,000 laborers for constant and permanent work; also experienced foremen." Construction, long halted at Newcastle, California, was speeded immediately. Apparently the need for labor was unduly advertised, for the *Shasta Courier* carried this advertisement on January 2.

> The Central Pacific Railroad Company advertises for 5,000 laborers to work upon the road between Newcastle and Illinoistown [Colfax]. It is the intention of the company to employ at once as many men as can be advantageously worked on the distance between these points — 23 miles. The iron for laying this additional amount of track is already in Sacramento and it is expected that the cars will run to Illinoistown by August next. The above opportunity affords a chance for those out of employment.

Base camp for Superintendent J. H. Strobridge's construction crews was in Auburn. New men were hired as a result of the fresh money in the treasury and were put to work completing the unfinished grading of the twelve miles between Newcastle and Clipper Gap.

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[1] Erle Heath, "From Trail to Rail," *Southern Pacific Bulletin*, XV (1927), Chap. XV, p. 12.

It was after passing Auburn early that year that the first Chinese were employed—apparently because Central Pacific was unable to fill its ranks. The first indication of this appears in a letter written April 12, 1865, by Central Pacific's legal counsel Judge E. B. Crocker to his long-time friend Cornelius Cole, who was retiring as a California congressman and returning to his home.

> Friend Cole, . . . We have now about 2000 men at work with about 300 wagons and carts and I can assure you they are moving the earth and rock rapidly. We are now on some of the heaviest work in the mountains, but so far we have been fortunate in meeting very little hard rock. You will be astonished when you come back and see the amount of work we have done.
>
> A large part of our force are Chinese, and they prove nearly equal to white men, in the amount of labor they perform, and are far more reliable. No danger of strikes among them. We are training them to all kinds of labor, blasting, driving horses, handling rock, as well as the pick and shovel. . . . We want to get a body of 2500 trained laborers, and keep them steadily at work until the road is built clear across the continent, or until we meet them coming from the other side . . . .[2]

Charles Crocker, who conceived the plan of employing the Chinese, was opposed by Strobridge, who gave in only after a series of trials demonstrated the worth of the Celestial worker. Crocker insisted that the race that built the Great Wall of China could certainly be useful in building a railroad, countering Strobridge's claim that they were "not masons."[3] Strobridge finally agreed to try fifty Chinese. They did so well, he agreed to fifty more — and before the road was finished, there were about twelve thousand on the payroll. As the Chinese increased their numbers and their skills, the ascent of the railroad toward the summit also increased in speed, despite ever increasing difficulties.[4]

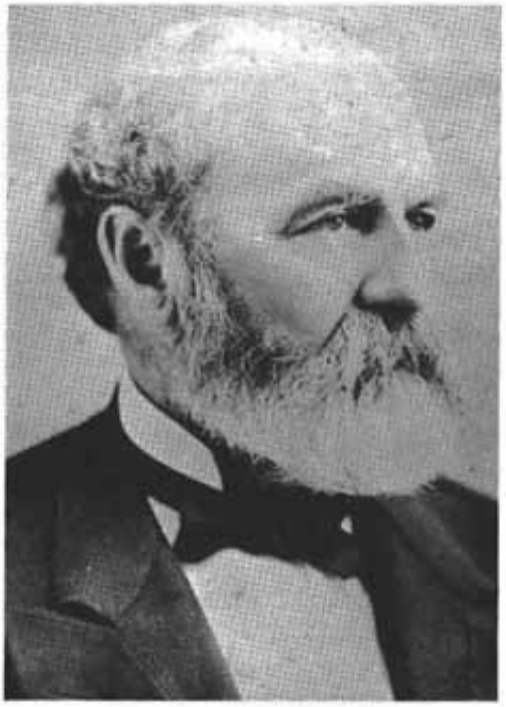
Shovel and pick and black powder were the only aids to grading, and horsepower meant horses pulling small carts. Speedy construction under such conditions required employment of many men — and nothing was scarcer in California than labor in 1865. Such Caucasians as were not employed on ventures of their own found it more profitable to work in the mines or follow agricultural pursuits than to face the hardships of hand-carving a railroad right-of-way up the steep slopes and through the granite spires of the Sierra. At the same time, there were many thousands

[2] Catherine Coffin Phillips, *Cornelius Cole, California Pioneer and United States Senator* . . . (San Francisco, 1929), 138.

[3] Edwin L. Sabin, *Building the Pacific Railway* . . . (Philadelphia, 1919), 125.

[4] Heath, "Trail to Rail," *S.P.B.*, XV, Chap. XV, p. 12.

Mark Hopkins (1813–1878) ran the day-to-day affairs of the Central Pacific during the era of constructing the transcontinental railroad.



Collis P. Huntington (1821–1900) handled the Central Pacific's financial affairs in the East and guided many of the logistics vital to construction of the first transcontinental railroad.

of Chinese in California. Drawn here by gold fever, they were eager for employment.[5]

S. S. Montague, in his annual report of 1865, said

> It became apparent early in the season that the amount of labor likely to be required during the summer could only be supplied by employment of the Chinese element in our population. Some distrust was at first felt regarding capacity of this class for the services required, but the experiment has proved eminently successful. They are faithful and industrious and, under proper supervision, soon become skillful in the performance of their duty. Many of them are becoming very expert in drilling, blasting and other departments of rock work.[6]

The Chinese on the Central Pacific were divided into small groups. Each group had a cook who not only prepared their meals, but also kept a large boiler of hot water ready every night so that when the Chinese came off the road they could fill their tubs made from powder kegs and

[5] *Ibid.*

[6] *Ibid.* An original copy of this report is in the California State Library, Sacramento.

Leland Stanford (1824–1893), was the governor of California and first president of the Central Pacific Railroad.

Charles Crocker (1822–1888), who was in charge of building the Central Pacific, originally conceived the idea of hiring Chinese laborers.

take a hot sponge bath. This bath and change of clothes were regular habits every night before they took their evening meal. Strobridge, who earlier opposed employing the Chinese, pronounced them the best in the world. "They learn quickly, do not fight, have no strikes that amount to anything, and are very cleanly in their habits. They will gamble, and do quarrel among themselves most noisily — but harmlessly."[7]

Leland H. Stanford, in a report to Andrew Johnson, had this to say about the Chinese on October 10, 1865:

> As a class they are quiet, peaceable, patient, industrious and economical. Ready and apt to learn all the different kinds of work required in railroad building, they soon become as efficient as white laborers. More prudent and economical, they are contented with less wages. We find them organized into societies for mutual aid and assistance. These societies can count their numbers by thousands, are conducted by shrewd, intelli-

[7] Heath, "Trail to Rail," *S.P.B.*, XV, Chap. XV, p. 12. See also John Debo Galloway, *The First Transcontinental Railroad: Central Pacific, Union Pacific* (New York, 1950), 144, and Robert F. G. Spier, "Food Habits of Nineteenth-Century California Chinese," *California Historical Society Quarterly*, XXXVII (No. 1 and 2, 1958), 79–84, 129–36.

> gent business men who promptly advise their subordinates where employment can be found on most favorable terms. No system similar to slavery, serfdom or peonage prevails among these laborers. Their wages, which are always paid in coin each month, are divided among them by their agents who attend to their business according to the labor done by each person. These agents are generally American or Chinese merchants who furnish them their supplies of food, the value of which they deduct from their monthly pay.
>
> We have assurance from leading Chinese merchants that, under the just and liberal policy pursued by the company, it will be able to procure during the next year not less than 15,000 laborers. With this large force the company will be able to push on the work so as not only to complete it far within the time required by the Acts of Congress but so as to meet the public impatience.[8]

The difference in the eating and drinking habits of the Chinese and white workers building the Central Pacific was as great as their other living habits. The Chinese menu included dried oysters, abalone, cuttlefish, bamboo sprouts, mushrooms, five kinds of vegetables, pork, poultry, vermicelli, rice, salted cabbage, dried seaweed, sweet rice crackers, sugar, four kinds of dried fruit, Chinese bacon, peanut oil, and tea. Seemingly, this was the forerunner of the modern American well-balanced diet. The fare of the Caucasian laborer consisted of beef, beans, bread, butter, and potatoes.

On the grade the Caucasians relieved their thirst with water — not always the best and at times, despite all precautions, a source of illness. The Chinese drank luke-warm tea. It stood beside the grade in thirty- and forty-gallon whiskey barrels, always on tap. Several times daily a Chinese mess attendant brought fresh tea, pouring it into the big barrel. These beverage reinforcements were carried to the work site in powder kegs suspended from each end of a bamboo pole which was balanced on a Celestial shoulder.[9]

On October 10, 1865, Governor Stanford again wrote President Andrew Johnson and Secretary of Interior James Haran:

> A call was issued for 5,000 laborers and from that day to the present, every able-bodied laborer that could be procured has been employed and kept constantly at work in the construction of the road.
>
> Labor is, however, scarce and dear in this state. For several months the number procured was comparatively small, but recently they have increased more rapidly, until now, 5,000 men are employed, with over 6,000 teams and the prospect is that the number of laborers will be increased to 6,000 during this season.

[8] Heath, "Trail to Rail," *S.P.B.*, XV, Chap. XV, p. 12.
[9] *Ibid.* and Spier, "Food Habits of the Chinese," *C.H.S.Q.*, XXXVII, 78, 80, 83, 130.

> A large majority of the white laboring class on the Pacific Coast find more profitable and congenial employment in mining and agricultural pursuits, than in railroad work. The greater portion of the laborers employed by us are Chinese who constitute a large element in the population of California. Without them it would be impossible to complete the western portion of this great national enterprise within the time required by the Acts of Congress.

Governor Stanford held the Chinese workers in such high esteem that he provided in his will for the permanent employment of a large number. Some of these were still living and working lands now owned by Stanford University in the 1930's.[10]

Building the Central Pacific road over and through the granite walls of the Sierra Nevada was done literally by hand. Chinese were lowered in baskets over cliffs two thousand feet above the base of the American River Canyon to chisel a roadway through the granite reaches and occasional shale deposits for the iron rails.[11] It is easy to understand why Central Pacific's Chinese became known as "Crocker's Pets," when you consider their industriousness and steadiness.[12]

Central Pacific and its Chinese laborers met the biggest problem in the fight to cross the Sierra after the line was opened to Cisco. This problem was the summit tunnels—eleven of them numbered three to thirteen within a twenty-mile stretch between Cisco, located at Mile Post 92 (from Sacramento), and Lake Ridge at Mile Post 112 just west of Cold Stream Valley on the eastern slope of the summit. These tunnels were bored while the mountain slopes were covered with as much as thirty feet of snow.

Civil Engineer John R. Gillis, who worked on these tunnels, told the American Society of Civil Engineers, which recently declared the Central Pacific a National Civil Engineering Landmark, that

> During the fall of 1866, the track reached Cisco, and as fast as the gangs of Chinamen were released, they were hurried to the Summit to be distributed among the tunnels in its vicinity. The year before [in August, 1865] some gangs had been sent to Summit Tunnel No. 6, and commenced the cuts at its extremeities; winter set in before the headings were started, and the work had to be abandoned. To avoid a repetition of such delay, the approaches to all the tunnels were covered with men . . . [who] worked day and night in three shifts of eight hours each. Thus, time was saved, and the tunnel organization started at once. As an illustration of the hurry, I may mention walking two miles over the hills after dark and

[10] Heath, "Trail to Rail," *S.P.B.*, XV, Chap. XV, p. 12.
[11] *Ibid.*, Chap. XVI, p. 12.
[12] Sabin, *Building the Pacific Railway*, 112.

> staking out the east end of Tunnel 12 by the light of a bonfire. At nine o'clock the men were at work . . . .[13]

Gillis went on to describe the weather problem at the summit and said that "At Tunnel 10, some 15 or 20 Chinese were killed by a slide" that winter. The year before, in the winter of 1864–65, two wagon road repairers had been buried and killed by a slide at the same location.[14]

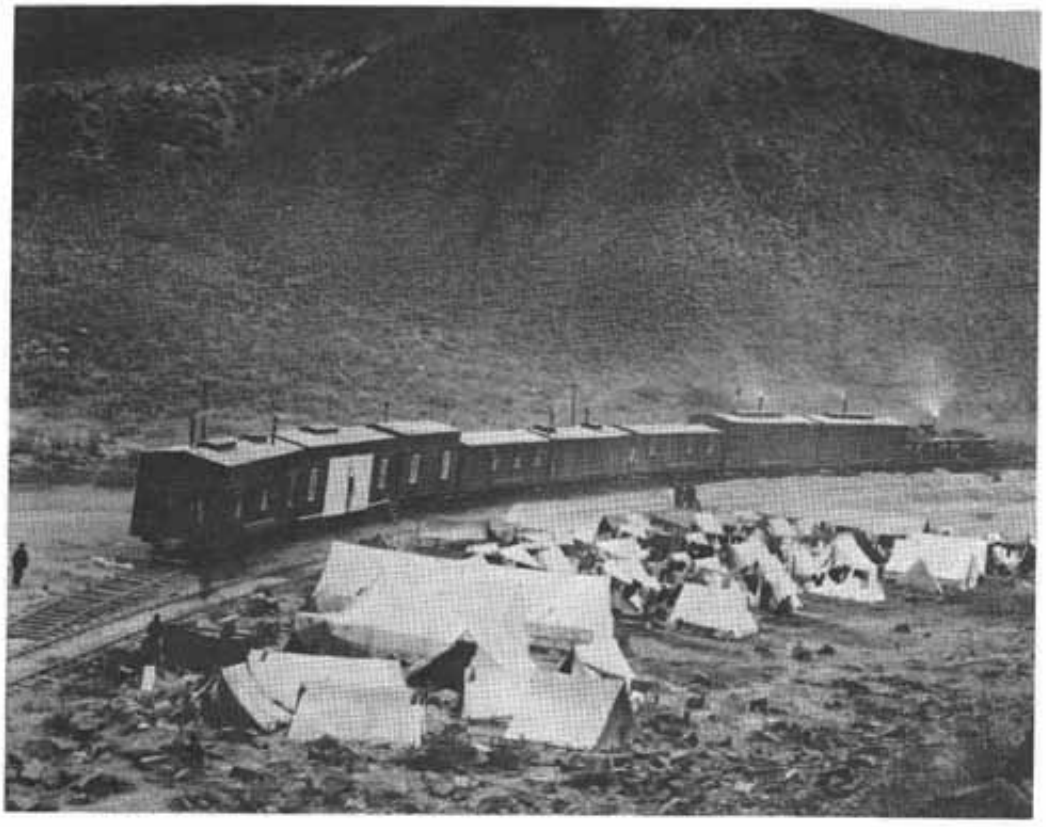
J. O. Wilder, for many years a Central Pacific-Southern Pacific employee, in an interview with the late Erle Heath, one-time Southern Pacific historian, said:

> The Chinese were as steady, hard-working a set of men as could be found. With the exception of a few whites at the west end of Tunnel No. 6, the laboring force was entirely composed of Chinamen with white foremen. A single foreman with a gang of 30 to 40 men generally consti-

[13] J. G. Gillis Speech Before the American Society of Civil Engineers, January 5, 1870 (typescript, Southern Pacific Company Archives, San Francisco), 10.

[14] *Ibid.*, 6. Also, Galloway, *First Transcontinental Railroad*, 149.

Chinese camp and J. H. Strobridge's construction train in Nevada in 1868. Strobridge and his engineers lived in the outfit cars which were placed on sidings. Alfred A. Hart photograph, gift of the Southern Pacific Railroad Company.



> tuted the force at work at each end of a tunnel; of these, 12 to 15 worked on the heading, and the rest on the bottom removing material. When a gang was small or the men needed elsewhere, the bottoms were worked with fewer men or stoped so as to keep the headings going.
>
> The Chinese were paid $30 to $35 in gold a month, finding [maintaining] themselves, while the whites were paid about the same with their board thrown in . . . .[15]

Wilder said that nine-tenths of the force on the road were Chinese. Using black powder, the Chinese averaged an advance of 1.18 feet daily.

The first train arrived at Summit Station[16] from Sacramento November 30, 1867. The summit tunnels had been completed in August of that year and the thousands of workers, mostly Chinese, were turned loose to build the line that had been graded previously to the Nevada State line. Now the job of hauling locomotives, cars, and iron over the summit for the forty miles of roadbed awaiting the rails began.

A. P. Partridge, who also aided in construction, told of the conditions under which the railroad gangs worked in the winter of 1866. He told Heath that the snows came early that year

> and drove the crews out of the mountains. There were about 4,000 men . . . 3,000 of them Chinese. Most . . . came to Truckee and filled up all the old buildings and sheds. An old barn collapsed and killed four Chinese. A good many were frozen to death.[17]

A construction report by Strobridge indicated crews, that winter, were at work many miles ahead of the line.

> It was necessary to have the heavy work in Palisade Canyon done in advance of the main force, and 3,000 men with 400 horses and carts were sent to that point, a distance of 300 miles in advance of the track. Hay grain and all supplies for the men and horses had to be hauled by teams over the deserts for that great distance. Water for men and animals was hauled at times 40 miles.[18]

On August 1, 1867, C. P. Huntington issued a report from his New York office as the race to meet Union Pacific gathered storm: "The company hopes to increase its force of 10,000 men to 15,000 during the present season when progress over the plains will be very rapid."[19]

[15] Erle Heath, editor of the *Southern Pacific Bulletin*, conducted question and answer interviews with various persons who had worked on the construction of the Central Pacific. Copies of these interviews are on file in the archives of the Southern Pacific Company in San Francisco.

[16] There is no longer a station by that name, although at one time trains did stop at Summit.

[17] Heath, Interviews.

[18] Heath, "Trail to Rail," *S.P.B.*, XV, Chap. XX, p. 9.

[19] Collis P. Huntington, *Railroad Communications with the Pacific with an account of the Central Pacific Railroad of California: The Character of the Work, its Progress, Resources, Earnings and Future Prospects* (New York, 1867). A copy of this pamphlet is in the archives of the Southern Pacific Company in San Francisco.

A Chinese tea carrier of the Central Pacific Railroad. Alfred A. Hart photograph, gift of the Southern Pacific Railroad Company.

Charles Crocker announced as a New Year's resolution "a mile a day for every working day in 1868." Apparently, the other associates were of the same mind as on January 26, 1868, Collis P. Huntington wrote to Crocker,

> I consider it of the most vital importance that we build to the Wasatch Mountains. . . . I would build the road in the cheapest possible manner then go back and improve it at once, because the Union Pacific have built the cheapest kind of road.

On June 20, 1868, the *Alta California* of San Francisco carried a story on the first trip between Sacramento and Reno. The reporter who told the story mentioned that below Cisco, "Chinamen are swarming all along the road. They have nearly finished their work in this vicinity and are packing their traps preparatory to passing on over the Summit into the great interior basin . . . ."

He continued his story:

> As the first through passenger train sweeps down the eastern slopes of the Sierras, John [meaning the Chinese laborers] comprehending fully the importance of the event, loses his natural appearance of stolidity and indifference and welcomes with the swinging of his broad-brimmed hat and loud, uncouth shouts the iron horse and those that he brings with him.
>
> John with his patient toil, directed by American energy and backed by American capital, has broken down the great barrier at last and opened over it the greatest highway yet created for the march of commerce and civilization around the globe . . . .
>
> Central Pacific found it desirable to increase grading forces considerably, so they brought several hundred Chinamen direct from China and organized them into construction gangs. The Piute Indians got among these Chinese and told them some big stories about enormous snakes out on that desert large enough that they could swallow a Chinaman easily . . . four or five hundred took their belongings and struck out to return directly to Sacramento. Crocker & Co. had spent quite a little money to secure them and they sent men on horseback after them . . . . Most of them came back again, kind of quieted down, and after nothing happened and they never saw any of the snakes, they forgot about them.

Despite such diversions, progress was swift. The *Alta California* pictured the pace of Central Pacific construction:

> Camp equipage, work shops, boarding house, offices and in fact the big settlement literally took up its bed and walked. The place that knew it in the morning knew it no more at night. It was nearly 10 miles off and where was a busy town of 5,000 inhabitants in the morning, was a deserted village site at night, while a smooth, well-built, compact road bed for traveling stretched from the morning site to evening tarrying place.[20]

Caxton, pen name for *San Francisco Chronicle* correspondent W. H. Rhodes, along on an inspection trip by railroad commissioners early in September 1868, wrote:

> . . . we were informed by Mr. Crocker . . . he had just placed upon the work all the Indian tribes living in the great basin of the Humboldt, consisting chiefly of the Pah-Utahs, Cowchillas and Washoes. I asked him how many men he had at work? He replied that it was impossible to tell as no list of names was kept and the men worked by the squad and not as individuals. In explanation, he added that Indians and Chinese were so much alike personally that no human being could tell them apart and, therefore, for fear of paying double wages, he devised the scheme of employing, working and paying them by the wholesale. Thus, every morning a count is made of those who go to work, a second of those who eat and a third of those who quit at night. In this way, lengthy bookkeeping is avoided, time is saved and cheating prevented. At the present time,

[20] *Alta California* (San Francisco), June 20, 1868.

there are about 10,000 Chinese, 1,000 whites and "any number" of Indians employed on the road . . . .[21]

At the end of track, 307 miles from Sacramento between Mill City and Winnemucca, the train trip ended. Caxton reported

> Here we found a very large number of men at work — principally Chinese — laying the track. . . . A horse was furnished me by Gen. Crocker and I rode on a gallop to the front. The grading is completed several hundred miles in advance of the track laying, so there is no delay in placing the rails.
>
> It would be impossible to describe how rapidly, orderly and perfectly this is done without seeing the operation itself. There are just as many employed as can conveniently work, and no more. Vehicles laden with ties are always in advance, and Chinese with guage and leveling rod place them across the grade, almost as quick as thought. The car with the rails is brought up at a gallop and six white men — three at each rail — roll the iron off the car and drop it upon the track with the velocity of steam. The empty car is lifted off the track, and then one fully loaded is drawn to the front, and the same operation repeated ad infinitum.
>
> I found it was no joke . . . [when] Gen. Crocker . . . [said] it would be no easy task to overtake the end of the road. Taking out my watch, I timed the last half mile I saw laid, and it took a little less than 28 minutes . . . .[22]

On November 9, 1868, the *Alta California* further pictured the Chinese forces in action at the rail end:

> Long lines of horses, mules and wagons are standing in the open desert near the camp train. The stock is getting its breakfast of hay and barley. Trains are shunting in from the west with supplies and materials for the day's work. Foremen are galloping here and there on horseback giving or receiving orders. Swarms of laborers, Chinese, Europeans and Americans, are hurrying to their work. . . . By the side of the grade smokes the camp fires of the blue clad laborers who could be seen in groups waiting for the signal to start work. These are the Chinese, and the job of this particular contingent is to clear a level roadbed for the track. They are the vanguard of the construction forces. Miles back is the camp of the rear guard — the Chinese who follow the track gang, ballasting and finishing the roadbed.
>
> Systematic workers these Chinese — competent and wonderfully effective because tireless and unremitting in their industry. . . .
>
> The Chinese board themselves. One of their number is selected in each gang to receive all wages and buy all provisions. They usually pay an American clerk — $1 a month apiece is usual — to see that each gets all he earned and is charged no more than his share of the living expenses. They are paid from $30 to $35 a month, out of which they board themselves. They are credited with having saved about $20 a month. Their workday is from sunrise to sunset, six days in the week. They spend Sun-

[21] *San Francisco Chronicle*, September 10, 1868.
[22] *Ibid.*

Victory Camp (later named Rozel) west of Promontory was so called because it was here that the Central Pacific boss, Charles Crocker, won a $10,000 bet from the Union Pacific that Crocker's men could lay more miles of track in one day than the Union Pacific crews. In the center foreground is J. H. Strobridge, who led the Central Pacific construction crews. Photograph gift of Bernice Gibbs Anderson.

Below, Victory Camp today is one more railroad ghost town along the abandoned Central Pacific Railroad line. Harry Harpster photograph.

day washing and mending, gambling and smoking, and frequently, old timers will testify, in shrill-toned quarreling.

At sunrise a signal to turn to is given from the camp train. What at first seemed confusion to the visitor soon is the aim of this third gang to keep pace with the rail gang. At times lack of wagons make it impossible to keep up the supply of poles and the telegraph gangs, who pride themselves on never letting the track get ahead of them utilize sage brush, barrels, ties — surreptitiously taken from the track — or anything else that would keep the wire off the ground until the supply of poles again equal the demand.

Then comes a wagon bearing a reel of wire which unrolls as the wagon goes ahead. As the wire uncoils it is carried upon the poles and made fast to the insulators.

Back of the track builders follows a gang with the seven or more ties necessary to complete the foundation for each rail. These are put into position and spiked by another gang, which also level up the track and leave it ready for the ballasters.

Meanwhile on board the camp train cooks are preparing dinner, clerks are busy with accounts and records, and the telegraph wire is tapping back the needs for tomorrow in the way of material and supplies.

Twice a day the camp train moves to the end of the track — at noon to give all hands the hot dinner that six-hours of labor has earned and at night to give supper and sleeping accommodations.

Immediately on reaching the end of the track at night a telegraph wire is cut in from the last pole to the telegraph car and Sacramento is notified of the number of miles of track laid.

The Vallejo *Evening Chronicle* of January 11, 1869, told how the Chinese gangs were paid:

Sisson and Crocker Co. had an interpreter named Sam Thayer and also a Chinese interpreter. When they came up to these gangs of Chinamen, the money due them would be already counted out and they would dump the money in one of the Chinese' hats for that gang with a statement written in Chinese. There would be no time for explanations. They had to take it whether they liked it or not. This Sam Thayer claimed he could speak half a dozen Chinese dialects. If there were any claims about the pay, they would take it up with the Sisson and Crocker Company later.

The most intense construction took place in the early months of 1869. One day Union Pacific's Irish "terriers" laid six miles of track. Crocker's "pets," paced by Central Pacific's own Irish track builders, followed with seven. This was bettered by the rival camp and brought the boast from Crocker that his men could lay ten miles of track in a day. It is said that his wager of $10,000 was "covered" by Thomas C. Durant, vice-president of the Union Pacific. Crocker and Strobridge made careful plans. Ties were laid several miles in advance and materials were hauled ahead to strategic points. On April 28, 1869, while a number of

officers of both companies, including General G. M. Dodge chief engineer of the Union Pacific, several newspaper correspondents, and workers from the rival camp looked on, the Central Pacific forces, working with military precision and organization, laid ten miles and fifty-six feet of track in a little less than twelve hours, a feat that has never been equaled. This day's performance brought the Central Pacific railhead past Camp Victory, later Rozel, a few miles from Promontory and completion of the Central Pacific.[23]

Although many claims have been made about the Central Pacific and Union Pacific powder crews blowing up each others forces as the grades began to parallel in Utah, such activity has not been substantiated by any contemporary account.

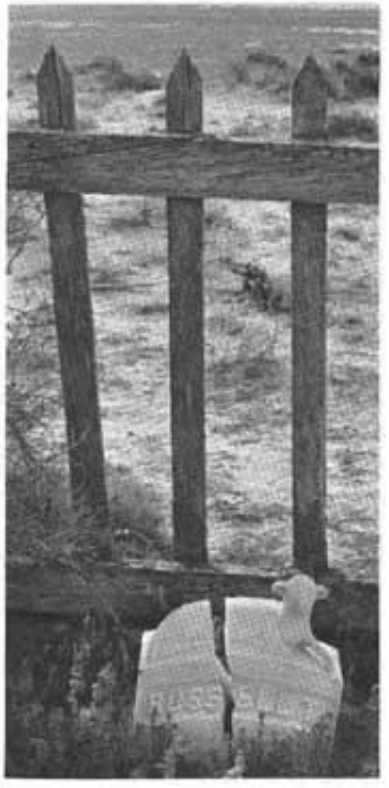
The Salt Lake City *Deseret Evening News* of March 25, 1869, reported that

> Sharp and Young's blasters are jarring the earth every few minutes with their glycerine and powder, lifting whole ledges of limestone rock from their long resting places, hurling them hundreds of feet in the air and scattering them around for a half mile in every direction. Mr. T. E. Ticks showed me a boulder of three or four hundred pounds weight that was thrown over a half mile and completely buried itself in the ground within twenty yards of his cook room. I ate a hearty breakfast and left that spot *sine dine*. At Carlisle's works a few days ago, four men were preparing a blast by filling a large crevice in a ledge with powder. After pouring in the powder they undertook to work it down with iron bars, the bars striking the rocks caused an explosion; one of the men was blown two or three hundred feet in the air, breaking every bone in his body, the other three were terribly burnt and wounded with flying stones . . . .
>
> From what I can observe and hear from others, there is considerable opposition between the two railroad companies, both lines run near each other, so near that in one place the UP are taking a four feet cut out of the CP fill to finish their grade, leaving the CP to fill the cut thus made in the formation of their grade.
>
> The two companies' blasters work very near each other and when Sharp & Young's men first began work, the CP would give them no warning when they fired their fuse. Jim Livingston, Sharp's able foreman, said nothing but went to work and loaded a point of rock with nitro-glycerine, and without saying anything to the CP "let her rip." The explosion was terrific. The report was heard on the Dry Tortugas, and the foreman of the CP came down to confer with Mr. Livingston about the necessity of each party notifying the other when ready for a blast. The matter was speedily arranged to the satisfaction of both parties.

Nothing was mentioned of any injury or death resulting from actions of the other road, however.

[23] Heath, "Trail to Rail," *S.P.B.*, XV, Chap. XXII, p. 11.

Kelton was one of the thriving railroad towns along the route of the Central Pacific Railroad in northern Utah. After the construction of the Lucin Cutoff, the town dwindled and now only ghostly reminders mark a once bustling community. Harry Harpster photographs.



On May 6, the San Francisco *Evening Bulletin* reported a Chinese Tong war:

> A battle has occurred between two rival companies of Chinamen, several hundred in number, laborers of the See Yup and Teng Wo Companies. They have been idle at [Camp] Victory, eight miles from here, for a number of days past. The row occurred about $15 due from one camp to the other. After the usual braggadocio, both parties sailed in, at a given signal, armed with every conceivable weapon. Spades were handled and crowbars, spikes, picks and infernal machines were hurled between the rank of the contestants. Several shots were fired and everything betokened the outbreak of a riot. At this juncture, Superintendent Strobridge, with several of his men, rushed into

> the melee and, with the assistance of the leading "Chinamen," who were more peaceably disposed, he succeeded in separating the combatants and restoring order . . . .
>
> The casualties include the shooting, fatally, it is supposed of a Chinaman. The ball penetrated his left side, tearing the flesh and inflicting a very ugly wound. If this man dies, another encounter will certainly follow and much bloodshed will doubtless ensue. Dr. Blackwood has rendered surgical attendance to the wounded man.

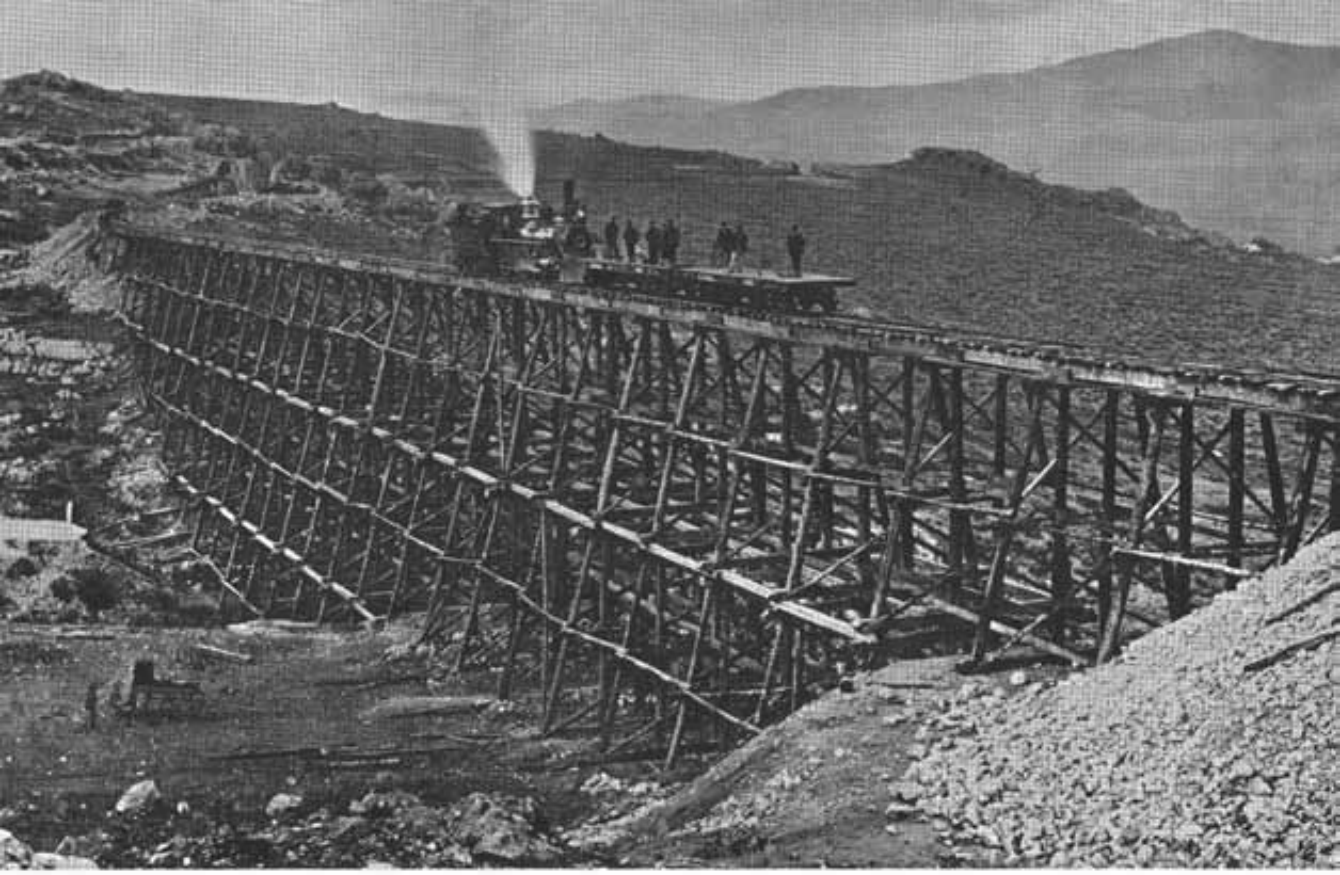
Further fighting was apparently avoided since no other mention appeared in the newspaper.

On May 8, a dispatch to the San Francisco *Evening Bulletin* reported that

> A large gang of graders attached to the Union Pacific road, made their appearance here today, announcing their intention to "clean out" the Chinese who had an encounter here yesterday. . . . Though much bluster and menacing language was indulged, still no positive demonstration has yet been made. . . . At all events, no collision can occur today and steps will be taken to prevent such altogether.

"Crocker's Pets," who had made the road possible, almost disrupted the final events that were to celebrate their labor. On the way to Promontory, the Stanford special narrowly escaped catastrophy. Chinese, cutting timber on the mountains above the entrance to Tunnel No. 14 near the state line east of Truckee, saw the regular train pass. Unaware of the following special, they carelessly skidded a log down upon the track below. The log, fifty feet long by forty-two inches in circumference, landed in a cut with one end against the bank and the other on a rail. The engineer, rounding a curve there, braked his train but it struck the log, crippling the engine. A guest, riding on the cowcatcher, was injured. The log scraped all along one side of the car, taking the steps with it. A wire was sent ahead from the next station in time to hold the train at Wadsworth until the Stanford coach could be attached. Thus, the Chinese were responsible for the use of the Central Pacific locomotive "Jupiter" at the ceremonies, rather than the "Antelope" which had started to make the trip.

The famous Gold Spike ceremony that united the Central Pacific and Union Pacific railroads at Promontory took place only a few days later, on May 10, 1869. With the completion of the Central Pacific, many Chinese workers moved to other railroad construction jobs, including some for the Central Pacific. Others returned with their savings to their families in Canton. Others still sent to China for wives and settled in various western communities as laundrymen and restaurateurs. The majority who remained, however, returned to the Pacific Coast.



The "Big Trestle" spans a 405-foot ravine on the Union Pacific line east of Promontory. Engine No. 119 and crew pose for photographer A. J. Russell, whose photographer's wagon is in the ravine to the left. In the background is the "Big Fill" of the Central Pacific. Utah State Historical Society photograph.

Golden Spike National Historic Site: Development of an Historical Reconstruction

BY F. A. KETTERSON, JR.

Mr. Ketterson is historian at the Golden Spike National Historic Site. He is responsible for the authentication of the historic displays at the Visitor Center and restoration of the Golden Spike Historic Site.

View from the road at the entrance of the Golden Spike National Historic Site. In the foreground (left and right) can be seen the abutments on which the "Big Trestle" rested, while to the rear is the "Big Fill." This will be an interpretative point within the Historic Site. Harry Harpster photograph.

FEW EVENTS IN OUR nation's history have captured people's imaginations as did the last days of the building of the first transcontinental railroad. The grand finale of this epic feat of construction took place at Promontory Summit, Utah, on May 10, 1869.

To commemorate the building of the railroad, Congress in 1957 established a seven-acre tract at the site where the Central Pacific and Union Pacific met. Designated the Golden Spike National Historic Site, the park thus established was not federally owned. In 1965 Congress authorized the enlargement of the area to encompass fifteen miles of the old Central Pacific Railroad right-of-way, and its transfer to federal ownership under the administration of the National Park Service.

One of the goals of the National Park Service development program for Golden Spike is the recreation, as nearly as possible, of the historic scene of May 10, 1869, at Promontory Summit. The project will include the reconstruction of the railroad grades, tracks, telegraph line, and

ceremonial trappings. Eventually, it is hoped to reconstruct replicas of the two locomotives that met at Promontory.

In order to carry this recreation goal to fruition, it was necessary that a certain amount of research for detailed information be carried out. At the outset, it was thought this research project would be relatively simple and rapidly completed. The comment of J. H. Beadle concerning the ceremony should have been a warning as to the simplicity of the project.

> . . . it is to be regretted that no arrangements were made for surrounding the work with a line of some sort, in which case all might have witnessed the work without difficulty. As it was, the crowd pushed upon the workmen so closely that less than twenty persons saw the affair entirely, while none of the reporters were able to hear what was said.[1]

This confusion, an almost total lack of recorded data in some areas, and conflicting reports from observers at the scene made somewhat difficult the gathering of the detailed information necessary to do a reasonably accurate recreation of the May 10, 1869, scene. This confusion also created a vacuum into which legend moved. One of the tasks was to separate, as nearly as possible, fact from fiction.

The investigation for the reconstruction was divided into two general areas: (1) the physical scene and (2) the ceremonial trappings.

For the recreation of the physical scene — to determine just what was on the ground at midday on May 10, 1869, in the way of grade, track, telegraph, tents, etc. — it was necessary to rely almost completely on photographs made at the time of the ceremony. At the outset, it was thought the reconstruction would consist of two railroad grades, a single line of track, and a single line of telegraph poles. After examination of numerous photographs, it was discovered that a number of items in addition to those previously mentioned would be needed. A siding built on the Union Pacific grade that extended to a point opposite the "spike site,"[2] a line of Union Pacific telegraph poles that extended through the entire reconstruction area, and a switch and siding on the Central Pacific line were identified. Also identified, but not scheduled for reconstruction at this time were a second Central Pacific siding leading to a gallows turntable and two storage tracks leading from the turntable.[3]

[1] *Utah Reporter* (Corinne), May 12, 1869.

[2] The points were located where the Union Pacific main line crossed over to the Central Pacific grade and where the 2,500-foot Union Pacific siding began. Both of these sites are outside the reconstruction area.

[3] Correspondence and discussions between the writer and Mr. Gerald Best, resident vice-president of the Pacific Coast Chapter of the American Railway and Locomotive Historical Society.

The final list of items to be reconstructed consists of the following:

(1) Two railroad grades.
(2) One line of main line track on the Central Pacific grade.
(3) One siding on the Union Pacific grade.
(4) One switch and one siding connecting with the Central Pacific line just west of the junction point.
(5) One line of Central Pacific telegraph from the west up to the junction point.
(6) One line of Union Pacific telegraph poles running through the entire area.
(7) A United States flag flying from a Central Pacific telegraph pole near the "spike site."

There were about a half dozen tents standing at the time of the ceremony. By the evening of May 10 several more had been erected and Promontory as a "hell on wheels" town began to roll. Owing to the expense involved in reconstructing and maintaining the half dozen or so tents present at midday May 10, it was decided not to reconstruct them.

With the identification of the various items that composed the physical scene of midday May 10, the next phase of planning for the reconstruction consisted of identifying materials, sizes, numbers, etc.

The first item investigated was the rail size used. Nearly all published works dealing with the construction of the railroad agree that the iron rails used weighed fifty-six pounds a yard. However, there are numerous smaller steel rails found in corrals and other places in this area whose owners are convinced that these rails came from the first transcontinental railroad. Naturally, a claim of this sort and the profusion of these rails warranted investigation. After investigating the stories of these rails, it was learned that the owners of the small steel rails were right — up to a point. The rails did indeed come off a portion of roadbed of the first Pacific railroad, but they were not the rails used in 1869. In 1904 about four miles of Southern Pacific rails were moved eastward to connect with the Oregon Short Line that ran through Brigham City. Southern Pacific, in order to retain ownership to the right-of-way from which the rails were removed, brought in and laid thirty-five-pound mine rails. This light-weight section of track was not used, and gradually farmers in the area appropriated the rails and used them for building corrals.[4]

[4] Notes supplied by Mrs. Bernice Gibbs Anderson, president, National Golden Spike Association, Corinne, Utah.

Photographed over the cab of a Central Pacific locomotive at Promontory, this view is to the east. The locomotive in the background is on a Union Pacific siding. The siding was constructed on what Union Pacific hoped would be the main line grade. The spike driving ceremony took place opposite and slightly west of the braced pole seen in the right center of the picture. This photograph was taken by Alfred A. Hart the day before the Driving of the Golden Spike. Gift of the author.

To aid in the reconstruction at Promontory Summit, Union Pacific Railroad contributed enough fifty-six-pound rails and spikes to lay about a mile of railroad. Tie plates, which can be found along the railroad grades today, were not used in 1869. This conclusion is supported by the numerous photographs of the 1869 railroad.

The next item for which type and size data were needed was the crossties. Photographs show that Central Pacific and Union Pacific used different types of ties. The Central Pacific ties were sawed and squared. The Union Pacific ties were crudely cut and adzed on two sides with the bark left on the unadzed portions. Some of the Union Pacific ties were simply trees split in two and used with no other preparation.

The next step was to determine the size of the ties. It was quickly realized that none of the meager information published relative to the

size would be of any value. This meant the information would have to be acquired by scaling from photographs. In the scaling there was one known dimension with which to work — four feet eight and one-half inches, the gauge of the rails. With this dimension the lengths of the ties could be scaled from photographs, and specifications for cutting ties for use in the reconstruction could be obtained.

The ties for both railroads in the Promontory area were, according to one inspector, made of untreated "soft white pine."[5] These ties were probably a mixture of the various pines or firs that grew in the Wasatch, Uinta, and eastern slope of the Sierra Nevada mountains. Nearly all the Central Pacific ties probably came from the sawmills the railroad set up in the vicinity of Truckee, California. Few, if any, of the Central Pacific ties used at Promontory in 1869 were redwood.

Commissioner Isaac N. Morris was something less than pleased with the way the Union Pacific ties were placed.

> Crossties are laid with great irregularity . . . . They appear, indeed to have been pitched on, and the rails spiked to them whereever they fell, provided they did not fall too far apart. No attention appears to have been paid to regularity of distance between the ties . . . [with] the distance at the ends being rarely uniform, and the space between them presenting most frequently a quadrilateral figure of equal sides and unequal ends.[6]

Photographs of the Union Pacific line at Promontory bear out Morris' observations. In the track reconstruction at Promontory it is planned to place the Union Pacific ties in the haphazard manner described by Morris. Historic photographs will be used as the guide for placement of the ties. Ties for the Central Pacific portion will be sawed and squared, and the Union Pacific ties will be rough cut as they were in 1869.

In order to determine the types of telegraph poles, crossarms, and insulators, photographs were again studied and quickly revealed that the railroads used different types of all three. The Central Pacific poles were sawed and squared; the Union Pacific were round. The Central Pacific crossarms had insulators mounted inside the arm. The insulators protruded from the bottom of the crossarm. Union Pacific crossarms had insulators that screwed on mounts, and the mounts were placed in holes on top of the crossarms. The preceding points were readily perceived from the study of historic photographs. What was not apparent from the photographs and what caused the greatest difficulty in this phase of the

[5] U.S., Congress, House, *Report of Isaac N. Morris*, 44th Cong., 1st Sess., 1875–76, House Ex. Doc. 180, p. 11. Isaac Morris was a U.S. commissioner who examined the unaccepted portions of the Union Pacific Railroad. His report was dated May 28, 1869.

[6] *Ibid.*, 10–11.

investigation, was determining the dimensions of all these items. Conspicuous by its absence was any written information relative to the sizes of the poles and crossarms. None of the historic photographs of Promontory were taken from an angle which would allow the use of the gauge of the railroad as a basis for scaling the needed dimensions. At this point this phase of the investigation ground to a complete halt for want of a known dimension to use for scaling.

A gift from Mr. Charles Rosier of Salt Lake City provided the means for getting this phase of the project moving again. He donated an 1869 Central Pacific telegraph crossarm and two insulators. The crossarm provided a known dimension that could be used for scaling the height of the Central Pacific poles. Later, five stumps of 1869 Central Pacific telegraph poles were found on the salt flats west of Promontory from which data on the base dimensions of the poles were gained.

An important added benefit of Mr. Rosier's gift was the information that the Central Pacific insulators were metal and glass and not glass alone. These insulators were, apparently, expensive to make and left something to be desired from the point of efficiency. Therefore, they were used only for a short time. Their shortcoming benefitted the reconstruction because this made their authentication quite easy.

Definite information relative to the dimensions of the Union Pacific telegraph could not be located. Therefore, conjecture based on the Central Pacific telegraph dimensions had to be used. From examination of the historic photographs, it was surmised that there were no great differences between the lengths of the Union Pacific telegraph poles and crossarms and those of Central Pacific. A dimension for the Union Pacific crossarm that was about the same as the Central Pacific crossarm was assumed, and the height of the Union Pacific poles was scaled from that. The exact type of glass insulator used on the Union Pacific telegraph could not be clearly identified. Therefore, conjecture was used. As people who have explored the route of the railroad from Corinne to Lucin know, the different types of glass insulators that have been found are numerous. The insulator selected as a model for duplication and reconstruction purposes was picked because it was the oldest looking (based on glass quality) and because it was found along the Union Pacific grade.

The matter of the flag to use in the recreated scene caused something of a problem. All the photographs studied showed the flag had twenty stars. The twenty-star flag was the official flag of the United States for only one year — from July 4, 1818, to July 4, 1819. The official flag in

1869 had thirty-seven stars. Why this anachronistic twenty-star flag was used is not known. A like flag will be used at Promontory.

In the second phase of the investigation — that for ceremonial trappings — much the same procedure followed for the physical scene investigation was used. First, the items used in the Golden Spike ceremony were identified and then as much detailed information as possible on the items so identified was obtained. In this phase of the investigation an article by Dr. J. N. Bowman was extremely helpful.[7]

The final list of items used at the ceremony consists of the following: (1) two gold spikes, (2) one silver spike, (3) one gold-silver-iron spike, (4) one California laurel tie with silver plate, and (5) one silver-plated spike maul. A number of sources list other spikes used at the ceremony, including gold, silver, and even jeweled spikes, from Idaho, Montana, and Utah. One exhaustive investigation could not verify the existence of any of these spikes.[8]

In order to replicate successfully the above-listed items, it was essential to gather as much detailed data as possible. In some cases it was possible to get all the information needed. In others some conjecture had to be used.

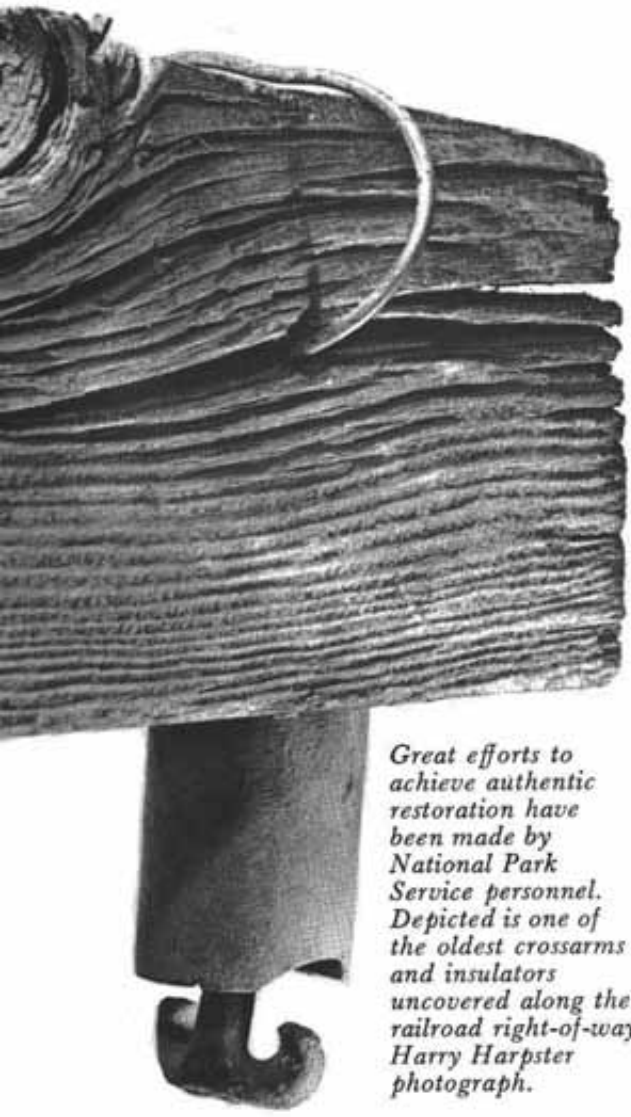
The ceremonial items on which the greatest amount of data could be compiled were the Hewes gold spike, the silver spike, and the silver-plated spike maul. Two of these items (the gold spike and silver maul) are at Stanford University.

The best known of the spikes used in the ceremony — The Golden Spike — was donated by David Hewes, a San Francisco businessman. The National Park Service's Eastern Museum Laboratory has duplicated this spike for use in an exhibit in the Visitor Center at Golden Spike National Historic Site. Stanford University loaned an exact duplicate, in regard to size and shape, of the Hewes spike to guide the laboratory staff in casting the exhibit spike. There were a number of differences in the engravings between the loaned spike and the Hewes spike. Therefore, the laboratory used photographs of the Hewes spike as their guide for engraving the spike. The result is a very good duplicate of the Hewes spike.

A second gold spike was used in the ceremony at Promontory. Frederick Marriott, owner of the San Francisco *News Letter*, donated this spike. It is less well known than the Hewes gold spike, was less valuable,

[7] J. N. Bowman, "Driving the Last Spike at Promontory, 1869," in this issue. This article is the best researched and most authoritative treatment of the ceremony and trappings that has been written.

[8] *Ibid.*



Great efforts to achieve authentic restoration have been made by National Park Service personnel. Depicted is one of the oldest crossarms and insulators uncovered along the railroad right-of-way. Harry Harpster photograph.

and its current whereabouts is unknown.[9] The preparation of a duplicate of this spike will call for a considerable amount of conjecture. The only known data available for use in duplication of the spike are its length, weight, and the text of its inscription. Conjecture will have to be used for the square dimension of the spike, the style and size of the letters of the inscription, the location of the inscription on the shaft of the spike, and the actual configuration of the spike. One reporter at the scene reported that Grenville Dodge received this spike after the ceremony.[10] What happened to this spike from that point is unknown.

With the silver spike from Nevada, a good deal of information for duplication purposes is available. This spike, in somewhat altered form, was in the possession of Stanford University. At the time of the ceremony, the silver spike was unpolished and had only the stamp of the assayers who furnished the silver, "E. Ruhling & Co." Soon after the ceremony, the spike was polished, engraved with the remarks used during its presentation at Promontory, and presented to Leland Stanford.[11] The duplicate of this spike that the National Park Service plans to make will have the same unpolished appearance as did the silver spike on May 10, 1869, and the same simple legend, "E. Ruhling & Co.," stamped on it. Conjecture will again be used for the style and size of letters stamped on the spike. With this spike, and with the other items on which letter styles must be conjectured, styles that are appropriate for the period will be used.

The last of the four ceremonial spikes was one made of gold, silver, and iron presented by A. K. P. Safford, then recently appointed territorial governor of Arizona. The sketchiest of information for this spike is available. Its present location is unknown. It was theorized, based on

[9] *Ibid.*
[10] *Ibid.*
[11] *Ibid.*

Safford's presentation speech,[12] and the dimensions and the weight of the spike, that it was probably an ordinary iron spike with its shaft silver-plated and its head gold-plated.

The Arizona spike will be duplicated using the only known dimensions with conjecture being used for lettering size and style and layout. The text engraved on the spike was the same as the presentation speech plus the words "Presented by Governor Safford."[13] Who got the Arizona spike after the ceremony is a matter of doubt. Safford may have taken it.[14] Another possibility is that it was presented to Sidney Dillon.[15]

Leland Stanford, president of the Central Pacific, and T. C. Durant, vice-president of the Union Pacific, put the ceremonial spikes into prepared holes in a California laurel tie. West Evans, Central Pacific tie contractor, donated this "french polished" tie with an appropriately engraved silver plate affixed for use in the ceremony. The tie was destroyed in the San Francisco fire of 1906. There is a difference of opinion as to whether this tie had silver bands around it at each end. No real proof, in the form of photographs, has been unearthed to support

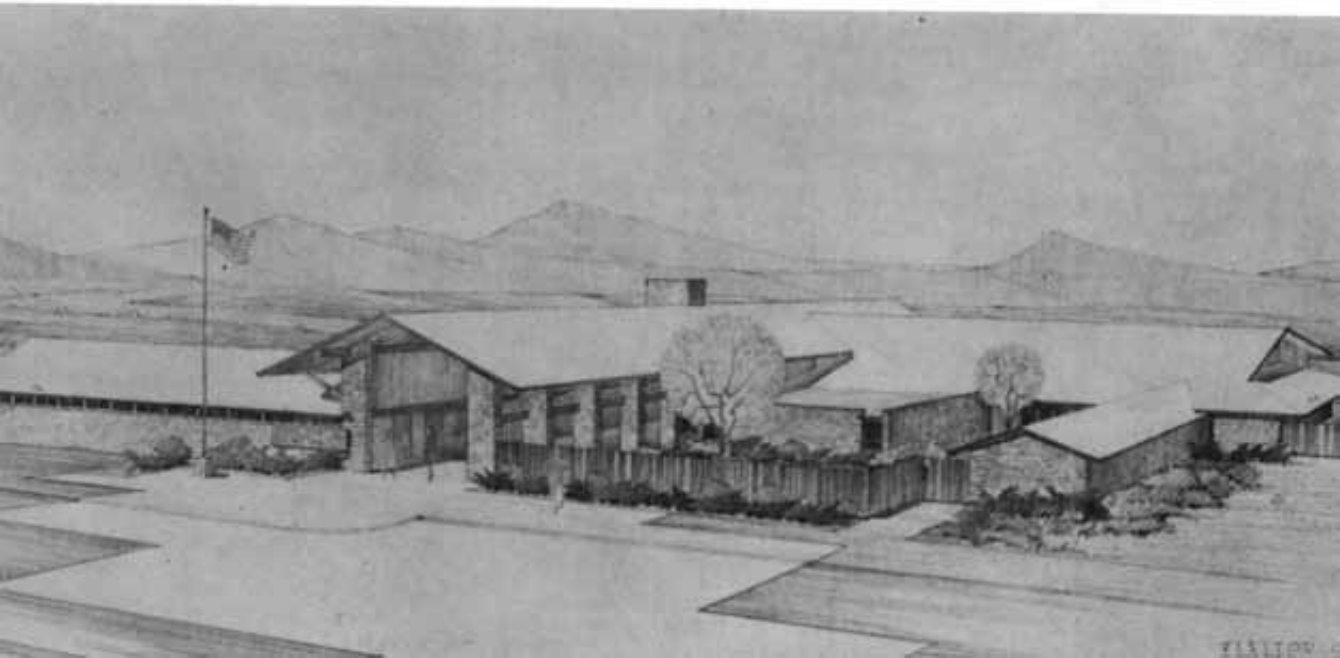
[12] Governor Safford presented the Arizona spike with these words, "Ribbed with iron, clad in silver, and crowned with gold Arizona presents her offering to the enterprise that has banded a continent, dictated a pathway to commerce."

[13] Bowman, "Driving the Last Spike," *U.H.Q.*, this issue.

[14] *Ibid.*

[15] Dillon was president of the Credit Mobilier in 1869, and later president of the Union Pacific. In recent correspondence between this writer and S. Dillon Ripley, great-grandson of Sidney Dillon and currently secretary of the Smithsonian Institution, Mr. Ripley stated that family tradition has it that the Arizona spike was given to Dillon after the ceremony and remained in his possession until his death. Sometime later this spike was given away, to whom or to what organization Mr. Ripley does not know. He is trying to find the Arizona spike.

Architect's drawing of the Golden Spike National Historic Site Visitor Center. The historic reconstruction of the grades and railroad is located behind this building. Photograph furnished by the author.



either contention. The tie that will be used for the "spike site" exhibit will not be banded.

The silver plate that was attached to the laurel tie measured about six inches by eight inches. The layout, style and size of letters, and thickness are not known. The plate most probably had no decorative lines or scrolls on it.[16]

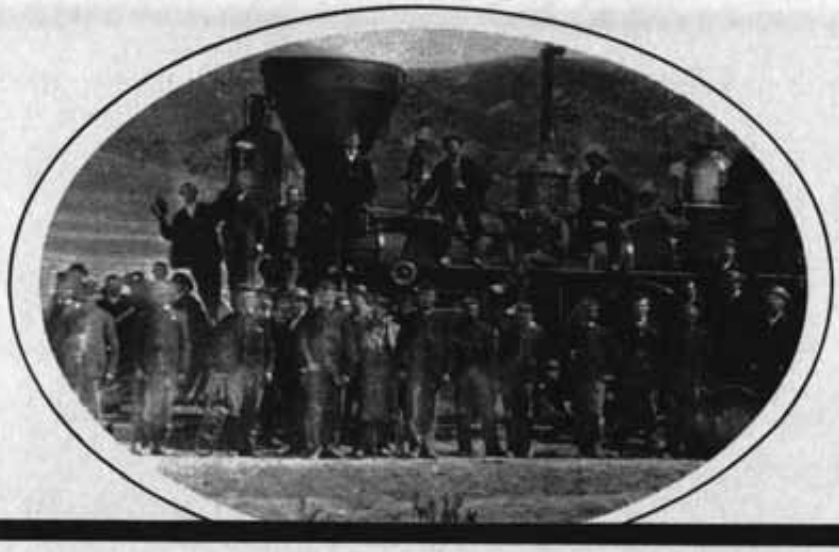
The last item used in the ceremony was an ordinary spike maul that had been silver plated. This maul is at Stanford University.

Duplicates of all of the items described, with the exception of the laurel tie, will be exhibited in the Visitor Center at Golden Spike National Historic Site. A duplicate of the laurel tie and duplicated heads of the ceremonial spikes will be exhibited at the site where the ceremony actually took place.

The reconstructed historic scene will be only one part of the interpretive program at Golden Spike. It will serve as a backdrop for and a "come on" to visitors to further explore the building of the first transcontinental railroad, and, more important, to realize that while May 10, 1869, was the end of a truly epic construction feat, it was the beginning of something with far greater import to the growth of the United States —the end of the western frontier. This railroad alone did not bring about the end of the frontier. It, in combination with the other transcontinental lines completed in the 1880's and the settlement that followed in their wake, brought about the end of the frontier.

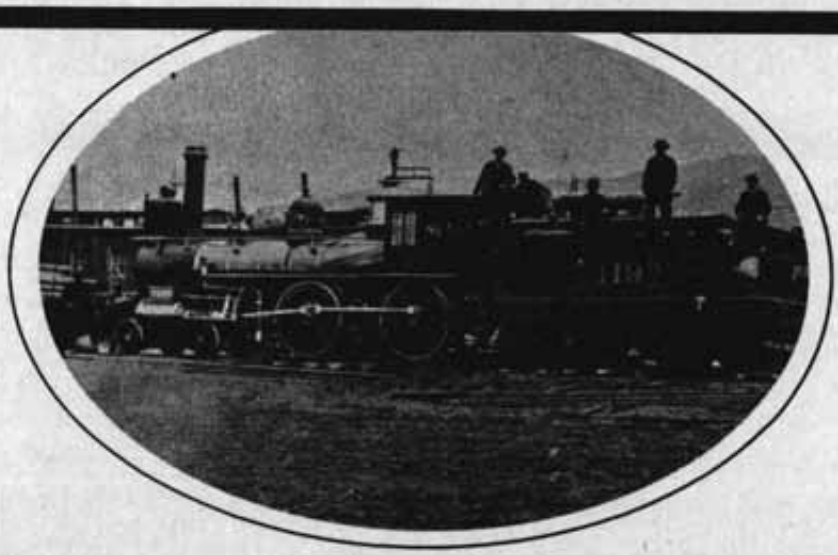
The interpretive program at Golden Spike National Historic Site, through the reconstructed scene, audiovisual programs, and free and sales publications will treat the total story of the first transcontinental railroad.

[16] Correspondence between this writer and J. C. Shea, general public relations manager of the Southern Pacific. Mr. Shea stated that Southern Pacific files indicate the plate "did not have border lines at either edge as was common at that time."



Rendezvous at Promontory: The "Jupiter" and No. 119

BY GERALD M. BEST



The two locomotives which became famous in history at the joining of the rails at Promontory, May 10, 1869. The top photograph is of the Central Pacific locomotive No. 60, the "Jupiter," photographed by Alfred A. Hart just after the driving of the last spike. This photograph was copied from a stereoscopic view at Stanford University, and is a gift of Roy Appleman.
Below, a photograph of the Union Pacific No. 119 being used during the construction of the railroad. This photograph was furnished by the author.

A STRANGE SEQUENCE OF events was to culminate in a rendezvous of two steam locomotives at Promontory, Utah, on May 10, 1869, when the golden spikes signifying the joining of the rails of the Union Pacific and the Central Pacific railroads were driven into the last tie.

The question has often been asked by those of enquiring minds, as to why the locomotives which hauled the two special trains to the meeting place were chosen for the places of honor on that day. Were they special favorites of the roads' superintendents or managers? Were they selected because they were particularly handsome specimens of the locomotive builders' art, or were they picked from the group of available locomotives and specially polished and groomed for the occasion?

None of these reasons are correct. The two locomotives came to the meeting point by a combination of accident and luck. In order to demonstrate this reasoning, the history of the two locomotives prior to May 10, 1869, has been thoroughly checked, and all the evidence bears out this theory.

The Central Pacific special train was hauled by the locomotive "Jupiter" No. 60. All Central Pacific locomotives bore names and numbers from the beginning of construction until 1872. Their names covered the range from the towns and cities through which the Central Pacific was to run, to such things as animals, birds, constellations and planets in the heavens, famous Americans, and even Greek deities. The "Jupiter" No. 60 was one of four engines of the American type, with four driving wheels and a four-wheel pony truck supporting the front end of the locomotive, built by the Schenectady Locomotive Works in September 1868. It was classed as a passenger engine, had driving wheels of 60-inch diameter, cylinders of 16-inch bore and 24-inch stroke, and it weighed 65,450 pounds without tender. The fuel it burned was wood, and the engine was equipped with a huge bonnet smokestack equipped with screens to prevent sparks from setting fire to the countryside.

All locomotives ordered by the Central Pacific from factories on the eastern seaboard were shipped from the makers in knocked-down form; such items as the boilers, smokestacks, headlights, cabs, bells, cowcatchers, and other parts were crated to facilitate stowing in the holds of the ships which carried the engines around the Horn to California. The "Jupiter" left the factory with its three mates — the "Storm" No. 61, the "Whirlwind" No. 62, and the "Leviathan" No. 63 — but in New York the "Jupiter" became separated from the others and was loaded on a

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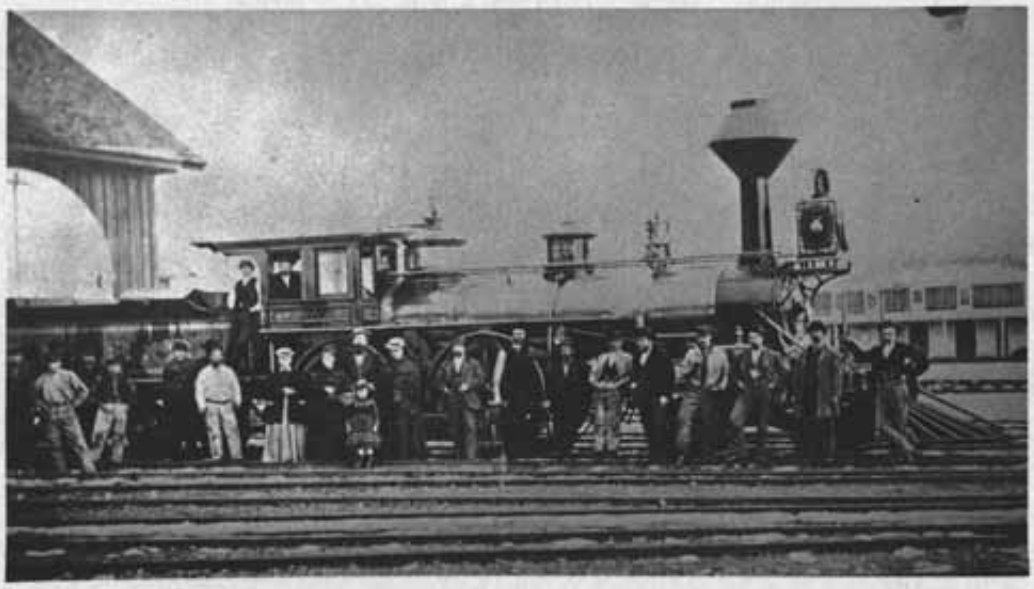
different ship. The engine arrived in San Francisco in the last week of February 1869 after a voyage of 140 days, was transferred at a special dock in San Francisco to a Sacramento River schooner the "Golden Gate," and arrived in Sacramento on February 26, 1869. The crated locomotive parts were hauled on wagons through the streets to the new 29-stall roundhouse of the Central Pacific, where the "Jupiter" was assembled during the following three weeks.

On Saturday, March 20, 1869, the "Jupiter" was put under steam and run up and down a test track on Front Street. It ran perfectly, and the mechanics responsible for setting up the engine turned it over to the operating department. It was immediately sent to Wadsworth, Nevada, 189 miles east of Sacramento, where it was put to work hauling passenger trains from Wadsworth east toward the rapidly advancing railhead. In April the other three Schenectady engines which left the factory with the "Jupiter" arrived at Wadsworth, an engine-changing point for all trains at that time.

Early in the morning of May 5, 1869, a special train backed into the Sacramento station to await the arrival of President Leland Stanford of the Central Pacific and a number of guests who were to accompany him to Promontory, Utah, for the joining of the rails, then scheduled for May 8. The train consisted of the locomotive "Antelope" No. 29, built by McKay & Aldus of Boston in 1867, a "subsistence car" or "tender," and President Stanford's private car. The "tender" looked like an ordi-

The Central Pacific special with the "Jupiter," waiting near Promontory while members of the Stanford party climbed the hills for a better view. Alfred A. Hart photograph from the Stanford University Library, furnished by the author.



Central Pacific "Antelope" No. 29, which pulled President Stanford's special train part way to Promontory. This photograph is from the collection of John B. Hungerford and was furnished by the author.

nary baggage car externally, but the interior was divided into a large number of compartments — one lined with zinc for meat; several for vegetables, etc.; one with a wire door for fowls; large tanks for fresh water; and several sleeping berths for the train crew. It had just been built in the Sacramento shops for the very purpose for which it was to be used, as a companion car to the president's car. The latter had sleeping quarters for ten passengers and a large section given over to either business conferences or dining. Stanford's guests on the train included three government commissioners, California Chief Justice S. W. Sanderson, Governor A. P. K. Safford of Arizona, and several of Stanford's personal friends — one of whom was Dr. J. D. B. Stillman of Sacramento. The locomotive "Antelope" was a favorite with the engine crews working out of Sacramento, and as it was intended to run the locomotive through to Promontory, it had been cleaned and polished until it looked like new.

Running as a second section of the regular 6:30 A.M. passenger train, the "Antelope" hauled the special without incident until the train had passed over the summit of the Sierras and was running through the Truckee River Valley toward Reno. At a point in a fairly deep cut just before the track entered a tunnel, a group of Chinese laborers were cutting trees on the mountainside, and having seen the regular train pass

thought they had plenty of time to roll a trimmed log down the mountain to a point near the railroad. The log got away from them, rolling down the steep bank into the railroad cut where it lay close to one of the rails. The log was fifty feet long and over three feet in diameter at one end. When the "Antelope" and its train came around the curve and the engineer saw the obstruction, it was too late to stop. Dr. W. H. Harkness, editor of the *Sacramento Press*, was on the cowcatcher and forseeing the inevitable crash, jumped to the ground and was slightly injured. The "Antelope" lost its cowcatcher, one side of the engine, and the steps of the cars were somewhat damaged. The damage was not enough to prevent the train from proceeding at a slow pace to Reno. Here a telegram was sent to Wadsworth to hold the regular train until the special arrived.

When the special reached Wadsworth, its two cars were attached to the rear of the regular train, which was hauled by "Jupiter" No. 60, in its sixth week of service. The "Jupiter" hauled the augmented train to Elko, where most of the passengers detrained, the train ending its run at Toano, Nevada, on the east side of the Pequop Range. Here the special cars were detached, and the "Jupiter" assigned to haul them to Promontory. A water car with additional water for the locomotive was added at this point, and on Friday, May 7, the train reached the vicinity of Promontory where word was received that the Union Pacific special train had been delayed and that the driving of the last spikes had been postponed until Monday, May 10.

This left President Stanford's party with time on their hands, and on Saturday they were invited to inspect part of the Union Pacific's line. They were taken by special train as far east as Weber Creek Station, twenty-six miles east of Ogden. On Sunday the Central Pacific special returned some distance west of Promontory, so the guests could inspect the shore of Great Salt Lake. Photographer A. A. Hart of Sacramento was with the party, and his stereoscopic views of the train are all that we have as a record of that day of idleness along the lake shore.

On Monday, May 10, the "Jupiter" brought the Stanford special to the meeting point at Promontory, and there the Union Pacific special was awaited. Photos show that the water car had been removed from the train. At 10:00 A.M. the Union Pacific special came in sight headed by locomotive No. 119, hauling a four-car train which included a "subsistence" car, a business car, the company director's car, and a Pullman sleeping car. On the train were Vice-President Thomas C. Durant, Chief Engineer Major General Grenville M. Dodge, Colonel Silas Seymour (Dodge's assistant), Superintendent Samuel B. Reed, and Jack and Dan

Casement (contractors who had built most of the Union Pacific). Bishop John Sharp of the Church of Jesus Christ of Latter-day Saints was an invited guest, as was Mayor Lorin Farr of Ogden, who represented Brigham Young at the ceremony.

As it is not the purpose of this paper to describe the ceremony itself, it is now engine No. 119's turn in the spotlight. This engine was of the American or eight-wheel type (the same as the "Jupiter"), was built by the Rogers Locomotive Works at Paterson, New Jersey, and was turned out November 19, 1868. It was shipped west as dead freight, with a messenger riding in the cab to make sure the engine's new bearings were lubricated frequently. Arriving at Council Bluffs, the engine was ferried across the river by mid-December, and was quickly set up at the Omaha roundhouse, as it had been shipped fully assembled. No. 119 was one of a series of five engines, Nos. 116 to 120 inclusive, and all were sent to the west end of the line during December. They had small driving wheels of 54-inch diameter, 16 by 24-inch cylinders, and weighed 68,400 pounds. They were considered freight engines and were admirable for handling construction trains. Photographer Andrew J. Russell's views made in the week before the Promontory meeting show no less than four out of the five engines in this group in service on construction trains in Weber Canyon or in the vicinity of Promontory. One of these pictures shows No. 119 with two flat cars in the middle of a trestle only a short distance from the end of the line. No. 117 had been the first locomotive to enter Ogden a few weeks earlier, and had also hauled the Stanford party on their excursion to Weber Canyon. All five locomotives were coal burners, and were equipped with an extended smokebox in which were adjustable cinder screens controlled by the firemen by means of a lever extending from the cab. The smokestack was Hudson's patent straight stack, with a large brass cap on top. No. 119 presented a distinct contrast to the "Jupiter," which seemed larger due to its huge bonnet stack and 60-inch driving wheels.

After Sidney Dillon became president of the Union Pacific, he was asked why engine No. 119 had been selected to head the official train. He was not sure, but thought it had been placed on the train at Ogden because it was serviced and ready, and therefore "first out." Being well suited to haul the train up the grade to Promontory, it was placed on the train by sheer happenstance. No. 119's crew probably spent considerable time cleaning and polishing the engine, for the brass cap on the smokestack and the brass steam dome casing gleam in the sunlight in the pictures made on that great day at Promontory.

After the ceremony the two locomotives returned to their regular duties and worked for many years before being retired. U.P. No. 119 was renumbered No. 343 in July 1885 and was rebuilt with larger driving wheels and various other changes and improvements. In April 1903 it was vacated from the equipment rolls and scrapped. Its four mates had either been scrapped or sold to second-hand locomotive dealers. In 1903 President E. H. Harriman was busy consolidating all his railroads into one system and obviously gave no thought to No. 119's fate; the Union Pacific motive power officials probably cared even less.

The Central Pacific's "Jupiter" soon became plain No. 60, and the fact that its owners had no sentiment whatsoever about the locomotive is seen in its later history. It was renumbered No. 1195 in 1891, received a new boiler at Sacramento in 1893, and was immediately sold to the Gila Valley, Globe & Northern Railroad, then under construction north from Bowie, Arizona, on the Southern Pacific, to Globe and Miami. As G.V.G.&N. No. 1, the old "Jupiter" worked out its days and was scrapped unceremoniously at Globe in 1901, two years earlier than old Union Pacific No. 119. The late Seth Arkills of Globe, first the fireman and then the engineer of No. 1, told the writer after he had retired in 1936 that everyone in Globe knew that the "One-spot" was the old "Jupiter," that it was an historic engine, and that it had been at Promontory in 1869. Arkills had developed an affection for No. 1 which caused him to have several photographs made of it on different trains which it hauled — the only photographic record of the last days of the "Jupiter." Arkills even wrote a letter of protest to Superintendent A. M. Beal, asking that the engine be preserved at Globe alongside the station. The letter accomplished nothing, for the Southern Pacific had control of the road by then and the locomotive was worth over a thousand dollars as scrap. Sentiment played no part in their thinking.

In all fairness to the Southern Pacific it should be pointed out that they preserved the engine "Governor Stanford" No. 1 by presenting it to Leland Stanford, Jr., University in 1899, insuring its preservation to this day. The Central Pacific's third locomotive, the "C. P. Huntington," sold to the Southern Pacific in 1871 to become their No. 1, has also been preserved and remains on display in Sacramento. The engines which met at Promontory enjoyed their brief moment of fame, and only in recent years have historians brought the engines into the prominence they deserved. In an effort to add a star to their crown of glory, this paper has been written.

Driving the Last Spike at Promontory 1869*

BY J. N. BOWMAN

The "Joining of the Rails," the most significant photograph in the history of the railroad, was for years credited to Utah photographer Charles R. Savage. Within the past decade the original wet plate negative was located in the A. J. Russell Collection of the American Geographical Society. This is a direct print from the glass negative and shows unmistakably the A. J. Russell identification and coding at the top of the photograph.

In July 1954, the governor's office referred to the state archives a letter of inquiry as to a second gold spike used upon the completion of the transcontinental railroad at Promontory on May 10, 1869. In preparing an answer to the letter, a number of problems arose, especially regarding the tradition that a silver sledge made the impressions on the head of the gold spike, that this spike was "driven," and that it was the last one driven. The following is the result of that study. But because of the conflicting stories of the events of that day written by persons present at the ceremonies, the various factors involved will first be considered.

The Source Material. There are extant no official or public records of the day's events, so that reliance must be placed on the statements of the persons present who sent dispatches then or later, or who wrote items or gave interviews at later dates. Over twenty newspapers had one or more reporters present; three persons present wrote diaries; and G. M. Dodge, S. D. Dillon, A. L. Bowsher, and David Lemon wrote stories or gave interviews long afterwards. Published accounts have been written from tradition or from some of these stories, and so are of secondary value. The existing contradictions may be explained by the statement of H. Beadle in the *Utah Daily Reporter*, two days after the events took place; namely, that no arrangements had been made for the ceremony and at the last minute a few items of procedure were laid down. "As it was, the crowd pushed upon the workmen so closely that less than 20 persons saw the affair entirely, while none of the reporters were able to hear all that was said"; and he "regrets that the noise and confusion prevented us from hearing their addresses." C. R. Savage and Bowsher stated later that they did not see the whole of the ceremony as they were both too busy. Much of the data of the dispatches, especially the copies of the speeches and of the prayer, had been secured beforehand during the two-day delay at Ogden. Regarding the gold spike, it is evident that its prominence in all these stories is due to its intrinsic value, to the prominence of the donor, and to its having been the "last" spike. The general confusion may also be seen in the fact that the reporters, with one exception, did not note the position of the sun or of the shadows cast, and so do not speak in terms of the actual cardinal points. Their statements must be read in terms of the photographs taken at the time by the three

* This article is reprinted with the permission of the author and director of the California Historical Society. It appeared originally in the *California Historical Society Quarterly*, XXXVI (June and September, 1957).

Dr. Bowman taught at various institutions (including the University of Washington and the University of California). From 1948 until his retirement in 1955, he was historian in charge of the State Archives in Sacramento. The Utah State Historical Society is indebted to Dr. Bowman for granting permission to reprint his article shortly before his death in 1968.

official photographers, and also by what may be considered as reasonably possible.[1]

The Gold Spike. The gold spike was presented by David Hewes of San Francisco, who had become wealthy by leveling the sand ridges and dunes and filling in the water lots. His offer to provide a gold spike was accepted by President Leland Stanford of the Central Pacific Railroad. The spike was made and finished by Schulz, Fischer & Mohrig, San Francisco, with a rough gold nugget attached to its end or point. It was reported as 6 inches long, weighing 18 ounces and valued at $350.00. Its actual description is: $5^{5}/_{8}$ inches long (overall) and $^{17}/_{32}$ inches square, 14.13 ounces in weight, 14.292 specific gravity, 13.377 ounces approximate gold, and 17.6 carats fine. It was inscribed on all four sides with the names of the officers and directors, the donor and the salutation, and on the top were the words "The Last Spike." The inscription has been printed many times. The spike was on exhibition in San Francisco and later in Sacramento before going to the "front." After the ceremony it was removed from the "last" tie, brought back to California, and returned to the donor in whose possession it remained until it was given in 1892, as part of his art collection, to Stanford University. In 1936 the university deposited the spike in the Wells Fargo Bank, San Francisco, with arrangements for its exhibit daily in the history room; on November 1, 1954, it was returned to the university where it now reposes in the museum.

The spike shows no sledge marks on the head nor any abrasions on the sides or edges as the result of driving in and removal from a tie; the point now shows the irregular edge where the nugget was broken off to be turned into souvenirs; this edge is the length of the width of the spike and is about $1/8$ inch wide, indicating the difficulty that would have been experienced had it actually been driven into a tie. The only markings on the spike are the indentations on the head, which tradition says were made by the silver hammer when it was driven into the tie as the last spike. Nor are there any claw marks on or under the head to indicate its removal from a tie. Also there is nothing in connection with the spike

[1] Unless otherwise stated, citations are to San Francisco newspapers; thus: *Alta* for *Alta California*, *Bull.* for *Bulletin*, *Chron.* for *Chronicle*, *Exam.* for *Examiner*, etc.

The Sacramento *Bee* and the *Union* are cited as *Bee*, *Union* respectively; the *Nevada Territorial Enterprise* as *Enterprise*.

The diarists were J. C. Currier, C. R. Savage, and L. H. Eicholtz.

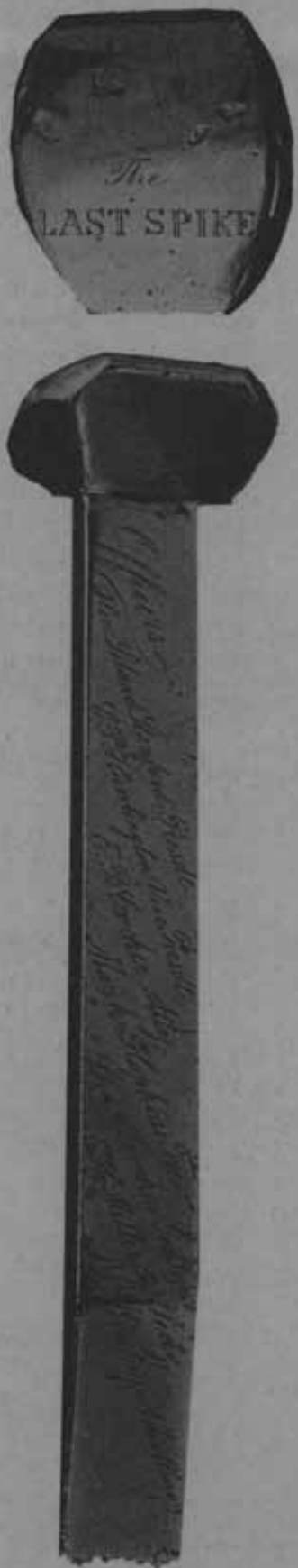
S. D. Dillon, G. M. Dodge, E. L. Sabin, and J. D. B. Stillman, all eyewitnesses, wrote articles then or later. A. L. Bowsher and David Lemon gave interviews, much later, as to the events of that day. Most of these sources are in the Bancroft Library, Berkeley. Earl Heath and E. C. Schafer, of the Public Relations Departments of the Southern Pacific and Union Pacific respectively, have an abundance of data on the Promontory ceremonies.

After note 2, the year 1869 is understood, unless otherwise stated.

to indicate that it is not now in the condition it was in in 1869 when it was returned to Hewes from Promontory. Any markings, sledge marks, claw marks, abrasions on the sides and edges made on that day would have been as highly regarded as the spike itself.[2]

The Second Gold Spike. This spike was overshadowed by the Hewes spike because of its less intrinsic value and because it donor was less well known. Its existence was mentioned by a number of newspapers in both San Francisco and Sacramento when it was on exhibition, but after that it was not mentioned as such during the presentation of the four ceremonial spikes, and was only included anonymously as one of the "two gold spikes" used on that day. It was presented to President Stanford by Frank Marriott, proprietor of the San Francisco *News Letter.* It was described as about 5 inches in length, weighing about 9½ ounces and valued at about $200.00, and was inscribed: "With this spike the San Francisco *News Letter* offers its homage to the great work which has joined the Atlantic and Pacific Oceans. This month — May, 1869." Unfortunately no copies of the *News Letter* of May 1869 are known to be in existence, therefore all knowledge of it rests on the notices in the other papers.

[2] The general literature on the subject is not listed here. See *Herald*, May 5, 1869; *Utah Reporter*, May 12, 1869. *Chron.*, May 5, 1869, alone mentions the nugget as attached to the head of the gold spike instead of to the point, and that it weighed 7 ounces. There is no evidence as to the source of the gold for the Hewes spike. Commercial dust or nuggets would imply a value of $214.49, without the "nugget." The papers generally reported the spike's value as between $360.00 and $414.00, but without indicating whether this included the "nugget."



Photographs of original spike furnished by Stanford University.

The only direct reference to the fate of the second gold spike, so far found, is the statement in the Sacramento *Bee* that Dodge received this spike while Stanford received the gold spike and the silver sledge. Its fate beyond this point is unknown.[8]

The Nevada Silver Spike. This spike, mentioned by all reporters, had been ordered suddenly and presumably by Commissioner J. W. Haines early in May 1869; the order was given to the E. Ruhling & Co., assayers, Virginia City, who provided the silver and supervised its manufacture by Robert Lodge of the Dowling Blacksmith Shop on May 5. During the forging, the papers reported that over one hundred persons each struck one or more blows with sledges. It was said to be about 6 inches long, ¾ inches square with a 1½ inch head, weighed 10½ ounces (one paper said 10¼), and was made from 25 ounces of silver. The assayer reported its fineness as "50 gold and 942 silver." It was in a somewhat rough condition, unpolished, and bore only the stamp of "E. Ruhling & Co." When completed, it was taken by C. von Gorder in a buggy twenty miles to Reno, where he arrived just in time to catch the delayed Sacramento special to Promontory, and was there handed to Commissioner Haines. After the ceremony, its return to Nevada was reported three days later: that G. T. Gage arrived in Virginia City "early yesterday [May 11] bringing with him the Nevada silver spike driven at the point where the connection was made between the Central Pacific and the Union Pacific railroads. After a train passed over them both the gold spike of California and silver spike of Nevada were taken out and iron spikes substituted. The last spike will be carefully preserved." Within ten days the spike was somewhat remodeled, the "E. Ruhling & Co." stamp was removed, and it was polished and inscribed with "To Leland Stanford President of the Central Pacific Railroad. To the iron of the East and the gold of the West Nevada adds her link of silver to span the continent and wed the oceans. . . . It was placed in a neat case fashioned to fit it" and was on exhibition on May 23 in the Nye & Co. store, jewelers. Beyond this point its story was lost until it turned up in Stanford University's museum. The university reports an absence of evidence as to when and by whom it came into its possession. From the salutation of the inscription it may be inferred that, at once or at an early date, it was sent to Stanford who treasured it with the silver sledge, and

[8] *Bee*, May 7 and 13; *Bull.*, May 7; *Call*, May 4; *Chron.*, May 5; *Exam.*, May 5; *Herald*, May 5; *Idaho World*, May 13; *Enterprise*, May 9 and 12; *Times*, May 5; *Union*, May 5; *Utah Reporter*, May 12 (three days earlier it mentioned the two gold spikes as having been "presented by the press of Sacramento"); *Leslie's*, June 5, p. 23; *Overland*, III, 82.

together they came in the 1890's to the new university where they were joined by the gold spike when it arrived from the Hewes heirs.

The silver spike is identical in length and size to the Hewes gold spike with a slight difference in the head, and has the above inscription on one side but with no other wording. The spike shows no evidence of sledge marks on the head nor claw marks under the head, nor scratches on the sides and edges from having been driven into and pulled out of a tie; but the head has about eight small prick marks which might have been made by some pointed instrument — not by a sledge — or may have been made in packing for transportation.[4]

The Arizona Iron-Silver-Gold Spike. The reporters record the presentation of this spike by Governor A. K. P. Safford but give no description or data as to the spike itself. One Arizona paper, however, quotes the San Francisco *Bulletin* as stating that on an unmentioned date there had been exhibited at D. W. Laird's jewelry store at 610 Market

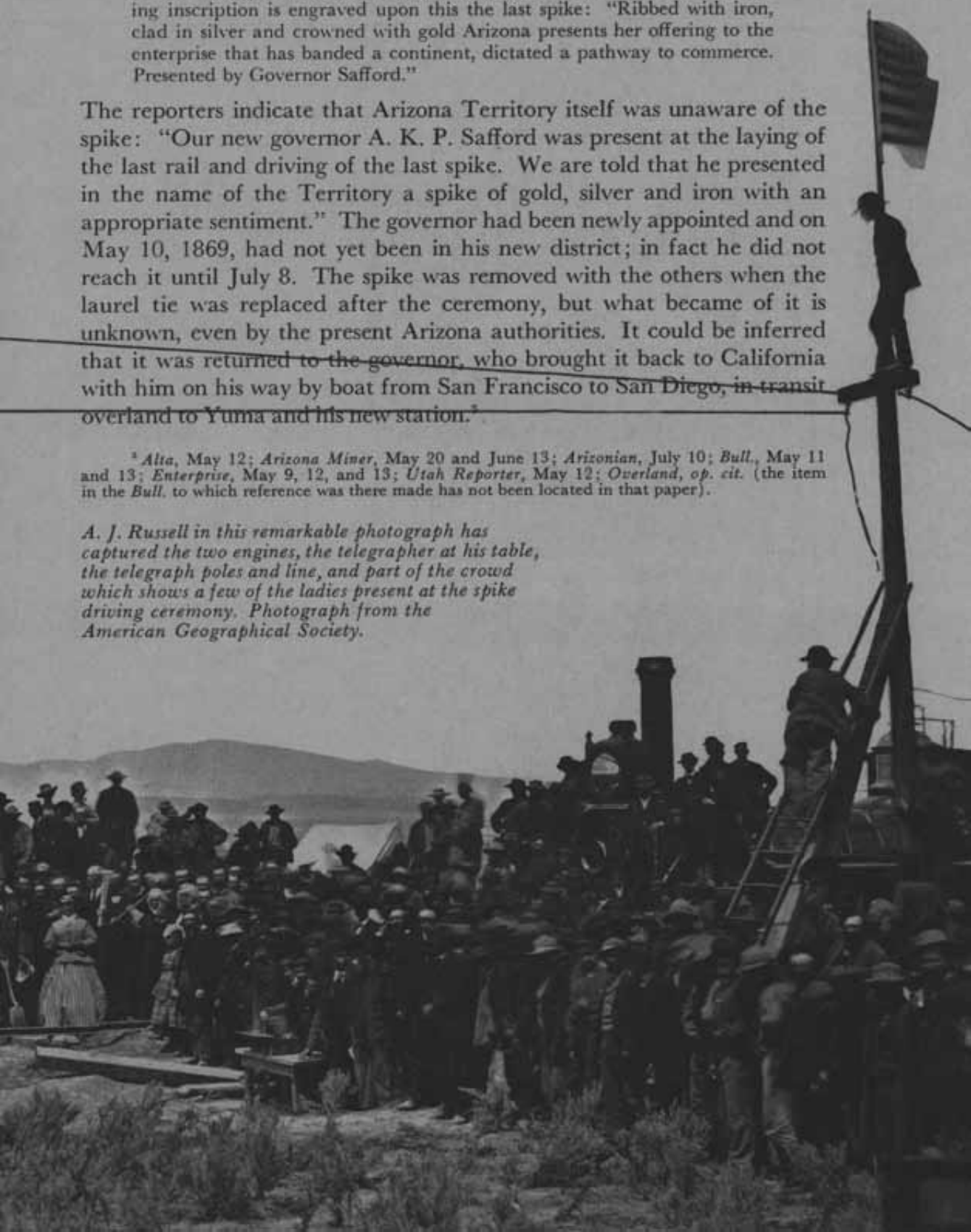
> a beautiful spike which will be presented to the Central Pacific Railroad Company as Arizona's tribute to the great triumph of the age. The spike is six inches in length, three-quarters of an inch thick and is 1½ inches

[4] *Alta*, May 12; *Arizona Miner*, May 29, June 5 and 12; Gold Hill *News*, May 7 and 12; *Enterprise*, May 6, 7, 13, and 23; *Utah Reporter*, May 12; White Pine *News*, May 13 and 23. *Overland, op. cit.* One reporter stated that the spike was inscribed at the time of the presentation, and gave the presentation talk practically in the words of the present inscription. From the surplus silver used in making the spike, duplicates were made by the Ruhling Co. One was presented to the editor of the Gold Hill *News* (May 6), and no doubt to other papers; and Governor Safford presented a duplicate to the editor of the Carson *Appeal* (May 11).

across the head, and weighs 10¼ ounces. The gold and silver used are of the finest quality and the workmanship is very creditable. The following inscription is engraved upon this the last spike: "Ribbed with iron, clad in silver and crowned with gold Arizona presents her offering to the enterprise that has banded a continent, dictated a pathway to commerce. Presented by Governor Safford."

The reporters indicate that Arizona Territory itself was unaware of the spike: "Our new governor A. K. P. Safford was present at the laying of the last rail and driving of the last spike. We are told that he presented in the name of the Territory a spike of gold, silver and iron with an appropriate sentiment." The governor had been newly appointed and on May 10, 1869, had not yet been in his new district; in fact he did not reach it until July 8. The spike was removed with the others when the laurel tie was replaced after the ceremony, but what became of it is unknown, even by the present Arizona authorities. It could be inferred that it was returned to the governor, who brought it back to California with him on his way by boat from San Francisco to San Diego, in transit overland to Yuma and his new station.[3]

[3] *Alta*, May 12; *Arizona Miner*, May 20 and June 13; *Arizonian*, July 10; *Bull.*, May 11 and 13; *Enterprise*, May 9, 12, and 13; *Utah Reporter*, May 12; *Overland*, *op. cit.* (the item in the *Bull.* to which reference was there made has not been located in that paper).



A. J. Russell in this remarkable photograph has captured the two engines, the telegrapher at his table, the telegraph poles and line, and part of the crowd which shows a few of the ladies present at the spike driving ceremony. Photograph from the American Geographical Society.

1869. May 10th. 1869.
GREAT EVENT
Rail Road from the Atlantic to the Pacific
GRAND OPENING
OF THE
Union Pacific
RAIL ROAD.
PLATTE VALLEY ROUTE
PASSENGER TRAINS LEAVE
OMAHA
ON THE ARRIVAL OF TRAINS FROM THE EAST.
THROUGH TO SAN FRANCISCO
In less than Four Days, avoiding the Dangers of the Sea!
Travelers for Pleasure, Health or Business
LUXURIOUS CARS & EATING HOUSES
ON THE UNION PACIFIC RAIL ROAD.
PULLMAN'S PALACE SLEEPING CARS
RUN WITH ALL THROUGH PASSENGER TRAINS.
GOLD, SILVER AND OTHER MINERS!
CONNECTIONS MADE AT
CHEYENNE for DENVER, CENTRAL CITY & SANTA FE
AT OMAHA AND CHEYENNE FOR VIRGINIA CITY, VIRGINIA CITY, SALT LAKE CITY AND ARIZONA
THROUGH TICKETS FOR SALE AT ALL PRINCIPAL RAILROAD OFFICES!
Be Sure they Read via Platte Valley or Omaha
Company's Office 78 La Salle St., opposite City Hall and Court House Square, Chicago.
CHARLES E. PERKINS, Ticket Agent.
S. F. GILMAN, JOHN P. HART, J. BUDD, W. SNYDER,

Other Ceremonial Spikes. The report in *Leslie's* mentions two gold and two silver spikes furnished by Montana, Idaho, California, and Nevada, but without identification as to which state gave which type. There was also a tradition that Utah presented one; however, no evidence has been found of any spikes other than those already noted, and the present authorities in these states report no knowledge on the subject. The rumor no doubt resulted from the confused and congested reporting conditions of that day.[6]

The Lemon Spike. On August 13, 1954, the iron spike of David Lemon arrived at the history room of the Wells Fargo Bank in San Francisco from Illinois, where it had been preserved since 1869 by Lemon, his son and assigns, the latter presenting it in 1954 to the bank to be placed beside the gold spike with which it was closely associated. It is an ordinary iron spike of its day, 5½ inches long and roughly ½ inch square, with one side of the head raised by the claw which removed it from the tie. The small glass-topped box containing the spike also contained the following affidavit:

> To Whom It May Concern: This is the original and last iron spike driven in the completion of the Union Pacific Railroad on May 10, 1869. As fireman on the first engine over it, I was an eyewitness to the occasion. This spike was driven last, then drawn, thereby making a hole for the gold spike. Afterward the gold spike was removed and this same iron spike redriven in the hole, and by me asking Sup[erintenden]t H. M. Hoxie for this as a souvenir, Supt. Hoxie had the track foreman re-pull it and handed it to me for the service I rendered Supt. Hoxie in a former time. I have since handed it down to my son, O. E. Lemon, and it is his property. Through courtesy it will be loaned to the Whiteside-Griswold Memorial Library of White Hall for the time being. S/s David Lemon. Subscribed and sworn before me at White Hall, Ills., this 10th day of May, A.D., 1924. J. D. Rowe, Notary Public.

The following statement accompanied the spike:

> To Whom It May Concern: This spike is the property of K. W. Vanderpool, until his death, or until he otherwise disposes of it and then only to William Lee Dawdy, to whom it has been promised. It was given to me by Otis Lemon, son of the late David Lemon who was present at the gold spike ceremony and whose account of the episode is contained inside this box. S/s K. W. Vanderpool

Some questions must be raised regarding statements in the affidavit: (1) Lemon mentions that he was the fireman on the first engine over the junction but without giving the engine number, as he does in an inter-

[6] *Leslie's*, June 5, p. 23; *Scribner's*, August, 1892, p. 258.

view in the same month in which the affidavit was signed — No. 117. From photographs taken at that time, it is known that No. 119 first crossed over the joint. (2) It would not have been the last spike driven, as the last one was driven by Stanford and Durant; it could have been the last one driven in the tie which replaced the laurel tie, especially if only one replacement was needed to accommodate the souvenir hunters. (3) The spike could not have made the hole for the gold spike, as those holes were made by an auger. Part of the iron spike is larger at the point than the gold spike, and a hole made by it would have been a very snug fit for the latter, because of the contraction of the wood after its redrawal; likewise, some marking would be expected on the sides and/or edges of the gold spike, but of which there is no indication. (4) Also this iron spike could not have been re-driven in the original hole after the gold spike had been removed, because the laurel tie, into prepared holes in which the gold and silver spikes were dropped, was removed and replaced by an ordinary tie. Undoubtedly the iron spike was driven in the replaced tie, and probably in the same position occupied by the gold spike; this is on the assumption that there was only one replaced tie. At least it could have been one of the four last iron spikes driven in the replacement.

On November 1, 1954, the Lemon iron spike was given by the Wells Fargo Bank to Stanford University to join the gold spike upon its return to the museum where it now keeps company with the gold and silver spikes and the silver sledge.[7]

The Silver Sledge. The silver "pick," maul, or sledge, as described by the reporters when it was on exhibition in San Francisco and Sacramento, was "the kind used in driving railroad spikes," with a hickory handle, and made by Conroy & O'Connor; it was "heavily plated with silver which was done by Vanderslice & Co." both San Francisco firms. It was presented by the Pacific Express Co. in whose office it was on exhibition before going to Sacramento on its way to the "front."

The sledge is now and has long been in the possession of Stanford University. The head has an overall length of 6¾ inches divided into the base part, 3 inches long, with a round head 1¾ inches in diameter; and the pointed part 3¾ inches long, with a head ½ inch in diameter. It is stamped "Conroy & O'Connor." The silver plating now shows break-

[7] By accident I was in the history room of the Wells Fargo Bank on August 13, 1954, when the express package arrived, and I aided Miss Simpson in removing the packing and the small glass-topped box in which the spike had been preserved. E. C. Schafer (note 1) has kindly provided photographs of engines 117 and 119, and also other pictures by which 119 can be identified as the first one to cross the junction. After fifty-five years, Lemon could easily confuse the numbers 117 and 119, and also incidents of the relation of the iron to the gold spike, but he would be less likely to confuse the driving of the spike into the replaced tie.

ing, thus exposing the iron beneath. The two heads of the sledge show no evidence of blows in driving the spikes, nor of their striking the rail instead of the last spike at the first blow given by Stanford as reported. Any blow struck by this sledge must have been very gentle, serving only as a token blow. The part it may have played in the driving must have been symbolical only.[8]

The Laurel Tie. The ceremonial laurel tie was presented by West Evans, tie-contractor for the Central Pacific. It may have been cut by P. R. Thayer of Piedmont from trees on the side of Mount Tamalpais, yet one reporter has it coming from Santa Cruz. It was prepared and polished by Strahle & Hughes, billiard-table manufacturers in San Francisco; it was about 7½ feet in length and 8 by 6 inches in width and thickness, and had an 8 by 6-inch silver plate on the top and in the center, and was without silver bands on the ends (as one reporter stated). The plate was inscribed: "The last tie laid on the completion of the Pacific Railroad, May, 1869," with the list of officers and directors, together with the names of the maker and the donor.

The tie was on exhibition in both San Francisco and Sacramento before going on the Stanford special train to Promontory. Holes were bored in it to receive the ceremonial spikes, as said previously. One story, which must be questioned, has it that the holes were made by driving spikes in the proper places and that this was done on the Stanford special on the way to the "front." The holes were very probably made by a three-fourth-inch auger, or larger, after arriving at Promontory and during the two-day delay in the celebration. Auger holes are mentioned by many of the reporters, but whether holes for each rail were opposite or alternate is not known; it is assumed that the holes were in the usual position for spikes.

After the ceremony and after the engines had passed over it, the tie was removed and brought back to Sacramento where it remained in the railroad shop until, in 1890, it was taken to the Southern Pacific's main offices in the Flood Building, San Francisco, where it was stored in the office of one of the officials until it was burned in the 1906 San Francisco fire.[9]

[8] *Alta*, May 8; *Bull.*, May 11; *Exam.*, May 6; *Herald*, May 10; *Union*, May 5 and 6; *Times*, May 10. The metal length of the typical spike maul of that day was 6¾ inches, the handle 33 inches (overall). Similar tools of today, according to S.P. officials, have 14- and 15-inch metal heads and 32- and 36-inch handles (overall), for use with the larger spikes and 6-inch rails.

[9] *Alta*, May 5; *Bee*, May 4; *Bull.*, May 11 and 13; *Chron.*, May 5; *Call*, May 4; *Exam.*, May 4; *State Capitol Reporter*, May 11; *Union*, May 10; *Utah Reporter*, May 12; *Harper's*, July, p. 293; *Leslie's*, June 5, p. 23; *Calif. Hist. Soc. Quarterly*, Dec. 1945, p. 368, note 5.

The Iron Tie. One reporter, who was present, stated that the Union Pacific had "a fancy iron tie from the East on which the California laurel sleeper will be laid." No other reference to it has been found; yet the attitude of this line, especially that of Dodge, regarding the road holding its own ceremony, would make the existence of this tie a possibility. However, the photograph taken after the rails and ties had been placed, but before the ceremonial driving, shows no place under the joint where the laurel tie was to be placed, sufficiently deep to accommodate another tie, unless the iron tie was very thin. No reporter mentions it in connection with the tie ceremony. If an iron tie existed it must have been intended for a separate ceremony, to be conducted at this or some other time and place.[10]

Wiring for the Broadcasts. The reporters are in general agreement as to some sort of wiring of the hammer and the spike for broadcasting the blows over the Western Union system. Nothing has been learned as to who initiated the idea of a broadcast nor when the agreement was reached; the first notice found of such an arrangement is dated May 4 in Sacramento. The wiring work would take some time, and so must have been done, with a regular sledge and a regular spike, before the ceremony began. The reporters indicate that the wiring was actually done by F. L. Vandenberg of the Union Pacific, with the help of the Central Pacific's telegraph operator H. Sigler. The sledge was to be handled by Stanford, who was to strike the initial blow for the broadcast and who would naturally stand on his side — the south side — of the tie; consequently it would be wired to the Central Pacific line, with the spike wired to the Union Pacific wires. The regular telegraph wires were also connected with the key of the operator who made the system-wide broadcast.

For the details of the wiring, the reporters' stories — that the wires were connected to the silver sledge and to the gold spike — must be questioned. The time factor as recorded and reported in Washington, D.C., would not permit the wiring of these two objects after their presentation, if the stories were questioned for no other reasons. As indicated before, the congestion and confusion of the unprepared ceremony made careful observation by the reporters impossible. So reliance must be placed on the statement of A. L. Bowsher, the Union Pacific general foreman of

There is a tradition that Hewes, who provided the gold spike, also provided the laurel tie or at least paid for it; but no evidence has been found to that effect. The donor was, without doubt, West Evans.

[10] *Alta*, May 10; Sacramento *Record*, May 11.

telegraph, even though his statement was made fifty-seven years later. Also Bowsher's narrative seems reasonable and in conformity with the other events. The sledge, according to him, was one in regular use; on the head was wired a sheet of copper to improve the contact, to which the wires were attached, twisted around the handle and run to the Central Pacific line. The spike was a regular spike with the head "carefully polished" to provide a good contact; it was partly driven into the tie next south of the laurel tie, and connected with the Union Pacific wires. In 1926 Bowsher drew a sketch of the wiring of the sledge and the spike for Earl Heath of the Southern Pacific public relations office. Whether these wires were connected directly with the wires of the two roads, as they very probably were, or to the key of the operator is unknown.[11]

The Date of Ceremony. By May 1 the Central Pacific had reached its junction point and awaited the building of the last few miles of the Union Pacific which had flood, rock, and bridge difficulties in getting into the basin. The date of the junction was set for May 8, but two days before this date new troubles arose for the Union Pacific at Piedmont where the car in which Dr. T. C. Durant, the vice-president, was riding was disconnected from the train and shunted onto a side line by some four hundred workers (one reporter says five hundred) who demanded their pay, unpaid since January 1, and threatened the life of Durant and of the operator who sent Durant's wire for the money, if he, the operator, should wire for soldiers instead. The next day the $80,000 requested by Durant arrived, the men were paid, and Durant released. So the ceremony was postponed to Monday, May 10. Stanford and his group had arrived on May 8; the Union Pacific people kindly arranged to take those who cared to accept the offer, to Ogden during the delay. It was at Ogden that the reporters collected much of their data and copies of the prayer and speeches to be given on the tenth. During this waiting period the Union Pacific completed their line to within one-rail length of the western line, built a siding and also a "Y."[12]

Hour of the Driving of the Last Spike. In the absence of present-day time zones and of the synchronizing of time pieces, some question arises

[11] *Bee*, May 4; *Bull.*, May 11; Chicago *Tribune*, May 11; *Chron.*, May 12; *Times*, May 12; *Union*, May 11; *Utah Reporter*, May 9 and 12; *Leslie's*, June 5, p. 19; *Overland, op. cit.*, p. 83; Eicholtz's diary, p. 61. *Engineers Journal*, July, p. 292, says the wire was attached to the rail instead of to the spike; *Deseret News*, May 19, states that Superintendent W. B. Hibbard of the Western Union had the wires attached. Bowsher's interview with Heath is in *South. Pac. Bull.*, May 1926.

[12] It would appear that the Union Pacific officials did not wish the Piedmont affair to be generally known, but the reporters released the story. *Alta*, May 10; *Bull.*, May 10; *Chron.*, May 11; *Exam.*, May 12; *Herald*, May 10; *Times*, May 10; *Union*, May 11; *Rocky Mt. News*, May 7; Sacramento *Record*, May 11.

Preparing for the ceremony at Promontory, May 10, with a crowd gathered. Note the uneven, hacked ties of the Union Pacific and that all but one rail is in place. Charles R. Savage photograph.

as to the hour of driving the last spike. At Promontory it appears to have been about 12:45; in Virginia City it was 12:30; in Cheyenne it was 1:53; in San Francisco "precisely" 11:46, and another reporter gave it as 11:44:37 A.M.; in Washington, D.C. it was 2:47 when "done" was received. The slight difference is no doubt due to the lack of time-piece regulation.[13]

Attendance. The dispatches of the reporters show a wide divergence as to the number of people present — from 500 to 3,000, with 30,000 expected. Study of the photographs taken at the time indicates between 500 or 600 as the probable number in attendance.

The bulk of the Chinese and other workers who had completed the line by May 1 had been shunted westward to improve certain points of

[13] *Alta*, May 11, 19, and 25; *Bull.*, May 10 and 21; *Chron.*, May 11 (giving the first blow as of 11:44:37 A.M.); *Exam.*, May 12; *Figaro* (San Francisco), May 11; *Enterprise*, May 11; Savage's Diary, May 4 and 11; Eicholtz's diary, May 10, with his watch still set to eastern time; *Leslie's*, June 5, p. 19; *Scribner's*, Aug. 1892, p. 258; *Rocky Mt. News*, May 10.

the line, leaving only a few, perhaps a dozen, to do the grading, lay the ties and drive the few spikes of the west rail, lay the east rail for the ceremony, and replace the laurel tie. The bulk of the Union Pacific workmen had also been shunted to eastern points for line improvement.

At Ogden the reporters learned that the U.S. 21st infantry was on its way to the San Francisco presidio. They reported 5 companies, a surgeon, and a quartermaster, and also a few cavalry officers; one reporter gave the number of soldiers as 352, and another as 500. The implication is that all of these men were present at the ceremony of driving the last spike on May 10. One reporter, however, mentions only part of the regiment as arriving at the scene in time for the driving, and this is in keeping with the number of men that can be estimated from the photographs. If all were present, which is very doubtful, only about 3 companies were on parade for the photograph. The only company which can be identified as having been present is Company K.

The number of women present also varies among the reporters — from one to twenty. From the lists of the reporters, twenty-one can be identified by name. The photograph shows only two, perhaps three. Most of the women were the wives of officers or visitors, a few were unmarried, and four were young girls.

Two persons present indicated the closing of one period of transportation and the opening of a new one. S. V. Geltz and J. B. Kenny, Wells Fargo stage drivers, drove their last runs on their routes, the latter after twelve years of service, and the former with eight.[14]

Decorations. Many of the reporters speak of the bunting and decorations on the engines, coaches, and tents, and that when the engines "nosed" over the laurel tie they were joined by ribbons. A study of the photographs indicates no decorations of any kind in evidence, especially none on the engines. Only one reporter mentions a detail — that F. L. Van Denburgh raised the national emblem (on the telegraph pole near the junction) at 7 A.M.[15]

The Point Where Construction Ended and Maintenance Began. The logical point would seem to be when the engines passed over the joint as indicating its use for traffic, and one reporter evidently had this in mind when he wrote that "the locomotives in turn crossed over the magic tie and the union was consumated forever." But the question arises as to the replacement of the laurel tie with a regular one and spiked for the

[14] *Alta*, May 11 and 12; *Bull.*, May 10 and 13; *Chron.*, May 11 and 12; *Exam.*, May 11; *Herald*, May 12; *Times*, May 11 and 12; *State Capitol Reporter*, May 14; *Enterprise*, May 12; *Union*, May 11; *Southern Pacific Bulletin*, May 1926; Overland, *op. cit.*, p. 83.

[15] *Enterprise*, May 12.

regular traffic. Maintenance implies replacements and repairs necessitated by regular use; the replacement of the laurel tie was still part of the construction-completion ceremony and its replacement was not due to impairment by traffic use. It seems reasonable to take this replacement as the end of the construction, or the last of the several replacements before regular traffic began near 5 o'clock when the Central Pacific train passed over it, in order to use the Union Pacific Y and begin its return to Sacramento. The number of replacements is not known, but the inference from the reports is that there were more than one. Each replacement meant the new driving of the last spikes, and no doubt this was done by some unknown son of Han.

The question of completion was later raised by the Union Pacific, as it was related to the company's reception of federal subsidies and the payment of five per cent interest on its net earnings until the bonds were repaid. In 1879 the U.S. Supreme Court decided for November 6, 1869, as the date of completion. The completion for legal and financial reasons does not affect the celebration of the completion of the tracks for traffic between the east and the west.[16]

The Site. Promontory, also called at that time Promontory Summit, Promontory Point, and Promontory Station, was a plateau in the Promontory Mountains just north of where the range projects southward into Salt Lake. The reporters describe the basin as about ten miles in diameter (one reporter says three) and surrounded on three sides with peaks, covered with sagebrush and grass, and without water which on that day had to be transported eight miles to the point of celebration. The track ran from southwest to northeast through the basin and fairly close to the eastern edge; and the rails for the celebration, judging from the shadows on the photograph taken at noon, ran almost due north and south. The day was sunny with a few clouds and a slight breeze; the temperature was sixty-nine degrees in the shade of the Central Pacific telegraph car. By the time of the celebration, about twenty tents and shacks had been erected on both sides of the track but most of them on the west side. Both roads had laid switches; the Union Pacific had also laid a Y, and on the tenth each road had at least two engines and their coaches.

The junction point was the highest point of the road in the basin and was about three and one-half miles eastward of the end of the ten-mile-and-fifty-eight-feet track laid by the Chinese in one day of about twelve hours, and was also a few miles south and west of the northernmost point

[16] *Ibid.*; 99 *U.S. Reports*, 402 ff; 25 *Law Ed.*, 274 ff, 287 ff.

reached by the road between Omaha and Sacramento. At the junction point the ground was quite level, especially beyond the west rail, while on the east side the photograph shows a drop of about three feet perhaps made by the grading.

Since the general course of the roads was east and west, the reporters at the junction referred to the north and south sides of the tracks without observing the position of the sun or its shadows cast.[17]

The Stage Setting. From the photographs and the statements of a few reporters, it may be inferred that the level ground, westward of the west rail, used by the soldiers while at parade-rest and beyond whom were the tents and shacks, formed the back-stage setting for the celebration; and the slight drop from the east rail was the part held open for spectators and photographers. This would imply that the east rail was the center of the scene, while nearby were the telegrapher's table and key so as to give him an unobstructed view of the driving of the last spike which he could broadcast over his wires. This east side of the rail and the east end of the ties would be the place of honor for the driving of the ceremonial last spike and the dropping of the gold spike (Hewes) into the laurel tie. It would be here that Stanford and Durant stood on opposite sides of the tie dividing the two roads and probably on the same, outside, side of the rail.

A photograph shows this east rail to have been without spikes and fishplates, with the end of the loose rail about one and one-half inches below the end of the Union Pacific rail. It is below this joint that the photograph shows the open space for the laurel tie; from another photograph it is seen that the corresponding joint on the west rail is over the next and adjoining west tie.

Driving the Last Spike. Consideration may now be directed to reconstructing the actual "driving" of the gold spike and the last spike, reliance being placed on the dispatches of that day and on the statements written long afterwards by persons present. A determining factor in this reconstruction is the recorded times of the telegrapher's signals during the broadcast.

[17] *Alta*, May 12; *Arizona Miner*, June 5; *Bee*, May 13; *Bull.*, May 3, 5, and 7; *Chron.*, May 11; *Deseret News*, May 19; *Exam.*, May 8 and 11; *Herald*, May 10 and 13; *Enterprise*, May 12; *Times*, May 11; *Union*, May 5; *Utah Reporter*, May 12; *Leslie's*, June 5, p. 23; *Scribner's*, see note 13. Yet Dodge, writing long afterwards, says "it was a bright but cold day." There is also some difference among the reporters as to the distance between the engines — 90 to 120 feet, or 2 rail lengths; this difference may have been due to the different positions taken by the engines at different times during the ceremony. The rails were 28 and 30 feet long and 3¼ inches high, and the ties were laid 2,400 per mile on the plains and 2,500 and 2,640 in the mountains. In the photograph, about 24 feet of the last rail can be seen.

No program or arrangements had been made for the celebration on either the eighth or the tenth; only two things seem to have been previously determined: the Western Union broadcast of the blows and that this should be at noon. As already noted and for the reasons given, a postponement of two days had been made. The rivalry of the roads was well known — to the extent that in their building they overlapped parallel grades some two hundred miles before a junction point could be agreed upon and settled by congress. It was reported that Edgar Mills for the Central Pacific and General Dodge of the Union Pacific conferred for over an hour and a half on the tenth in a vain attempt to agree on a joint program, Dodge insisting on having his own, separate celebration of driving the last spike. The impass was broken by Stanford and Durant, highest ranking officials of the two lines, about five minutes before the ceremony began. This delay did not interfere with the wiring of the sledge and spike and the preparation for the broadcasting of the blows.[18]

In spite of differences among the reporters as to the events themselves and especially as to their sequence, the central activity seems to have been the "driving" of the gold and last spikes, the laying of the last rail and placing of the last tie having been preparatory thereto. The central events must then extend from the prayer to the "done" at the last blow, the time of each event being checked by the Washington records of the broadcast: 2:20, 2:27, 2:40, and 2:47.

At about 10:30 the Chinese began the final grading for the last two rails, the laying of the ties and rails, the driving of the spikes, and the bolting of the fishplates of the west rail. The last and east ceremonial rail no doubt was bolted at its south end, and perhaps a few spikes were driven near this junction. Also, since the visitors were to "drive" a last iron spike and, as amateurs, they would have had difficulty in starting the spikes, it is quite likely that the Chinese started a number of the iron spikes, as Bowsher stated that the last spike was partly driven for Stanford and Durant. Several reports record the enjoyment of the crowd at the attempts of the visitors to drive their spikes. Near noon this work was finished and the officials of both roads had arrived from the east and

[18] *Alta*, May 10; *Bull.*, May 13; *State Capitol Reporter*, May 14; *Times*, May 11; *Utah Reporter*, May 12. Dillon in *Scribner's*, August 1892, stated that the arrangements were made on very short notice. The last rails for the ceremony were really those of the Central Pacific. It is only by rare chance that both or even one of the stock rails would be of the proper length and require no cutting or boring for holes for the fishplates. The witnesses state that Stanford and Durant stood opposite to each other, but they differ as to whether they stood on the west (north) or east (south) side of the rail, and only one reporter speaks of their being on opposite sides of the tie. Questioned also must be the family tradition that Dr. John B. Campbell was "the one who actually drove the Gold Spike while his bosom friend Mr. Leland Stanford made the speech" (letter of June 22, 1950, from his daughter, Mrs. Blanche Salter, of Clearfield, Utah, to Miss Irene Simpson).

the west. The engines, uncoupled from their coaches, were run within a short distance of the ends of their respective rails; the soldiers detrained and marched to the west side of the track where they stood at parade-rest to observe the events and to serve as a background for the stage setting — or at least they were so placed for the photographs. The broadcast wiring had been completed and the table and key for the telegraph operator had been placed at an advantageous point in front and east of the joint. The visitors had collected on all sides of the track and on the engines to the extent that the congestion was especially mentioned by one reporter.

At about noon the stage was fairly well set, but to eliminate the congestion Jack Casement of the Union Pacific asked the crowd to withdraw from the rails so that all could see the ceremony, and, to aid in this retirement, the engines advanced closer to the rail ends. At 12:20 the operator notified the Western Union system that in about twenty minutes the last spike would be driven and that all wires should be kept clear. Casement again asked the crowd to retire somewhat for the better observation of all and to enable the photographers to take their pictures. J. H. Strobridge of the Central Pacific and S. B. Reed of the Union Pacific, both general superintendents of their respective lines, carried the laurel tie, the former holding the west end and Reed the east end, and from the east side of the east and last rail they placed it in its position under the final joint.

The central actors then took their places. Mills, who acted as master of ceremony, called the group to order, and introduced the Reverend J. Todd from Massachusetts for the invocation, which took about two minutes. At this point, at 12:27, the operator told the system that three dots would indicate the first blow and "done" the last blow, and "hats off" during the prayer. During the next thirteen minutes the following events must have taken place: the ceremonial driving of the last iron spikes by H. Nottingham of the Michigan Southern & Lake Shore Railroad, by W. Sherman of San Francisco and other participants, and finally by Commissioner J. W. Haines of Nevada, who also bolted the last fishplates; then came the adjustment of the laurel and other ties and their tamping after the alignment. At 12:40 the operator answered a question from the east that "we have done praying. The spike is about to be presented." In the next seven minutes the central events occurred. Dr. W. H. Harkness in a short talk presented the Hewes gold spike to Durant who "placed it in the auger hole prepared for it," no doubt on the outside of the east rail. No doubt also Harkness presented Durant with the second gold

spike for its hole on the inside of the rail, but no reporter recorded this probable fact. Governor F. A. Tritle of Nevada presented, with a few words, the silver spike to Stanford, who supposedly placed it in another auger hole in the laurel tie at the west rail; and Governor A. P. K. Safford in like manner presented his ceremonial spike of iron, silver, and gold, in the name of Arizona Territory, and also no doubt handed it to Stanford who similarly placed it in the last of the holes in the ceremonial tie. In about two and one-half minutes Stanford made his response on the acceptance of the spikes and concluded with "Now, gentlemen, with your assistance we will procede to lay the last tie, the last rail, and drive the last spike." This speech was quite evidently written in Sacramento and distributed to the reporters between the eighth and tenth, and so was not quite in keeping with the fact that the last rail and tie were already in place and the gold "last" spike already "driven."

In these seven minutes there would only be time for the driving of the last spike — the gold one had already been placed in its auger hole. On behalf of the Union Pacific, General Dodge made a much shorter response in place of Dr. Durant, who had a severe headache and after the last blow retired to his sleeper. Mills made a few remarks, followed by L. W. Coe, of the Pacific Express Co., who in a very few words presented the silver sledge to Stanford. Time would not have permitted the wiring of this sledge and the gold spike after these presentations, as is generally reported in the dispatches and stories of the reporters. Stanford may have given the gold spike or other spikes token touches with the silver sledge, but for the last spike he used the regular and wired maul, standing on the south side of the laurel tie, and no doubt on the outside of the rail, while Durant stood on the north side of the tie and also on the outside of the rail.

It is reasonable to infer that the last spike was one only and served both roads, and that Stanford alone used the wired sledge. If the two officials stood on opposite sides of the rail, the heads of the silver or regular sledges were of such length that the spike could have been driven across the three and one-fourth inch rail. Perhaps at about 12:45 the operator wired "all ready now," and, after a short pause, the three dots for the first blow went over the wires from coast to coast, followed by a single dot for each blow until at 12:47 "done" went out for the final blow. Stanford and Durant both missed the spike at the first blow, so the wired sledge did not work; but W. N. Skilling, the Union Pacific operator at the key, performed the task of sending the three dots for the first blow and one for the missed blow of Durant. Whether the final driving home

Charles R. Savage, Salt Lake photographer, recorded in his diary: "Today the ceremony of uniting the Ends of the tracks took place — I worked like a nigger all day and secured some nice Views of the scenes connected with laying the last rail . . . . Everything passed of[f] lively and the weather was delightful Saw but little of the actual driving of the gold spike and laying of the laurel tie — as I was very busy . . . ." Top, Charles R. Savage photograph, and below A. J. Russell photograph from the American Geographical Society.

of the spike was done with the wired sledge or not is not known, but probably not, and the operator would have performed his task of noting the blows on the wires. The number of blows driven is unknown; yet a San Francisco paper in a local item mentions nine, without indicating the source of the data. That number may have been correct, but surely not a larger number. Stanford and Durant gave the light token and ceremonial blows; the driving home of the spike was done by general superintendents Strobridge and Reed, but which one gave the actual last blow for the "done" is unknown.[19]

With the last blow there no doubt were cheers, but how many and how they fitted into the other activities are unknown. The crowd was again asked to retire so that the three official photographers could take their pictures. The engines advanced and "nosed" over the laurel tie, the engineers and other persons on the pilots joined hands and also broke a bottle of champagne — some say it was wine — over the tie as a christening, and pictures were taken of the "nosed" engines. One reporter indicated that Stanford and Durant stood on the pilots of the two engines and joined hands for the photographers; this, however, may be questioned. Cheers now or during this period were lustily given for the new road, for both lines, for the officers and directors of each system, for the workmen, the flag, for the President in Washington, for the ladies, and no doubt for other persons and things.

Two more ceremonies remained: the ceremonial driving of the spikes by the military officers and the ladies, and the engines crossing over the joint. Mrs. Strobridge is mentioned by name as having given a token blow on one of the silver spikes. The Nevada spike in the Stanford museum shows no evidence of blows on its head; the spike she struck may have been that of Arizona if it was a real blow that she gave. Mrs. Currier and perhaps other ladies also participated in this part of the ceremony.

For the military participation, the diary of Lieutenant J. C. Currier of Company K was found by Miss Irene Simpson of the Wells Fargo history room in 1954 in the possession of Mrs. Harriet Currier Hale (daughter of the lieutenant) of San Mateo, California, and now of Massachusetts. That portion of the diary concerning May 10 is as follows:

[19] *Bee*, May 13; *Chron.*, May 11 (with a local item in which nine blows are reported); Portland *Oregonian*, May 11. The *Rocky Mt. News* of May 10 says "3 strokes drove the spike," and the Carson telegraph office heard the indications of five blows (Carson *Appeal*, May 11).

> We have just witnessed the laying of the last rail. Crowds began assemblying at 7 a.m. There were several thousands present and ceremonies were opened with a prayer by a minister from Mass. A covered wood tie, beautifully polished and appropriately engraved was then brought out and placed in position by the highest officials of each R.R. A spike of gold was then produced with a silver hammer. A telegraph wire was attached to the spike — at a given signal, one, two, three strokes were made with the silver hammer. The telegraph wires were so arranged that the taps were flashed to all parts of the U.S. so that eager thousands in all the great cities knew the rail was laid and the R.R. complete. Truly it was worth the trip from New Hampshire alone to see this great achievement. Two beautifully decorated engines, one of each road advanced until the guards touched — the engineers climbed out and broke a bottle of champagne across the space and shook hands. Nattie [Mrs. Currier] and I were permitted to give a stroke — I used my sword hilt. Our regiment marched up and stood at Parade rest while our pictures were taken, then our regimental band played.

A few days later the regiment arrived at the San Francisco Presidio.[20]

The lieutenant and the other officers used their sword hilts in giving their ceremonial blows to the ceremonial spikes; five, perhaps, six blows of different strengths struck the gold spike (the Hewes) sufficiently hard to leave marks on the head. Doubts have been raised as to whether sword hilts were of such construction and their weight sufficient to make the indentations now seen on the gold spike. The Smithsonian Institution has army swords of that year with tangs protruding beyond the hilts, and their weight is quite similar to that found necessary to make similar indentations in gold bullion by the superintendent of the U.S. Mint in San Francisco.[21]

The present Southern Pacific and Union Pacific officials have no knowledge of any instrument in use in 1869 which could have made the present indentations on the gold spike.

The concluding ceremony was the crossing over of the joint by the two engines. The Central Pacific Jupiter backed up from the "nosed" position and the Union Pacific engine No. 119 crossed over the junction and returned to its side while Jupiter made its crossing, thus symbolizing

[20] See *Hist. Register, U.S. Army* (Washington, D.C., 1903), I, 345, for career of John Charles Currier.

[21] E. C. Schafer (note 1) learned from the Department of the Army, West Point Academy, and the Smithsonian Institution that six types of military swords were in use in 1869. M. L. Peterson of the latter organization gave the names and weights of swords in use in 1869 and a sketch of the one whose tang could have made the indentations. Ross P. Buell, superintendent, U.S. Mint, San Francisco, in a letter of February 10, 1955, stated that a two-pound hammer, dropped twenty inches, made an indentation in a gold bullion bar similar in composition to the gold spike, which was of the same depth as the deepest identation on the spike.

the completion of the construction for the traffic between the east and the west.[22]

In the meantime, telegrams were sent by Stanford and Durant to President Grant and many wires were received from various persons and states.

After the crossing by the engines, the ceremonial spikes were lifted from their auger holes in the laurel tie and the tie itself removed and replaced with a regular tie, tamped, and spiked with regular spikes, one of which was retrieved by David Lemon. The gold (Hewes) spike and the silver hammer were taken by Stanford, and the second gold spike was given to General Dodge. The Nevada silver spike was given to G. T. Gage who took it back to that state, and the Arizona Territory spike evidently was given to Governor Safford. The tie was returned to California and placed in the Sacramento shop.

The replaced tie was quickly reduced to souvenirs by the visitors and a replacement with a new tie and last spikes became necessary. Some reporters mention further replacements in the wake of the souvenir hunters, that the Chinese also cut part of a tie into mementos, and also that even the last rail was broken up into relics by the soldiers. At least one replacement could be expected and perhaps a second. Who drove the last spike on the last replacement is unknown — possibly it was one of the Chinese workmen.

After the formal ceremonial, the Central Pacific officials joined the Union Pacific group in the latter's car for a series of toasts; and one reporter stated that Strobridge gave a dinner in his car to the Chinese workmen and foreman in honor of their feat in building the road in record time.[23]

By 5 o'clock the higher officials of both roads had departed for the east and the west.

Such is the possible reconstruction of the events and their sequence based on the statements of those present, on photographs taken at the time, on an analysis of the probability of occurrences and their order of occurrence, and especially on the broadcast time-schedule of the Western Union office in Washington.

Conclusion. The gold (Hewes) spike was dropped into an auger hole, it was not driven; it was the first of the four "last" ceremonial spikes

[22] Some of the reporters stated that the engines were recoupled to their coaches before making the crossing, but this may be questioned as the engines alone would serve equally well for the symbolic crossing of traffic between the east and west.

[23] *Bull.*, May 13.

and was not the last spike driven; it was not wired for the broadcast; and the markings on its head were not made by the silver sledge or any sledge but by the tangs of the military sword hilts. There was a second gold spike from California, but what became of it after its presentation to Dodge is unknown. All the ceremonial spikes were dropped into prepared holes, none were driven. The markings on the head of the Nevada silver spike could not have been made by a sledge and what made the present pinpricks on its head is unknown. The silver sledge is silver plated and was used only for ceremonial purposes — perhaps only to touch with token blows one, several, or all of the ceremonial spikes; it was not wired for broadcasting and shows no evidence of blows struck. The Lemon spike did not make the hole for the gold spike and was not redriven into the laurel tie; it no doubt was one of the four spikes driven in the tie which replaced the laurel tie, and probably occupied in it the same position that the gold spike occupied in the laurel tie. Stanford and Durant did not "drive home" the last spike; they gave the first and second, perhaps also the third and fourth blows which actually touched the last spike; the blow for "done" of the broadcast was given by either Strobridge or Reed. The last spike driven was of iron and was wired to the Union Pacific telegraph line, as the regular sledge used by Stanford was wired to the Central Pacific wire. The laurel tie with the ceremonial spikes was removed after the crossing by the engines and was replaced by a standard tie with regular iron spikes. Who drove the last of the replacement spikes is not known but probably it was one of the Chinese workmen.

The reports of the day that the gold spike was the last, that it was wired and was driven with the silver sledge which was wired, became a tradition at once, apparently because of the widespread buildup in the papers and the crowded condition of the onlookers which prevented observation of the events and their sequence; even Dodge and Dillon, whose high official standing would have entitled them to an advantageous observation point, accepted the tradition in their stories written long afterwards.

There are still a number of problems connected with the events of that day to be analyzed from the conflicting statements of those present.

Corinne, The Fair: Gateway to Montana Mines

BY BRIGHAM D. AND BETTY M. MADSEN

"THE CHILD IS BORN, and her name, as you see, is Corinne." Thus the *Salt Lake Reporter*, datelined Corinne, March 15, 1869,[1] announced the selection of the site finally chosen for the establishment of the last town on the long line of the Union Pacific Railroad. Other camps fur-

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[1] *Montana Post* (Virginia City), April 20, 1868.

ther west were to be only temporary construction camps, and the land embraced by a sweeping curve of the Bear River was destined to become the "city of the future."

Official announcement was yet to be made, however. On October 20, 1868, the *Salt Lake Reporter* had stated that "everybody and his wife . . . is bound for Bear River. The railroad company will make that place the end of a division."[2] As soon as this became generally known, those who proposed to make real estate investments began to weigh the advantages of the various favorable possibilities for the location of a town between the mouth of Weber River and the northeast point of Great Salt Lake. Prime in their considerations was the determination of the most convenient point of departure for the stages and freight lines that would be running from the railroad to Idaho and Montana, and it soon became obvious to many that the fertile land at the top of Bear River Bay in Great Salt Lake promised the greatest number of advantages.

First, it offered the shortest, fastest, easiest route to the flourishing Montana markets. Second, it lay within a very few miles of an already established wagon road to Montana, laid out by Captain Stansbury as

[2] John Hanson Beadle, "Scrapbook containing editorials and dispatches from the *Salt Lake Daily Reporter* [and other papers], October 1868–August 1869" (microfilm, Utah State Historical Society, Salt Lake City), October 20, 1868.

Corinne in 1869. A. J. Russell photograph from the American Geographical Society.

early as 1849, which was "the greatest natural highway in the world." Third, the river offered a source of water for irrigation of the hundreds of acres of arable lands on both sides of the river — "the only pure water in any abundance between the Wasatch and Humboldt Mountains."[3] Fourth, it was also the nearest point on the railroad to the promising communities of northeastern Utah. Fifth, the Bear River showed possibilities for river navigation, for bringing the ores from the south end of the lake nearer to the railroad.

While some speculators favored Ogden or Bonneville, nearer the mountains, others were soon busy preparing for the rush of business they were sure was to come to the banks of the Bear. A year or two later the editor of the *Corinne Daily Journal* recalled that on his visit there on January 16, 1869, Al Stubblefield had a saloon where one could get bread, meat, coffee, and "sage brush whisky"; the Booths of Brigham City had set up a rope ferry, built a brush fence "from bend to bend" of the river enclosing a log house, and were claiming all the land in the large bend of the river; Gilmore and Moore had two foundations laid; and Connor and McMassar and others were preparing to establish themselves there. When the editor returned two weeks later, he found that Green and Alexander, who had been unloading their lumber on his first visit, had finished their hotel.[4]

These were no doubt among the people who were there when John Hanson Beadle visited the site (then known as Connor) on February 18, and found fifteen houses and a hundred and fifty inhabitants. On this visit he reported that

> there is no newsstand, postoffice or barber shop. The citizens wash in the river and comb their hair by crawling through the sage brush. A private stage is run from this place [Brigham City] to Promontory, passing through Connor. The proprietor calls it a Try-weekly, that is, it goes out one week and *tries* to get back the next.[5]

But a few days later he was a little more kind when he noted that

> already sharp-sighted men are locating on the even sections of land near there, although it occurs to me that they are a little fast, seeing that lands within twenty-five miles of the track on either side are withdrawn from market in the discretion of the Secretary of the Interior by the provisions of the Pacific Railroad Act.[6]

By the fourth of March, however, it would appear that Beadle felt a little more secure about the possibilities of the future of Connor City,

[3] *Ibid.*, February 21, 1869.
[4] *Corinne Daily Journal*, May 25, 1871.
[5] Beadle, "Scrapbook," February 18, 1869.
[6] *Ibid.*, February 21, 1869.

because he made a more extended visit to the crossing. With him were Colonel C. A. Reynolds, Major F. Meacham, Lieutenant A. E. Woodson, General J. A. Williamson, Captain E. B. Zabriskie, Captain John O'Neil, Messrs. M. T. Burgess, S. S. Walker, M. H. Walker, N. S. Ransohoff, N. Boukofsky, and J. M. Worley. They shared a cold dinner on the grassy west bank of the river just below the crossing and proceeded to drink a series of toasts. The first was to "the president of the United States, General U. S. Grant . . . . Drunk standing with three times three and a tiger." Other patriotic toasts were followed by one to the "twin relics of barbarism, slavery and polygamy. May the one soon follow the other to perdition." The toasting went on all day and night, with the brunt of it falling on one man "who was well able to bear it."[7] But the significant thing about his report was that the next day most of the men located claims as near to the crossing as they could get them on the even sections of land, although this was well before the Union Pacific had given any definite indication concerning the location of the new town.

The railroads and the government, so slow in coming to a decision, had all the speculators edgily waiting to learn where the junction city would be. At Ogden, an already well-established city? At Bonneville, five miles northwest of Ogden and being considered by the Union Pacific? Or at the hopeful little village known to most simply as "Bear River"?

At length, by-passing the final decision on the location of the junction city, the Union Pacific engineers surveyed both Bonneville and Connor City. The *Corinne Daily Mail* states that Connor City was surveyed as a result of a contract between "a number of Gentiles" and the Union Pacific, giving the railroad alternate lots for compensation. However, Jesse Jameson says that any agreement with the merchants of Corinne must have been oral because the railroad company had no record of its being made. As late as March 20, Beadle reported that both towns were to be placed on the market and that the Union Pacific had "offered no inducements or given any promises to either of the prospective towns." Under the direction of J. E. House, land agent for the railroad, a townsite was laid out west of the river by John O'Neil, his construction engineer. To Mr. House apparently was given the authority to choose between the two locations, and to General J. A. Williamson was given the privilege of naming it.[8]

[7] *Ibid.*, March 11, 1869.

[8] *Corinne Daily Mail*, December 22, 1874; Jesse H. Jameson, "Corinne: A Study of a Freight Transfer Point in the Montana Trade, 1869–1878" (Master's thesis, University of Utah, 1951), 50; Beadle, "Scrapbook," March 15, 20, 27, 1869; Leon L. Watters, *The Pioneer Jews of Utah* (New York, 1952), 62; Utah, Box Elder County, Recorder, Abstract Book A, p. 89.

Freighters, such as depicted here, carried goods from Corinne north to the mines of Idaho and Montana. Photograph from the Montana Historical Society, gift of the authors.

Conjectures as to the source of the name abound, but they all seem to be variations of one theme. Some state that Williamson named the city for a famous actress named Corinne LaVaunt and that when his daughter was born there she was named for the city. Others claim that the town was named for the daughter. That the daughter was named before the city was founded is verified by the *Daily Utah Reporter*, which notes that the city was named for General Williamson's "beautiful and accomplished daughter — Miss Corinne Williamson" and by the general himself, when in a community drive for funds, "General Williamson led off with a handsome donation for himself and 'ten dollars for the young lady after whom this city was named' — Miss Corinne Williamson."[9]

[9] Beadle, "Scrapbook," March 15, 1869; *Daily Utah Reporter* (Corinne), November 5, 1870, April 3, 1871.

There is, nevertheless, an interesting probability that truth may be found in both versions. After extensive search in early theatrical records, Rue Corbett Johnson reported that he could find no evidence of the existence of an actress named Corinne LaVaunt. On the other hand, in announcing the new name, Beadle made the passing comment that "Corinne" was "not without pleasing associations in itself for people acquainted with modern French literature, it being the name of one of Madame de Staël's most fascinating books." Could it not be more than a coincidence, then, that the heroine of *Corinne, ou l'Italie* (a novel published in Paris in 1807, and in English in New York in 1857 and 1861) is a beautiful and highly celebrated actress, who has no surname and is known to her admirers only as "Corinne"? It is intriguing to speculate that readers of this popular novel may have referred to their idol as "Corinne, La Vantée" (from *vanter*, a word used frequently by the author), eventually dropping the final vowel and using the descriptive title as a surname. Whatever the source of the name, it did not quite meet with the approval of everyone. The *Salt Lake Telegraph* complained that it was difficult to remember the spelling and pronunciation and objected to its being called "Coreen," suggesting a "more phonetic name . . . Bar Town, Forlorn Hope, or Last Ditch." To aid in the spelling, a rhyme was offered:

Two n's, an i, and an e;
An r, an o, and a c.[10]

As soon as O'Neil's survey was completed, House recorded it in Douglas County, Nebraska, on March 24, 1869, and the lots were placed on sale the next day. The city plat had been drawn on a grand scale (three square miles), providing for the great metropolis predicted by the more visionary of its citizens. The blocks were generally 264 by 280 feet, and the first eight blocks from the river fronting on either side of the wide railroad right-of-way were divided into twelve 22-foot lots along streets called, quite naturally, North Front Street and South Front Street. Behind each of these streets was another street where the same size lots prevailed. A 16-foot alley ran through the middle of the blocks, making the lots 132 feet deep. In the rest of the town, the lots were twice as large — six to the block — with the alley through the center.[11]

[10] Rue Corbett Johnson, "The History of the Drama in Corinne and Brigham City, Utah, 1855–1905" (Master's thesis, Brigham Young University, 1954), 6–7; Beadle, "Scrapbook," March 15, 1869; Staël-Holstein, Baroness de, *Corinne, ou l'Italie* (Paris, 1807); Madame de Staël, *Corinne; or, Italy*, trans., Isabel Hill (New York, 1857, 1861); *Salt Lake Telegraph*, April 26, 1869.

[11] Utah, Box Elder County, Recorder, Map of Corinne, March 24, 1869; *Salt Lake Telegraph*, April 6, 13, 1869.

It was the narrow business frontages on Montana Street and South Front Street which drew most of the very lively bidding, with some lots changing hands more than once during the day. The prices paid have been estimated as ranging from $5.00 to $1,000 by various observers, and the *Salt Lake Telegraph* reported that "the choice locations . . . were considered bargains at that." The sale of more than three hundred lots on the first day amounted to $30,000, and by summer, sales reached $70,000. Estimates of the amount of the railroad's interest in Corinne were as high as $100,000. Many of the three to four hundred people there had come from the previous camps of Echo and Wahsatch, and were old hands at being the first on the ground at a new boom town in order to get a good location. Some others were Salt Lake merchants, "particularly those who have been tabooed by reason of being Gentiles," who were new to the risky business of speculation in town lots.[12]

Less than two weeks later, when the Union Pacific pulled its first engine across the new bridge over the river and into Corinne on April 7, the *Telegraph* reporter could say,

> the utmost excitement prevails upon the subject of Corinne and hundreds are still flocking there. From two hundred and fifty to three hundred tents, shanties and buildings have been erected, and each day sees their number increased,

and one commentator could write that "all lost fortunes and disappointments along the line are to be retrieved here." Of those who left Ogden for the new El Dorado, a correspondent to the *Telegraph* wrote:

> They came, they went;
> And when they left us,
> They only of themselves bereft us.[13]

"Saxey," writing to the *Deseret News*, drew the conclusion that Corinne was "fast becoming civilized, several men having been killed there already, the last one was found in the river with four bullet holes through him and his head badly mangled."[14]

It is true that for a time Corinne appeared to be merely a continuation of the string of rowdy, uproarious construction camps that preceded her and stretched beyond her to the west. Some businessmen established themselves there, only to pack up after a few days to move on to some

[12] *Salt Lake Telegraph*, March 27, 1869; *Utah Reporter*, April 7, June 4, 1870; *Corinne Daily Mail*, May 25, 1871, December 22, 1874; *Montana Post*, April 2, 1869.

[13] *Salt Lake Telegraph*, April 1, 6, 9, 1869.

[14] *Deseret News* (Salt Lake City), April 7, 1869.

more likely looking town, agreeing with "Apriori," who wrote to the *Telegraph* that

> a thriving town, with whatever natural advantages, cannot be resolved from the foetid elements rankling at Corinne . . . I opine that the amount of Montana trade drawn to this direction will afford her but a flickering vitality in a season when they cannot be shipped via the Missouri River . . . in justice to the public the facts should be known.[15]

Alexander Toponce reminisced that in April and May of 1869, Corinne and Blue Creek (to the west) were pretty lively places. Speaking of the construction camp Deadfall, at Blue Creek, he says,

> It seemed for a while as if all the toughs in the west had gathered there. Every form of vice was in evidence. Drunkenness and gambling were the mildest things they did. It was not uncommon for two or three men to be shot or knifed in a night.
>
> Back at Corinne it was every bit as bad.[16]

He recognized a tent similar to ones he had seen in construction camps all the way from Omaha. It was 150 feet long and 50 feet wide, crowded with tables where every kind of gambling could be played day or night.[17]

The actual state of affairs remains vague. Beadle says that when he moved there in early April there were nineteen saloons, two dance-houses, and that the "supply of 'sports' " easily met the requirements of a railroad town. Workers drifted to Corinne for rest and recreation, and on Sunday the "men went hunting and fishing, and the 'girls' had a dance or got drunk."[18] "Apriori" wrote to the *Telegraph* in April that as he passed through Corinne, he saw, among other things,

> One house, or tent, of feminine frailty, one bar room and chop house, one grocery, one saloon with "convenient apartments" . . . one punk roost, one keg saloon, two mercantile adventures, . . . one town liquor store, one billiard hall, one washing, ironing, and plain sewing erection, several promiscuous ladies in eight-by-ten duck domiciles . . . one or two wholesale and retail liquor establishments.[19]

A correspondent from the *New York Herald*, visiting Corinne in May 1869, thought the town not much better than Deadfall in appearance and in the character of its population. In fact he was so frightened by the faces of the community that instead of spending the night there as he

[15] *Salt Lake Telegraph*, April 26, 1869.

[16] Alexander Toponce, *Reminiscences of Alexander Toponce, Pioneer 1839–1923* (Ogden, 1923), 176.

[17] *Ibid.*

[18] John H. Beadle, *The Undeveloped West: or Five Years in the Territories . . .* (Chicago, [1873]), 120.

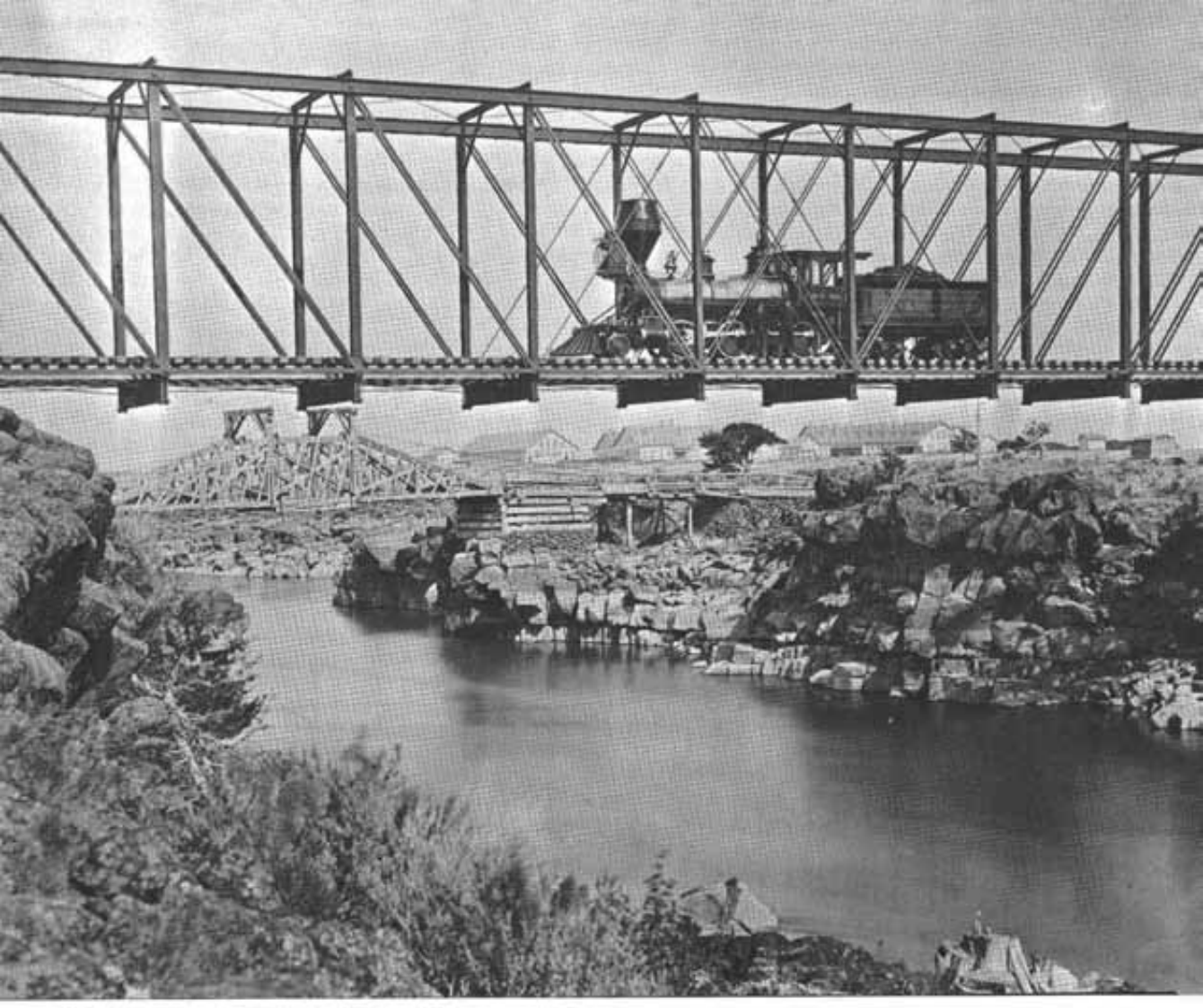
[19] *Salt Lake Telegraph*, April 13, 1869.

planned, he hired a "pine box on four wheels" and left for Brigham City, breathing a sigh of relief when Corinne was behind him. His lasting impression was that it would never be more than a station for the accommodation of trains and that it should be renamed Camille "by reason of the number and evident character of the females inhabiting it."[20]

Impressions of Corinne differed among those who were on the outside looking in, and those who were on the inside looking out. People passing through "on the cars" rarely saw more than the cluster of tents, shacks, and unrestrained characters that were to be seen in any town serving the new railroad, but the people who planned to make it their home were already endowing it with the glories they could see in the future. Commenting on this, the editor of the *Telegraph* compared the point of view of the *Herald's* correspondent with that expressed by O. J. Hollister of Corinne in his letter to the *Denver News* extolling the wonders of the city which would leave "Salt Lake City in the shade," and made a perceptive summary of current evaluations of Corinne: "Putting ... Herald man and Hollister—together on the Corinne question makes a remarkable picture, with abundance of light and shade, very glaring light and very dismal shade."[21]

Knowing that nothing permanent could derive from their enterprise without some form of law and order, the men who foresaw a vast commercial city had already formed a temporary organization when the first lots were sold. General J. A. Williamson had been chosen mayor, with William Kenny as marshal, Wells Spicer as city attorney, and with a city council including John O'Neil, J. C. Shephard, John McLaughlin, J. A. McCabe, and Joseph Crabb.[22] The activities and effectiveness of this "popular" government is not immediately clear from contemporary reports. Certainly for the first few months they lacked both funds and legal status. Newspaper correspondents with a compulsion to keep their reports spicy, told of frequent murders and robberies, but the local news rarely carried such items. The *Utah Reporter* thought the "organization ... kept good order among the populace."[23] Some funds no doubt were raised by the method used by Alexander Toponce when he became mayor several years later. He would go to a saloon, invite the clientele to have a drink with the mayor, and after they had all lined up at the bar and ordered, he would tell them of whatever need was pressing and ask them

[20] *Ibid.*, May 26, 1869.
[21] *Ibid.*
[22] *Ibid.*, April 13, 1869; Beadle, "Scrapbook," March 27, 1869.
[23] *Corinne Daily Mail*, December 22, 1874.



The Utah Northern was built to connect the transcontinental railroad with the mines of Montana. Here shown is an engine testing the new bridge at Eagle Rock, on the Snake River, now Idaho Falls, Idaho. Note the bridge for wagons in the background, and the roundhouse and other railroad buildings. Photograph gift of Gerald M. Best.

to chip in. Few refused to donate, and after visiting several saloons, the mayor usually had the money he needed.[24]

Public street meetings were called by means of posters and bonfires as often as two or three times a week, where the citizens debated the need and implementation of improvements for the city. After several lusty orations delivered atop a dry-goods box, the crowd would vote unanimously for the resolutions in question,[25] but the newspaper frequently reported delays in any subsequent action. Lack of finances probably contributed to these delays. There was little extra cash because the initial

[24] Toponce, *Reminiscences*, 230–31.
[25] Beadle, *Undeveloped West*, 121–22.

rush of business ground to a slow pace during the summer as the city waited for the eagerly sought freighting contacts. Also, the city was still plagued by the question of where the railroads would eventually place their junction, and the tension was too much for some of the less adventurous. One man who wanted to be ready to move to the "new town," should Corinne fold, went ahead and built a home, but put it together in sections held by wagon bolts. Years later, well established, he wanted to sell the fastenings, which no longer seemed necessary.[26]

Having no money and no real power, the popular government found it necessary to submit occasionally to the helping hand extended by the Utah Territorial government. Chafing under this influence of Mormondom, citizens made frequent complaints about mismanagement of funds, graft, and general inefficiency. S. G. Sewell, as justice of the peace, came in for a good bit of criticism from time to time, and when a subscription was taken to build a city jail, it was followed by an investigation of how much money had been subscribed and why contractors on the jail had not received their pay. The *Reporter* published a satisfactory accounting of the money by Mr. Sewell, but intimated lingering doubts as to his integrity in other matters. The jail apparently was carted away by creditors. Despite such occurrences, it was not until March 1870 that the *Reporter* could admit that much scandal and humiliation had been brought to the city by the shameless conduct of some who had held public office, and that Corinne had been swindled enough by an irresponsible government during the last year.[27]

At long last, the Territory of Utah recognized the existence and permanence of the little city by granting it a charter, approved February 18, 1870. Moving as quickly as possible in order to set up the city organization as outlined in the charter, the citizens held an election on March 3, 1870, in which J. Malsh was elected mayor by 112 votes to 110 votes for W. H. Munro. However, several persons signed sworn statements that they had voted illegally, and the vote was strangely called a tie, which was settled by lot "as provided by law," making W. H. Munro the first official mayor of Corinne. The voters also expressed their independence by indiscriminate scratching of tickets, with the result that five councilmen from each ticket were selected: Hiram House, A. J. Fitzgerald, S. L. Tibbals, F. Hurlbut, Sam Howe, Dr. J. W. Graham, John H. Gerrish,

[26] *Utah Reporter*, April 12, 1870; *Daily Corinne Reporter*, November 25, 1871.

[27] Robert West Howard, *The Great Iron Trail: The Story of the First Transcontinental Railroad* (New York, 1962), 333; *Utah Reporter*, February 8, 10, 19, 22, 24, March 3, April 12, 1870.

J. W. Guthrie, John Kupfer, and J. W. McNutt. Women, of course, were legally franchised, but refrained from exercising the privilege, which they regarded as a Mormon scheme to get votes.[28]

Among the first actions of the city council was the appointment of Dennis J. Toohy as city attorney, the passage of an ordinance prohibiting the erection of tents or canvas-roofed houses in and around Montana Street between Second and Seventh streets, provision for two city justices, and the designation of the *Utah Reporter* as the official newspaper of the city.[29]

During the year of infancy, the city had been the recipient of complaints about everything from morals to rents, wages, and prices, and had tried to do something constructive about all of them. In April 1869 the *Salt Lake Telegraph* had noted the "twenty 'lost ones'" who were already there, and from the beginning there had been a constant effort to confine the gambling and other vices to a diminishing section of the city, and the newspaper warned that in gambling houses "themoreyoulaydownthelessyoutakeup." In May 1869 the *Montana Post* had commented on the high rents — that half a canvas house cost $100.00 to $150.00 per month and that a 22-foot lot cost $100.00 per month. When the *Reporter* chided the merchants for their high prices, especially for board which ranged from $4.50 to $8.00 per week, the editor concluded that "the boarding business, at almost any price, is about the best business a man can get into here."[30]

As the official newspaper of the city and its most vociferous advocate, the *Reporter* moved from one such campaign to another. Indicative of the editor's interest in the welfare of the commercial interests of the city is his editorial of December 14, 1869:

> There is not a man doing business here today but what knows that there never was a time since Corinne was laid out that the mountain of orders could be met and filled without considerable patch-work and delay. No doubt . . . [they] think they have a supply equal to the demand, at present. But how long could they maintain an assortment when the heavy buyers come in? . . . We have known orders to go begging here for ten days at a time, nobody having the goods to fill them, and still merchants say it is dull . . . . All we ask of you now is to wake up to your own interests, canvass the ground, and act accordingly.[31]

[28] Utah Territory, Legislature, *Acts, Resolutions and Memorials, Passed and Adopted During the Nineteenth Annual Session of the Legislative Assembly of the Territory of Utah, 1870* (Salt Lake City, 1870), 128–31; *Utah Reporter*, March 3, 5, 10, 1870.

[29] *Utah Reporter*, March 31, 1869, February 26, March 19, April 28, May 28, 1870.

[30] *Ibid.*, January 18, 1870; *Salt Lake Telegraph*, April 6, 1869; *Montana Post*, May 14, 1869.

[31] *Utah Reporter*, December 14, 1869.

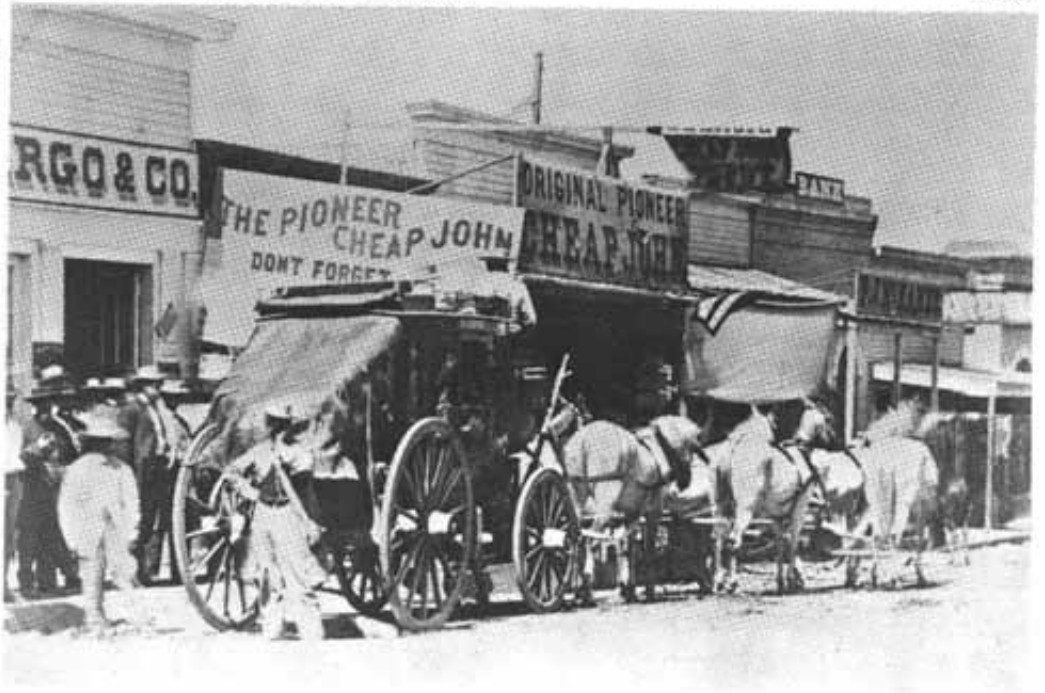
Apparently the men did "canvass the ground," because by April 1870, claim was made that sales of over $4 million had already taken place, one warehouse alone having shipped out a thousand tons of freight in the first six months. Banking cash transactions had exceeded $5 million; real estate that had probably been worth less than $100,000 was now valued at over $1.3 million; and Corinne claimed to have paid internal revenue equal to three-fifths of the entire collection from the six most populated counties of the territory.[32] And that spring, when active trade began a month earlier than had been expected, there were many ready to take advantage of it. The men of Corinne had wisely seen that their future lay in the provision of the goods and the services needed to maintain the immense flow of trade to the north.

Prior to the completion of the transcontinental railroad and the founding of "Corinne the Fair," the gold camps of Montana and Idaho had been supplied over a combination of routes from the East and the Pacific Coast. Pack trains over the Mullan Road from Walla Walla had had some significance before 1869, but the major share of supplies had gone up the Missouri River to Fort Benton and thence overland to Helena and the other western Montana towns. From one steamboat up the river in 1859, the traffic to Montana had grown to forty-two river boats in 1869, but in 1870 only eight steamers landed cargos at Fort Benton. The dramatic drop partially reflected the shift of freight business to Corinne and the Union and Central Pacific railroads. Fort Benton continued to be the chief rival of the Utah town because of the low freight rates charged by the steamship companies. The chief disadvantage faced by those engaged in the river traffic was the unreliability of sufficient water to navigate the rapids in the Upper Missouri. On the other hand freighters from northern Utah were assured of at least six to nine months of good freighting to the north.[33]

The mines of the northern Rockies were supplied initially by a rather disorganized effort on the part of Mormon farmers who used the slack season in their work to take a wagon load of produce to Montana. This early effort was soon supplanted by professional freighters who thereafter carried the bulk of the supplies along the northern road. Thus, by the time Corinne was established, the freighting route to Montana was already a well-marked dusty thoroughfare.

[32] *Ibid.*, April 7, 1870.

[33] Henry Pickering Walker, *The Wagonmasters: High Plains Freighting from the Earliest Days of the Santa Fe Trail to 1880* (Norman, Oklahoma, 1966), 201–26.



Goods and passengers were carried north from the railroad at Corinne and later from the Utah Northern railhead to mining communities such as this one — Helena, Montana. Photograph from the Montana Historical Society, gift of the authors.

It coursed along the foot of the Wasatch Mountains from Salt Lake City to Ogden and Brigham City, then over the Bear River at Hampton's Station (by ferry or bridge), up the Malad Valley, across the Great Basin divide to Marsh Creek, down the Portneuf River to Snake River, up the left bank of that stream to a crossing at Eagle Rock (now Idaho Falls), across the sagebrush desert by Camas Creek to Beaver Canyon, across Monida Pass at Pleasant Valley, down Red Rock Creek, then to Deer Lodge or Virginia City, and from either of these towns to Helena. There were minor variations, of course, but this "most natural highway" was the principal factor which made Corinne the Montana freight transfer point of the Union and Central Pacific railroads rather than Ogden. As the freighter looked north from his wagon camp in the depot yard of the Burg on the Bear, he could contemplate a dry, firm road straight up Malad Valley to his destination in Montana. Ogden, two days of heavy travel away, did not have a chance with the teamster who measured his profits in days on the road.[34]

[34] *Helena Herald*, May 28, 1870; Jameson, "Corinne," Chap. III, p. 71–111.

Still the summer of 1869 brought only depression and dull times to the merchants of Corinne. The Missouri route was heavily used because shippers and merchants, uncertain of the completion date of the transcontinental railroad and doubtful of the site for a freight transfer point, had elected to gamble on high water and the steamers for another season. By autumn the flow of goods was along the new railroad to the fair city on Bear River, and the Union Pacific could total a shipment of 1,125,960 pounds to that point by December 31, 1869.[35]

The freighting pattern for Corinne was shaped during 1870, and in turn this forwarding business determined the life and pursuits of the people of the city. As oxen, mules, and horses wintered along the bottom lands of nearby rivers, their masters enjoyed the metropolitan delights of the new town while evaluating the preparations for the next freighting season. They were considerably heartened by the sight of Creighton and Munro, agents for the Far West Fast Freight Lines, and E. G. Maclay Company, agents for the giant Diamond R firm, building warehouses to accommodate the expected flood of goods from the East. By early March 1870 some of the freighters were already on their way to Montana with small trains and light loads because of the mud and late snow storms at Pleasant Valley on the Continental Divide, and the local newspaper could record the "lively" business of the Burg as teams and freighters crowded in to get their share of goods for the north.

Mid-April found the "plain north and west of town . . . dotted with freighter camps, and stock corrals, . . . [with] large cattle herds . . . pasturing on the prairie between . . . [Corinne] and the lake."[36] By May 13 the *Helena Herald* reported that a Diamond R train of five wagons had arrived there, having made the trip in 22 days.[37] The shipments north built rapidly until May 24 when the *Corinne Reporter* listed the departure of a Garrison and Wyatt train of 10 teams with trail wagons, 8 yoke of cattle to the teams, each team loaded with 12,000 pounds. The month of May saw 2,176,820 pounds received and dispatched through Corinne for Montana,[38] the yearly total for 1870 finally reaching 6,898,732 pounds.[39]

May and June brought exciting hours of work and prosperity; then the "summer dullness" would set in during July, although occasionally

[35] *Helena Herald*, May 18, 1870.
[36] *Utah Reporter*, April 21, 1870.
[37] *Helena Herald*, May 13, 1870.
[38] *Utah Reporter*, May 24, June 5, 1870.
[39] U.S., Congress, House, William A. Jones, *Report Upon the Reconnaisance of Northwestern Wyoming*, 43rd Cong., 1st Sess., 1873–74, House Ex. Doc. 285, Serial 1615, p. 57.

the local newspaper could rejoice that the Diamond R had shipped 100,000 pounds of freight on one day — "it wasn't much of a day for freight either, in fact it is considered quite out of season."[40]

August brought much activity to the railroad yards as the freight cars began to stack up on the sidings. Everything was hurried to beat the deadline of a possible early winter at Pleasant Valley and to avoid getting "snowed in on the divide," there to cache your cargo until spring or to undertake the back-breaking and dangerous work of trying to "sled" the goods to its Montana destination. Now, the local editor could take pride in the "three immense bull trains . . . loading at the freight palaces on the off side of the track," one of which consisted of 20 wagons and 160 oxen, "the wagons being joined by twos and each couple drawn by eight yoke"; or the journalist could chortle that "Mr. Wade has arrived in town with his train, after making the round trip to Helena and back in thirty-one days. Who can beat that in overland freighting?"[41]

November concluded the hectic days of spring, summer, and fall and Corinne would settle down to a winter of ice-skating parties, occasional evening visits to the Opera House to listen to discussions of the "Mormon question," and just biding its time until another season of freighting activity made it again the "Bustling Burg on the Bear."

There was also, of course, the traffic in human cargo to Montana. The stage line which formerly had operated from Salt Lake City, courtesy of Ben Holladay's Overland Stage Company or Wells, Fargo and Company, was immediately transferred to Corinne as the base of operations for travelers to Montana. The company of Gilmer and Salisbury received the early contract to carry mail and express matter to the Montana towns. It was to be a tri-weekly service, but by March 29, 1870, the *Reporter* noted "all the hotels . . . [are crowded] with people waiting for the stages to take them northward to the gold fields . . . Gilmer and Salisbury are about to send out double runs every day."[42]

Those passengers who did not relish the bruising and sleepless journey of three or four days of constant travel, day and night, with the only stops being to change horses at the various stage stations, could choose to ride with

> Mr. Eaves . . . [who] starts a load of passengers to [Helena] or Snake River every few days; no "schedule time," but start whenever the load gets ready. His teams make only "day runs," and the passengers provide for

[40] *Helena Herald*, July 14, 1870.
[41] *Daily Utah Reporter*, August 16, September 17, 1870.
[42] *Ibid.*, March 29, 1870.

> themselves; making the route a sort of compromise between the "crossing of the plains" and the modern stage . . . fare to Helena twenty-five dollars . . . passengers have their regular sleep.[43]

Another type of passenger transportation provided even greater profits to Corinne merchants. During 1870, and for most of the decade after, as many as fifty people a day disembarked at the city to outfit themselves for the journey to Montana. The sale of horses, rigs, and supplies constituted a sizable business for many establishments during the travel season.[44]

Indeed, after the first few months of uncertainty in 1869, the new year brought great expectations for the citizens of the city on the Bear River. The light from many freighters' campfires, the bulging hotels, the throng in the railroad depot yard — all bespoke the potential of a large city which would surely outshine Salt Lake City. The only obstacle on the road to success was expressed by the editor of the local paper: "We have the banded influence of Mormonism against us on three sides." Still there was the realization that the produce of Mormon farmers, the wagons and teams of Mormon freighters, and the political influence of Mormon leaders were necessary staples which would make the only Gentile town in Utah the greatest metropolis between the Mississippi and the Pacific Coast. The *Reporter* editor noted that the streets were crowded with Mormon farmers from Cache, Malad, and other valleys. "One year ago the Mormon farmer dare not enter our city . . . [from fear] of being maltreated while here, as they were assumed they could be by the thieving hierarchy that has so long controlled their every move." One by one, continued the editor, they are coming to see for themselves and "enjoy a change from their monotonous Mormon homes." The newspaper frankly concluded, "The simple fact that not one Mormon has suffered even a scratch in Corinne in all of the eighteen months of its existence, has at last been too powerful a sermon . . . to overcome."[45]

Attracting Utah farmers to the streets and business establishments of Corinne was one thing, but this did not alter the necessity of opposing the political control of the Mormon church. The "Burg on the Bear" was described by one writer as a "little Republic" composed entirely of Gentiles in a territory predominantly Mormon.[46] One of the first political moves was to send Dr. O. D. Cass, General A. J. Williamson, General

[43] *Ibid.*, August 30, 1870.
[44] *Ibid.*, April 19, 1870.
[45] *Ibid.*, July 14, August 3, November 2, 1870.
[46] Watters, *Pioneer Jews of Utah*, 62.

Corinne, the "Gentile capital" of Utah, was where the first opposition political party was organized and was the site of the first non-Mormon church erected in Utah. It was the Methodist-Episcopal church constructed in 1870. Brigham City Protestants are presently at work restoring the church. Harry Harpster photograph.

Patrick E. Connor, J. H. Beadle, and O. J. Hollister to Washington, D.C., in November of 1869 "in the interests of Corinne," the "Gentile portion of Utah." An extreme annoyance to the non-Mormons of the city was the practice by Mormon elders from Brigham City of collecting tithes from among their church members in Corinne. The *Reporter* editor always referred to the tithes as "taxes" and exploded that the Mormons had no legal right to take this money away from their fair city. "If Brigham wants the name and honor of being the proprietor of the largest house of ill-fame in the world, all right; let them that dance pay the fiddler; we don't propose to contribute a cent."[47]

Behind the attacks on the immorality of polygamy and the church-state alliance, lay the fear that Mormon political power could destroy, or at least hinder, the economic growth of Gentile Corinne. The first attempt to escape such a fate was the movement to annex the north degree of Utah Territory to Idaho Territory, taking in Salt Lake, Weber, Cache, and Bear River valleys and especially the line of the Pacific railroad. On January 6, 1870, a "Grand Rally" was held in Corinne to marshal support for the cause of insuring life, liberty, and the pursuit of happiness from the despotism of Brigham Young. Congress failed to heed the wishes of the Corinnethians partly because Gentiles in the Mormon-dominated towns did not rally in support of the measure. One Gentile in Brigham City wrote the *Reporter* editor, "You ought to know our situation better than to ask [for our support] . . . our lives and property would not be worth mentioning if we did."[48]

The first opportunity to pursue normal political channels in hopes of breaking the Mormon domination was in July of 1870 when a convention was held in Corinne to select a "Gentile" candidate for Congress. The first meeting "broke up in a general row" according to the Mormon *Salt Lake Herald*, but two subsequent and simultaneous meetings nominated J. H. Beadle on a Radical Gentile ticket dedicated to "no compromise with Mormonism" and General George R. Maxwell on a Liberal or Compromise platform.[49] Beadle eventually withdrew so as not to divide the forces of the new Liberal party. A schism in the Mormon church, the Godbeite movement, added further strength to the new party and some Corinneites began to dream of at least capturing their county of Box Elder from the Mormons.

[47] *Utah Reporter*, December 14, 1869.
[48] *Ibid.*, January 5, 16, 1870.
[49] *Salt Lake Herald*, July 7, 1870; *Daily Utah Reporter*, July 17, 1870.

Once a bustling community on the transcontinental railroad serving the mines of Idaho and Montana, Corinne is now on a spur track of the Southern Pacific and has a population of only about five hundred persons. Some of the old buildings remain, but the streets no longer ring to the sounds of freighters, railroaders, and land speculators. Harry Harpster photograph.

A noble effort was made to capture the county during the election of 1870 and the *Salt Lake Herald* asked how it was that Corinne with a populace of about 600, and perhaps only 225 taxpayers, could poll 837 votes. The editor said everyone expected some "pretty tall ballot stuffing, but these figures indicate a plethoric result, which must astonish even the ones engaged in it." The next day the newspaper noted that it was convenient to have a railroad moving between Ogden and Corinne so that a man could cast ballots in both cities. "This hint will explain the large vote of that nice little burg on the banks of Bear River."[50]

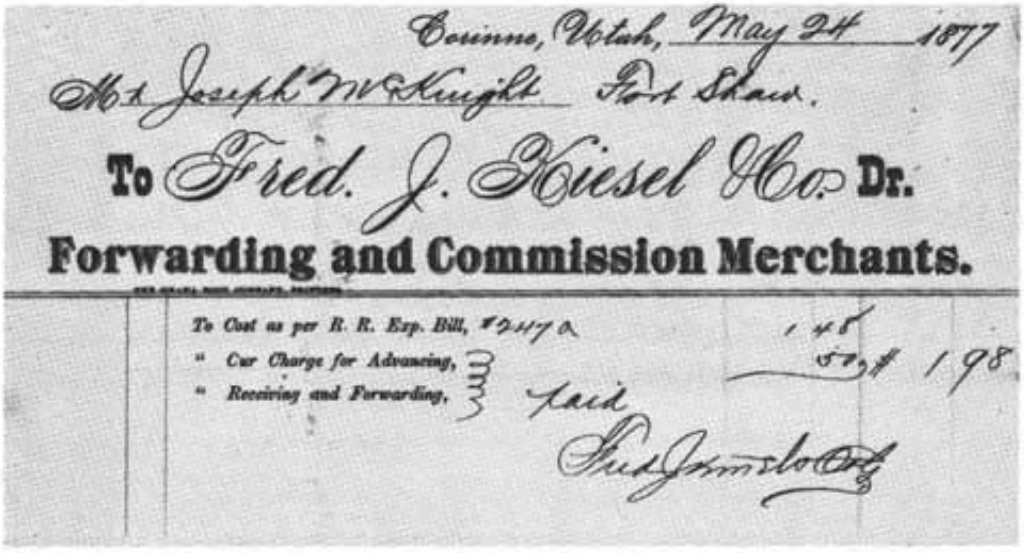
Corinne rather gloried in its unique situation as the only Gentile city in Utah and enjoyed somewhat its altercations with the Mormon polygamists; but as Jameson has said, Corinne was Montana-minded, considering itself almost an appendage of the northern territory. Realizing that the sole basis of its economic development was the transfer and forwarding business from the railroad to the freighters who jammed its

[50] *Salt Lake Herald*, August 6, 1870; *Ogden Junction*, August 6, 1870.

yards, it quavered in uncertain terror before every railroad plan which would replace the wagon traffic by a railroad to Montana. The start of the narrow-gauge Utah Northern Railroad from Brigham City to Cache Valley in 1871 created the first panic. With the completion of that road to Franklin, Idaho, by 1874, Mormon writers and even certain Corinneites foretold the doom of the town on the Bear. But the panic of 1873 delayed proper financing to continue the rails north; the boggy road through Marsh Valley north of Franklin kept teamsters on the Malad route; and the necessity of transferring goods from broad-gauge railroad cars to narrow-gauge cars at Ogden added to the handling charges. All three of these factors kept Corinne alive for another few years.

Corinne had desperately agreed to a spur rail line from Brigham City to connect with the Utah Northern, but when the Union Pacific took over the Utah Northern in 1877 and advanced the rails twenty miles north of Franklin by January 1878, the *Salt Lake Tribune* foretold the end, "the shipping season in the town is closed, and perhaps forever." And yet 1877 had been the most successful year in Corinne's history — 5,700 tons of freight to Montana and Idaho with 1,128 tons of ore received from the two northern territories.[51]

[51] *Salt Lake Tribune*, December 2, 1877.


Corinne, Utah, May 24 1877

Mr Joseph McKnight Fort Shaw.

To Fred. J. Kiesel & Co. Dr.

Forwarding and Commission Merchants.

To Cost as per R. R. Exp. Bill, $247 a 1 48

" Our Charge for Advancing, 50 $ 1 98

" Receiving and Forwarding, paid

Fred J Kiesel & Co

Fred J. Kiesel was one of the forwarding agents located in Corinne. Later he moved his headquarters to Ogden, Utah. Print furnished by the authors.

A few teams and wagons pulled into the familiar stops near the freight yard during 1878, but most were bound only short distances — to Malad, or other nearby towns. The Salt Lake *Independent* correctly assessed Corinne's demise as a freight transfer station, "Corinne is one of the things of the past. It will in another year be simply a way station on the Central Pacific Railroad."[52] By December 10, 1878, the freighting business ended at Corinne when the Utah Northern Railroad opened its terminus at Blackfoot, Idaho.[53] The town fell into immediate decay and Alexander Toponce, for a long time an interested participant, chronicled its demise:

> The buildings were without paint, stores and dwellings stood vacant. Many of them were torn down or moved out on farms. People lived in houses rent free. Corinne men were found all over the west. The few who remained lived on the hope of what would happen when the irrigation water was brought on the broad valley.[54]

Not only did Corinne and most of its inhabitants lose its freight business, it also lost its identity as the only Gentile town in Utah. "In August of 1877 the Mormons came to claim the near dead body of their adversary. A ward was organized with H. J. Faust as Bishop."[55] When Warren B. Johnson started a walk from the Pacific to the Atlantic in 1882, he arrived in Corinne about dark of the evening of September 23, 1882. He asked a local resident for permission to sleep in the barn and asked casually, "Are there many Mormons in Corinne?" The lady of the house answered, "We are all Mormons here."[56]

Corinne, as the "Gateway to Montana," played a unique part not only in the history of Utah but also in the history of Idaho and Montana. During the first eighteen months of its existence it was transformed from a construction camp of the Union Pacific into a bustling, lively freighting center with high hopes and little actual promise as soon as another railroad pushed up the Montana road across the Malad and Monida divides to a connection with the Northern Pacific Railroad. But to the citizens of "Corinne the Fair" or the "Burg on the Bear," the choice of names depending on your place of residence and your preference in religion, the months of 1869 and 1870 were full of excitement and buoyant optimism for the future of the greatest city between St. Louis and San Francisco.

[52] *Independent* (Salt Lake City), January 6, 1878.

[53] *Salt Lake Tribune*, December 10, 1878; *New Northwest* (Deer Lodge, Montana), 1877 and 1878 issues.

[54] Toponce, *Reminiscences*, 233.

[55] Odell Scott, "Corinne City, Utah" (MS, authors' possession), 16.

[56] Warren B. Johnson, *From the Pacific to the Atlantic, being an account of a journey overland . . . with a horse, carriage, cow and dog* (Webster, Massachusetts, 1887), September 23, 1882.

The Undriving of the Golden Spike

BY DAVID H. MANN

L. P. Hopkins (left), division superintendent of the Southern Pacific Railroad; Utah Governor Herbert B. Maw; and E. C. Schmidt, in charge of public relations of the Union Pacific Railroad, exhibit the "Undriven Golden Spike" at Promontory, September 8, 1942, when the "Old Line" was dismantled. Photograph furnished by the author.

In 1942 when the rails over historic Promontory Summit were drafted for war, it signaled the end of the famous stretch of railroad where a century ago the Driving of the Golden Spike tied the East and West together with bonds of steel. The track of the historic 123-mile-long "Old Line" railroad — Corinne to Lucin — was not junked, however, but salvaged for the war effort. In other words a tremendously expensive piece of railroad, a mammoth engineering blunder, did not die — it was simply converted to a more demanding use.

Dismantling the rail line made famous by the Driving of the Golden Spike brings up the question: Was the Golden Spike "undriven" too? Certainly it was. If it could be driven, it could be "undriven." Not the original spike, of course, but the event called for a spike pulling celebration. So a time was set, a crowd gathered, and again two locomotives stood face to face as they had done seventy-three years previous. Next, amid fanfare reminiscent of the famous celebration at Promontory Summit in 1869, railroad and state dignitaries pulled up a newly bronzed railroad spike, thus spelling finis to what had been known as the Old Line. With the building of the Lucin Cutoff across Great Salt Lake in 1903–04, the lake route became the "Main Line" and the Promontory route a stepchild, a branch line, and thus it remained until 1942.

The Old Line, millions of dollars down the drain, would never have been built if Brigham Young could have had his way. He wanted the railroad to come south out of Ogden via Salt Lake. The mistake of routing the first transcontinental railroad north from Ogden to Brigham City, thence west over steep and rugged Promontory Range can be charged to race-mad engineers, who after a dozen preliminary surveys, selected the final path of the Central Pacific and the Union Pacific through Utah with the meeting at Promontory Summit.

"In the final reckoning, the Union Pacific and Central Pacific spent about $1 million on 200 miles of grade that were never used," said government historian Robert M. Utley.[1] If the two rival companies spent a million dollars on grades never used, think what they must have spent for permanent grading, rails, bridges, fills, cuts, depots, round houses, and other railroad equipment finally dismantled between Corinne and Lucin.

Mr. Mann, free-lance writer, was editor of the *Utah Farmer* for over sixteen years until his retirement in 1965. Prior to this time he was director of the Utah State Department of Publicity and Industrial Development, forerunner of the Utah Tourist Council.

[1] Robert M. Utley, *The National Survey of Historic Sites and Buildings, Special Report on Promontory Summit, Utah (Golden Spike National Historic Site)* (Santa Fe, New Mexico, 1960), 39.

As the transcontinental rails neared Utah in 1868, Brigham Young felt certain his friend General Grenville M. Dodge, chief engineer of the Union Pacific Railroad, would direct the westbound line south from Ogden into Salt Lake City and thence west to Nevada. It seemed perfectly natural to him that the engineers would bring the line into his beloved capital city and center of population in the Great Basin. Brigham Young knew that going west out of Salt Lake presented no serious problems. The line would have to skirt the south end of the lake, thence west across the desert toward Humboldt Wells, Nevada, to meet the Central Pacific. No man of pioneer prominence ever showed greater enthusiasm for building the transcontinental railroad than did Brigham Young; in consequence, he expected General Dodge to favor Salt Lake City.

On June 8, 1868, a group of prominent Salt Lake citizens, aware that the Union Pacific rails would enter Utah Territory and might go north instead of south, promoted a meeting in Salt Lake City to celebrate and welcome the "Iron Horse Into Utah." Brigham Young tendered the use of the tabernacle for the occasion, and he had a good reason — he wanted to impress the Union Pacific as strongly as possible that he, a stockholder and contractor, expected the rails to come south to Salt Lake City instead of going north. Some three thousand enthusiastic people gathered at the meeting, including most of the prominent citizens of the city.

President Young was invited to act as chairman, and in his introductory speech he declared: "If I could direct the route they [the railroad] should take I should have it come down through Echo and Weber Canons and from there through the lower part of Salt Lake City, and then pass the south side of the Lake to the Humboldt."[2]

Another speaker, Colonel F. H. Head, territorial Indian superintendent, in stating the reasons why the rail line should come via Salt Lake City instead of going north said

> For myself I have always felt a high degree of confidence that the road would come through Salt Lake City.... If this country were a desert as when you came here, as described by President Young, it would then be about an even question whether the road should go north or south of the Lake; each road has its advantages and disadvantages. The northern route it is claimed is a trifle shorter;... On the route south of the Lake there is a desert to contend with; and the advantages and disadvantages on the two routes are substantially equal. There is no particular difference from what I can learn in favor of one route over the other. But it seems

[2] *Deseret News* (Salt Lake City), June 17, 1868.

About two hundred people gathered at Promontory, September 8, 1942, to witness the "Undriving of the Golden Spike." Two engines were drawn up in fashion similar to the 1869 ceremony. Photograph furnished by the author.

> to me that the fact of this city being the metropolis of the Territory and of the surrounding mining Territories, and the centre of their business for the last ten or fifteen years, is of itself enough to decide the question.[3]

Toward the end of the meeting several resolutions were passed, one of which declared: "*Resolved*: — That it is the wish of this meeting that the Railroad shall come to this city and pass by the south side of the Lake, and for that purpose proper and suitable grounds for depot, machine shops and improvements can be obtained within this city."[4]

It is unfortunate that General Dodge and his engineers in choosing the northern route were not aware of the difficulties construction crews would face in building a successful and profitable railroad over Promontory Mountain. Had they known, the rails would surely have come south.

[3] *Ibid.*
[4] *Ibid.*

In all probability Brigham Young and his associates never realized that General Dodge had fully expected to run the Union Pacific line directly west out of Ogden to the Great Salt Lake and across the shallow Bear River Bay — the east arm of the lake — to Promontory Point. From Promontory Point the rails would go north along the west side of Promontory Mountain, thence west to Nevada, entirely avoiding the route over Promontory, thus saving fifty miles and the crossing of the mountain. General Dodge points this out by calling attention to the fact that when the original survey was made in 1853, the lake east of Promontory Point was comparatively shallow, but by 1868 it had risen some twelve feet. In discussing the problem Dodge declared: ". . . therefore, it was impossible for us with our means to build a railroad across the lake and we were forced around the north end of the lake and over Promontory [Mountain] . . . ."[5]

It now becomes clear why the Union Pacific went north instead of south — the deeper lake was the cause. Privately the Central Pacific had known for years Dodge intended to cross the east arm of the lake directly to Promontory Point and thence north. In accordance with this information Central Pacific had directed their eastbound line to connect with the Union Pacific somewhere north of the Great Salt Lake.

This information also clears up another mystery: Why have most historians writing on the railroad erroneously declared that the completion of the first transcontinental railroad was at Promontory Point, instead of at Promontory Summit, some twenty-four miles directly north? One answer is they assumed Dodge followed his original survey, not realizing the rail line was forced by circumstances to cross Promontory Mountain far north of Promontory Point.

Historian Orson F. Whitney in discussing the issue wrote:

> It is perfectly plain that financial considerations alone influenced the choice of the northern in lieu of the southern route. *Mistake it may have been* [italics author's], as many still maintain, but that it was deemed by the companies to be to their best advantage at the time, is not disputed.[6]

In July 1868 it became General Dodge's painful duty to notify Brigham Young the railroad would by-pass Salt Lake City. While there is no record of what occurred at the meeting, later, Dodge in a face-saving and conscience-salving move reported that "We had only one controversy

[5] Major-General Grenville M. Dodge, *How We Built The Union Pacific Railway and Other Railway Papers and Addresses* (Denver, 1965), 44–45.

[6] Orson F. Whitney, *History of Utah* (4 vols., Salt Lake City, 1892–1904), II, 231.

with the Mormons," meaning an argument over the route. Dodge maintained that his choice of the Promontory route was far superior to the southern route.[7]

The race between rival railroads building side by side from Ogden over Promontory Mountain to their meeting place at the north end of Great Salt Lake has been told time and time again by numerous writers and historians. The goal was control of the rail traffic and business of the Great Basin, and the land grants that would fall to the winner. The final answer was a compromise, fixing Promontory Summit as the meeting point.

The route over Promontory Mountain proved a jinx from the first. The summit of the pass was 4,900 feet above sea level and about 700 feet above the level of Salt Lake Valley. The east climb to the summit was steep and rocky, about 9 tortuous miles rising 80 feet every mile. Once over the summit the next 16 miles were downhill and a comparatively easy uphill grade.

A considerable amount of the grading on the east slope required deep cuts through solid rock, expensive fills, and some high wooden trestles. The major points of tough construction proved to be Central Pacific's "Big Fill" and the Union Pacific's "Big Trestle," the lines being only a few hundred feet apart. It required 250 teams and 500 men two months to complete the Big Fill, which was 170 feet high and 500 feet long. The spectacular Big Trestle drew more awe than the Big Fill. Crossing the same gorge, it was 85 feet high, 400 feet long, and took 38 days to construct. Newspaper reporters declared the trestle to be a flimsy affair and warned that travel over the same would likely shake one's nerves to the limit, since the timbers were weak and the spikes too small.[8]

Since this writer in his early manhood served as a fireman for the Southern Pacific and on several occasions made the trip over Promontory Summit in the cab of a panting, hard working locomotive taxed to the very limit to pull a mixed train of only six box cars and a passenger coach over the divide, he can attest to the problems involved in crossing Promontory Mountain. For example, by the late 1890's increasing transcontinental traffic over the mountain was proving almost more than the motive power of that era could handle. Helper engines, necessary to get trains over Promontory Summit, were costing the railroad $1,500 per day. Passenger trains were forced to run in three sections, each with a helper engine. It began to look as if the limit of traffic over the Ogden-

[7] Dodge, *How We Built The Union Pacific*, 33.
[8] Utley, *Special Report on Promontory Summit*, 50.

Dignitaries and guests at the "Undriving of the Golden Spike" ceremony. Mrs. Mary Ipsen (center), of Bear River City, was the only person at the ceremony who was present at the Driving of the Golden Spike in 1869. To the left is the late Frank Francis, Ogden Standard Examiner *editor and columnist who acted as master of ceremonies. On Mrs. Ipsen's left is Utah Governor Herbert B. Maw, and on the far right is Mrs. William Tyson of the Box Elder County Chapter of the Daughters of Utah Pioneers. Photograph furnished by the author.*

Promontory-Lucin section, the Old Line, had been reached at 600,000 tons annually. Three engines were required to handle 1,000 tons, and it took between 30 and 36 hours to make the run. No wonder then that the Southern Pacific built the Lucin Cutoff to eliminate the Promontory bottle neck. Had Brigham Young lived until 1904, he would probably have said: "I told General Dodge it was a mistake to take the north route, but he wouldn't listen."

As to the major advantage of the Lucin Cutoff, the entire project — including trestle, fill, and track approaches — covered 103 miles and resulted in a saving of 44.77 miles. Operating expenses over the new route were $60,000 less per month than they had been over the Old Line, and traffic schedules were speeded up beyond the original estimates. The

new line across the lake, which cost $8 million to construct, went into operation March 8, 1904. All of which prompts the thought that had General Dodge been less headstrong and more attentive to Brigham Young, he would have routed the rails south into Salt Lake City and then west to Nevada, thereby saving the expenditure of many millions of dollars in construction, maintenance, and reconstruction in Utah. On the other hand look at what Dodge's mistake had done for Utah's economy — the state would certainly have missed those millions.

The death throes of the Old Line began July 1, 1942, when workmen commenced the task of pulling up the rails of what was the original Central Pacific and Union Pacific line. The contract for the dismantling job had been awarded to the Hyman-Michaels Company, of Chicago, which sent two light engines and a work train to the site where work started four miles west of Corinne. It cost the Hyman-Michaels Company around $5,000 to "dead head" the two engines across the continent, since they had to be moved by slow freight rather than under their own steam. Upon arriving at the work site, the engines were put to work moving the track pulling equipment which lifted and loaded the rails onto flat cars at the rate of about three miles a day.

In contrast to the laying of the original rails on this line, pulling was comparatively easy and accomplished by a special block-and-tackle hoist mounted on a timber frame at the end of a flat car. Operated by an eight-man crew, the individual rails were lifted from the ties, raised sufficiently, and then moved back and laid on the bed of the flat car. When a car became loaded, the hoisting frame was quickly moved to an empty car and the job continued.

Since the old right-of-way was overgrown with weeds and grass, an unexpected hazard to the rail-pulling project arose. The locomotives set fire to the ground cover, consequently fire breaks had to be made in many places to protect the thousands of acres of ripening wheat on the Promontory flats that bordered the line.

The chore of dismantling the 123 miles of Old Line progressed rapidly, so fast in fact that the "spike pulling" ceremony was scheduled for September 8, 1942, at the same site where the original lines met in 1869. Meanwhile the salvaged rails were received by the United States Navy, and as a means of furthering the war effort were relaid at a naval base in Hawthorne, Nevada, and at the Utah Quartermaster Depot at Ogden, thus furnishing much needed wartime railroad trackage.

By the first week in September, nearly all the rails of the historic railroad were hauled away, thus sounding the end of the Old Line. To

this line's credit, however, it should be pointed out that during its seventy-three years of use it had meant a great deal to the farmers and ranchers of western Box Elder County. And they were at the celebration in force. Dozens of Box Elder residents came to see the last spike withdrawn on a railroad that had served the region so well.

It has been estimated that during the period of the Old Line's existence, it had hauled more than a million bushels of wheat from Box Elder's dry farms to say nothing of the sheep and cattle transported to market. Numerous winters the railroad hauled feed that meant the difference between a total loss and salvation for large herds of hungry sheep, horses, and cattle. There are still old-timers who can recall seeing hundreds of starving livestock huddled close to the right-of-way awaiting the arrival of the Southern Pacific train bringing forage to save them from starvation. Some of these old-timers watched the last spike pulled with nostalgic memories.

While the rails were removed in 1942 and put to use in the defense of America, many spikes and ties were strewn along the right-of-way and have become the object of photographers' studies and are sought by artifact hunters. Harry Harpster photograph.

September 8, 1942, proved to be a pleasant day, and the celebration staged in observance of the Pulling of the Golden Spike at the Driving of the Golden Spike site had been scheduled for the noon hour to conform with the time of the first event held seventy-three years previous.

In accordance with the earlier celebration pattern, the Hyman-Michaels Company had "spotted" their two locomotives face to face, a rail length apart. About 11:30 A.M. a distinguished group of notables of the State of Utah, the army and navy, Daughters of Utah Pioneers, ranchers, farmers, and Box Elder County folk arrived by automobile to look, listen, and participate in the historic fete.

This writer was there; he too had nostalgic feelings about the Old Line's demise. Taking a lesson from the photographer's problems at the first celebration, he had hauled a long stepladder all the way to Promontory to be above the crowd and secure the same type of scenes recorded in 1869.

The most outstanding woman present was Mrs. Mary Ipsen, an eighty-five-year-old grandmother of Bear River City. She was the only person in attendance who had been on hand May 10, 1869, at the historic spike driving celebration. Mrs. Ipsen, in good health, recalled when, as a girl of twelve, she had worked as a waitress on the mess car of a work train involved in building the line over Promontory Mountain. She was congratulated by Utah Governor Herbert B. Maw on having lived to see the cycle completed — the last spike driven, and seventy-three years later, withdrawn.[9]

The late Frank Francis, *Ogden Standard Examiner* columnist and well-known sage, acted as master of ceremonies. George Albert Smith, member of the Council of Twelve Apostles of the Church of Jesus Christ of Latter-day Saints, offered the invocation.

The ceremony commenced when Mrs. Ralph Talbot, Jr., wife of the brigadier-general commanding the Utah Quartermaster Depot and whose great-uncle attended the Driving of the Golden Spike, handed the clawbar to Governor Maw. He raised the spike about an inch. E. C. Schmidt, assistant to the president of the Union Pacific Railroad Company, then took over the bar, pulling the spike another inch. He was succeeded by L. P. Hopkins, division superintendent of the Southern Pacific Railroad Company. Finally, the job of removing the spike fell to Everett Michaels, vice-president of the Hyman-Michaels Company. Following brief remarks by Governor Maw and other dignitaries, the ceremony came to an end.

Among the important people attending the fete were state officials E. E. Monson, secretary of state; Grover C. Giles, attorney general; Reese M. Reese, state auditor; and Charles M. Skidmore, state school superintendent. Also on hand were Brigadier-General Ralph Talbot, Jr.; H. A. Dixon, Ogden Chamber of Commerce and president of Weber College; F. H. Knickerbocker, executive-assistant to the president of the Union Pacific Railroad; B. W. Hanson, traffic manager of the Union Pacific Railroad; and Jay Rosenberg, who directed the event as chairman of arrangements.

The "last rail" of the abandoned line was secured by Edward Ward, president of the Box Elder Junior Chamber of Commerce on behalf of that organization. It is now displayed with a suitable plaque on the southwest corner of the Box Elder County courthouse lawn as a relic of the historic Old Line.

[9] Mrs. Ipsen, born in Denmark in 1857, passed away in 1948 at the age of ninety-one.

The dream of almost every boy was to become an engineer on the railroad, Harry Harpster captured this poignant scene between a boy and a railroad engineer.

Mid-Century Crossing By Rail

BY JACK GOODMAN

YOU AWOKE TO THE altogether pleasurable realization that you were aboard a train, that your train was chuffing steadily down a long, curving grade, that the sun was rising, and that you had at last arrived in that promised land — the West.

You were, of course, a veteran traveler, having spent two full nights and the better part of two full days amidst the curtained berths and plush seats of the big, gray-green Pullman cars since your family waved farewell at New York's Grand Central Station. Bothered not at all by the side-sway and forward motion of your rail-borne ship, you reached a practiced hand to the metal-tracked, dun-colored window shade. You squeezed the handle expertly, and dressed with equal expertise as you peered out — somewhat disappointed — at your first western mountain range.

You were fifteen. An equal span of years would pass before you rode this way again, and not alone, aboard a lengthier, dingier string of Pullmans, packed with men in service uniforms. It would be longer still before you would hike and camp in the distant peaks — the Uintas — glimpsed that pleasant summer morning through a thin filter of locomotive smoke.

What better way for a boy to come West, in 1928 or any year, than aboard the Union Pacific's "Overland Limited?" Thousands of far-hardier youngsters painfully trudged across plains and mountain passes in pioneer times on their initial treks to the shining mountains. And young people by the hundred thousand would, in latter days, ride west aboard speedy, diesel-powered streamliners, drive west along broad interstate freeways, or jet-plane west at altitudes that flatten the landscape to a semblance of crinkled cardboard.

I should make it clear that, along with most youngsters living east of the Hudson that year, I knew rather more about Paris, France, than about Evanston, Wyoming, which the "Overland Limited" was slowly approaching. One Charles Augustus Lindbergh had flown the Atlantic a year earlier. Thus newsreels, Sunday rotogravure sections, and the "Midweek Pictorial" had given every schoolboy a graphic picture of events at Le Bourget Airport, plus fulsome views of the Eiffel Tower. Contrariwise, our boyhood notions of western geography and history, gained chiefly from the Macmillan readers at New York's Public School 138, were odd indeed.

Mr. Goodman has been a board member of the Utah State Historical Society since 1961, past contributor to the *Utah Historical Quarterly*, and regional correspondent for the *New York Times* and *Newsweek*.

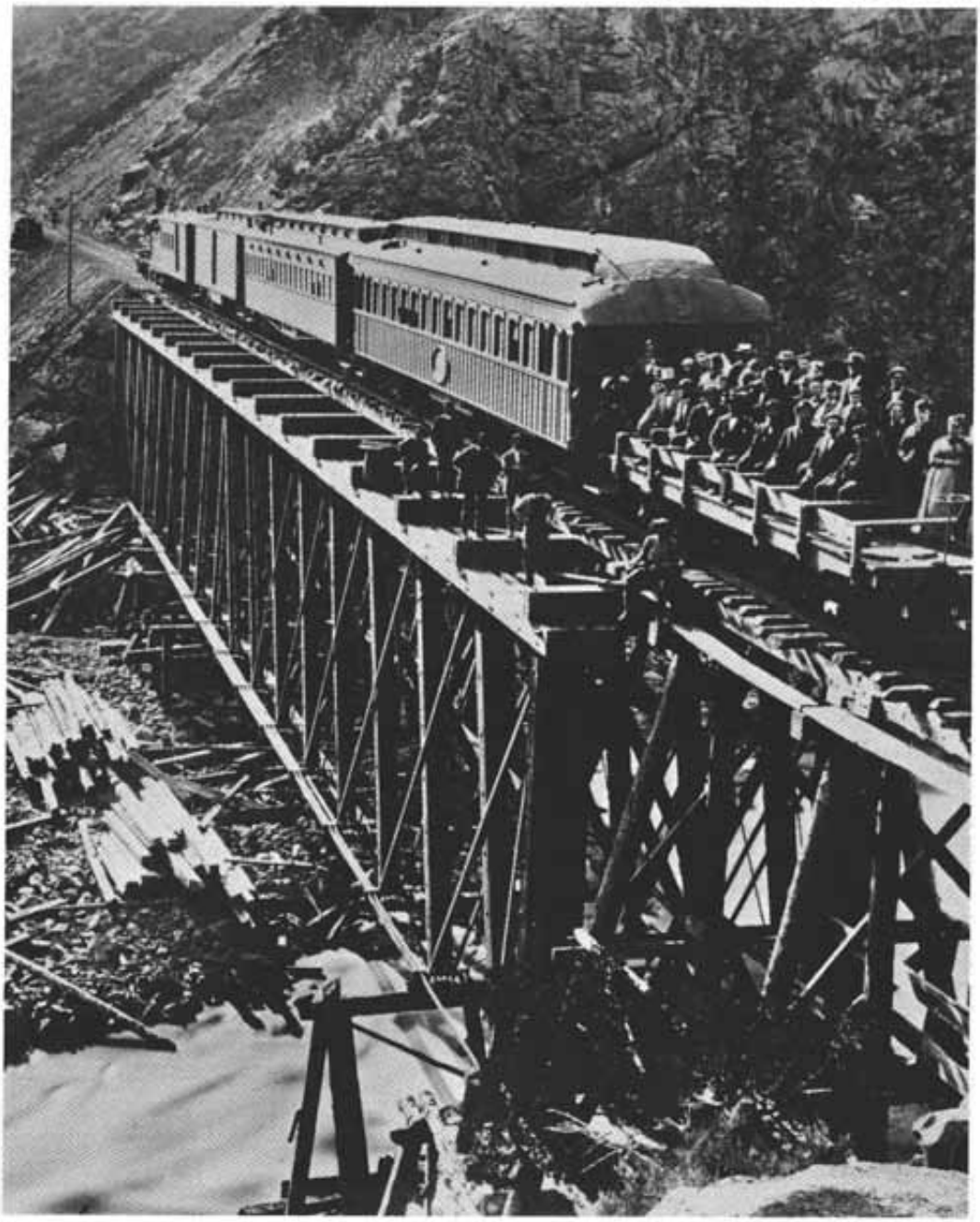
Wyoming we envisioned as a land of cowboys, many sheep, and not a few Indians, a state fitfully pierced at its northwest extremity by the steamy plume of Old Faithful. Somewhere in the Wyoming vastness was a deep cut through a mountainside called South Pass, down which covered wagons had rolled with great regularity but at singular peril. Utah we knew to contain some strange folk called Mormons, usually misspelled as Mormans. They had practiced polygamy, which we neither understood, nor could spell. This same state contained a Great Salt Lake upon which two young ladies (rather daringly clad for a geography text) floated forever in our memories. There was also a place, close to that self-same lake, where the head-on meeting of two ancient-appearing engines had been photographically recorded, a place I erroneously expected to spy when my Pullman "went to sea" on the trestle across the Great Salt Lake.

For reasons I cannot presently recall, Nevada, off to the west, was *terra incognita.* Somehow its existence was never acknowledged in our history classes, although it was undoubtedly upon the list of the nation's forty-eight states we memorized so painstakingly in geography sessions. Our knowledge of California was far more detailed, due both to the efforts of Hollywood film makers and to the presence at P. S. 138 of a girl who had resided in that fabled land. In addititon, the illustrations in the *Book of Wonders* in our school library proved to the hilt that California both existed and contained such oddities as cable cars and a redwood tree, the latter penetrated by a highway containing a Model A Ford.

Of such things were history and geography constituted for a lad of fifteen summers on his initial western *Wanderjahr.* More important to the consideration at hand, what was life like aboard a transcontinental express fifty-nine years after the Driving of the Golden Spike and forty-one years prior to this Centennial year? A single word best describes my view of that railroad voyage — wonderful!

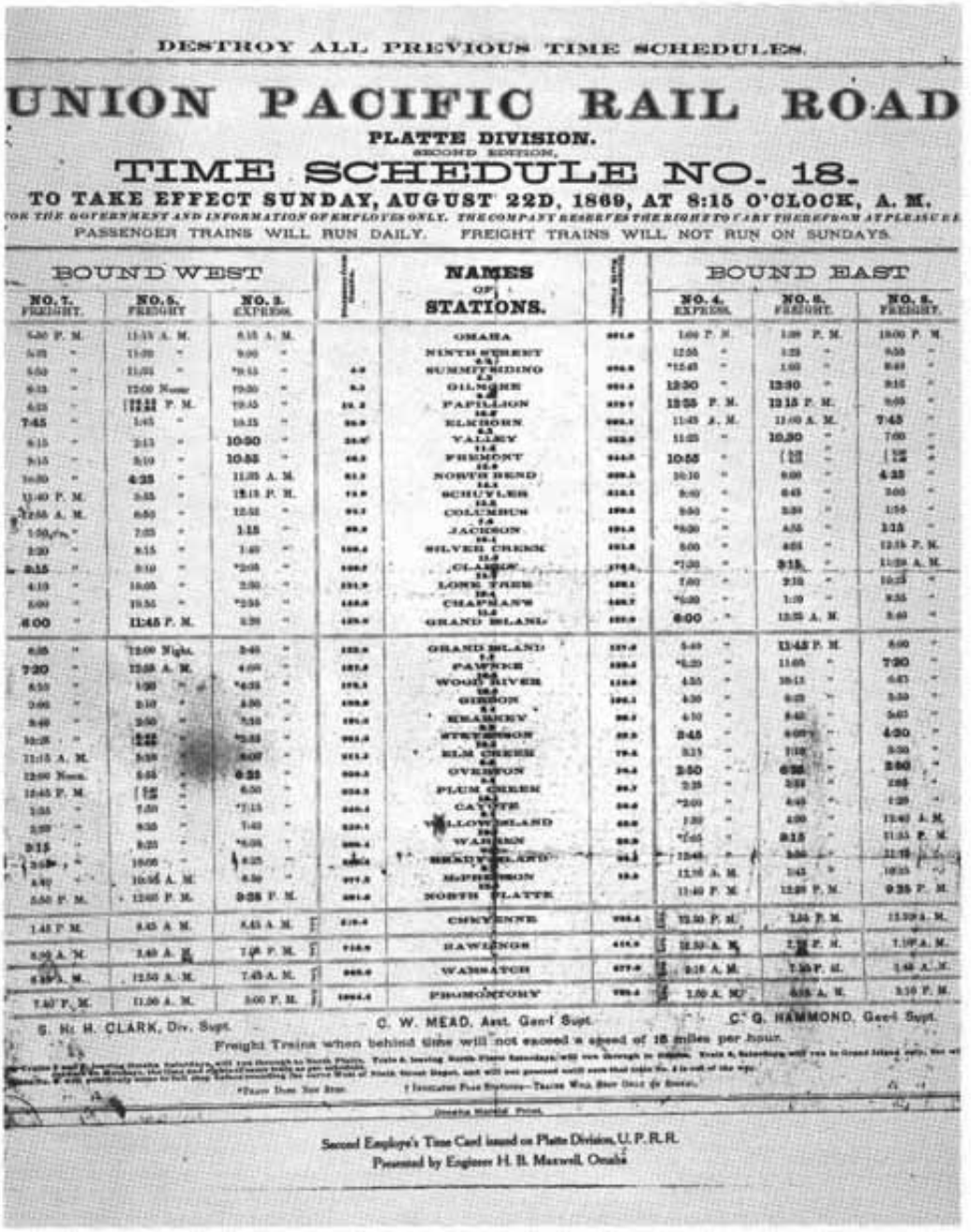
You boarded the "Overland Limited" of those dear, dead days almost beyond recall in the noisy, smoky reaches of the Chicago & Northwestern Station, after your initiation to railroad travel aboard the equally famous "Commodore Vanderbilt" on the New York Central's "Water Level Route." Departure time from Chicago was 8:00 P.M. Central *Standard* time, railroads not being of a mind to monkey with clocks in new-fangled, daylight fashion.

Baggage was no problem. To begin with, a boy traveled light. But in any event, your ticket — approximately a yard long — included an



The excursion train and time schedule of 1869 are a far cry from the trains and schedules of the "Golden Period" of railroad travel in the late 1930's. A traveler could cross the continent in luxury in a fraction of the time of the 1869 period. Photograph and schedule are gifts of the Union Pacific Railroad Company.

in-transit stub that permitted the bearer to travel in state aboard a Parmalee "limousine," free, all the way from the Central's LaSalle Street



DESTROY ALL PREVIOUS TIME SCHEDULES.

UNION PACIFIC RAIL ROAD

PLATTE DIVISION.

SECOND EDITION.

TIME SCHEDULE NO. 18.

TO TAKE EFFECT SUNDAY, AUGUST 22D, 1869, AT 8:15 O'CLOCK, A. M.

FOR THE GOVERNMENT AND INFORMATION OF EMPLOYES ONLY. THE COMPANY RESERVES THE RIGHT TO ANNUL THE SAME FROM AT PLEASURE

PASSENGER TRAINS WILL RUN DAILY. FREIGHT TRAINS WILL NOT RUN ON SUNDAYS.

BOUND WEST				NAMES OF STATIONS.		BOUND EAST		
NO. 7. FREIGHT.	NO. 5. FREIGHT	NO. 3. EXPRESS.				NO. 4. EXPRESS.	NO. 6. FREIGHT.	NO. 8. FREIGHT.
5:30 P. M.	11:15 A. M.	8:15 A. M.		OMAHA	691.0	1:00 P. M.	1:00 P. M.	10:00 P. M.
5:35 "	11:20 "	8:20 "		NINTH STREET		12:55 "	1:25 "	9:55 "
5:50 "	11:35 "	*8:35 "	4.0	SUMMIT SIDING	686.0	*12:40 "	1:40 "	9:40 "
6:15 "	12:00 Noon	9:00 "	8.3	GILMORE	682.7	12:30 "	12:30 "	9:15 "
6:35 "	12:22 P. M.	9:15 "	10.2	PAPILLION	680.8	12:05 P. M.	12:15 P. M.	9:05 "
7:45 "	1:45 "	10:25 "	20.9	ELKHORN	668.1	11:45 A. M.	11:00 A. M.	7:45 "
8:15 "	2:15 "	10:50 "	26.0	VALLEY	662.9	11:25 "	10:30 "	7:00 "
8:35 "	2:30 "	10:55 "	28.2	FREMONT	660.7	10:55 "	[illegible]	[illegible]
10:20 "	4:25 "	11:05 A. M.	51.3	NORTH BEND	637.6	10:10 "	9:00 "	4:25 "
11:40 P. M.	5:55 "	12:15 P. M.	71.9	SCHUYLER	616.4	9:02 "	8:45 "	3:05 "
12:55 A. M.	6:50 "	12:51 "	81.7	COLUMBUS	606.6	8:50 "	8:30 "	1:55 "
1:50 "	7:55 "	1:15 "	88.3	JACKSON	599.8	*8:30 "	8:05 "	1:15 "
2:20 "	8:15 "	1:40 "	100.4	SILVER CREEK	587.8	8:00 "	7:05 "	12:15 P. M.
2:35 "	8:30 "	*2:05 "	108.7	CLARKS	579.5	*7:30 "	6:15 "	11:20 A. M.
4:10 "	10:05 "	3:30 "	121.9	LONE TREE	566.1	7:00 "	5:10 "	10:25 "
5:00 "	10:55 "	*3:55 "	128.8	CHAPMAN	559.7	*6:30 "	4:30 "	9:55 "
6:00 "	11:45 P. M.	4:30 "	139.0	GRAND ISLAND	549.0	6:00 "	12:55 A. M.	8:40 "
6:05 "	12:00 Night.	5:40 "	152.0	GRAND ISLAND	537.0	5:40 "	11:45 P. M.	8:00 "
7:20 "	12:55 A. M.	6:55 "	161.5	PLATTE	527.5	*5:20 "	11:05 "	7:20 "
8:55 "	1:30 "	*8:35 "	178.3	WOOD RIVER	510.9	4:55 "	10:13 "	6:47 "
9:00 "	2:10 "	8:50 "	180.8	GIBBON	508.4	4:30 "	9:53 "	5:50 "
9:40 "	2:50 "	9:30 "	191.5	KEARNEY	497.7	4:10 "	9:40 "	5:05 "
10:25 "	3:35 "	*9:55 "	201.5	STRETTENSON	487.7	3:45 "	9:05 "	4:30 "
11:15 A. M.	3:50 "	10:07 "	211.2	ELM CREEK	478.0	3:15 "	7:10 "	3:50 "
12:00 Noon.	5:05 "	6:25 "	220.3	OVERTON	468.9	2:50 "	6:35 "	2:50 "
12:45 P. M.	5:50 "	6:50 "	224.3	PLUM CREEK	464.7	2:25 "	5:55 "	2:05 "
1:35 "	7:00 "	*7:15 "	240.4	CATTLE	448.6	*2:00 "	4:40 "	1:20 "
1:50 "	8:30 "	7:40 "	250.1	YELLOW ISLAND	438.9	1:30 "	4:00 "	12:40 A. M.
2:15 "	8:55 "	*8:05 "	256.4	WASHIN	432.6	*1:05 "	3:15 "	11:55 P. M.
2:35 "	10:00 "	8:25 "	258.6	SHOVEL ISLAND	430.4	12:40 "	3:00 "	11:15 "
4:40 "	10:55 A. M.	8:50 "	277.3	McPHERSON	413.7	12:10 A. M.	1:45 "	10:35 "
5:50 P. M.	12:05 P. M.	9:35 P. M.	291.0	NORTH PLATTE	400.0	11:40 P. M.	12:20 P. M.	9:35 P. M.
1:45 P. M.	8:45 A. M.	8:45 A. M.	519.4	CHEYENNE	171.6	12:50 P. M.	1:35 P. M.	12:30 A. M.
8:50 A. M.	7:40 A. M.	7:05 P. M.	715.0	RAWLINGS	476.0	12:50 A. M.	7:35 P. M.	7:10 A. M.
6:35 A. M.	12:50 A. M.	7:45 A. M.	868.0	WAHSATCH	677.0	9:15 A. M.	7:30 P. M.	1:45 A. M.
7:40 P. M.	11:30 A. M.	8:00 P. M.	1064.4	PROMONTORY	880.4	3:00 A. M.	6:05 A. M.	3:10 P. M.

S. H. H. CLARK, Div. Supt. C. W. MEAD, Asst. Gen'l Supt. C. G. HAMMOND, Gen'l Supt.

Freight Trains when behind time will not exceed a speed of 15 miles per hour.

*Does Not Run Sun. † Indicates Fast Stations—Trains Will Not Only Do So.

Omaha Herald Print.

Second Employe's Time Card issued on Platte Division, U. P. R. R.
Presented by Engineer H. B. Maxwell, Omaha

terminus to the C & N depot. There was time, and to spare, to lunch grandly in the depot, wander aimlessly around the Loop, and then lounge in the station trainshed, watching giant locomotives and smaller suburban steamers arrive with strings of Pullmans and coaches from spots as distant as Omaha and Blue Island. Eventually, trainmen posted the track number of the "Overland," and you strolled with as much aplomb as you

could muster to view the observation car, Pullmans, diner, coaches, baggage car — and finally the locomotive — that would shortly bear you west. Strolling, it should be added, was difficult, the platform being cluttered with baggage wagons, porters, passengers, and a wide variety of railroadmen bearing steam hoses, water hoses, hammers, and oil cans. The bedlam was considerable. Today's airports are, youngsters should be informed, tame by comparison to a busy railroad station at departure time. The locomotive was, quite naturally, the *piece de resistance*, though merely a flatland affair, designed to haul us no further than Omaha. Still it panted, clanked, steamed, and chuffed sonorously enough, even at rest, and when the fireman momentarily opened the firebox, shook down a grate, and thereby cast a red glow over the platform, the effect was wondrous to behold.

Promptly at 8:00 P.M. the conductor down on the platform bellowed his last "awww-aaa-boorrd," lanterns were swung, bell up ahead clanged, and away we went — grandly, at a slow pace, gathering speed, but ever so smoothly. By that time, of course, I had set my bag down on my Pullman car seat (the young have no need for Redcaps, nor trust in them for that matter) and was back on the observation platform.

A generation has grown up, will live, and will die, without ever riding an observation platform, and will be the worse for it. The platform was, by today's standards of space, quite small, offering seats for no more than four or five Pullman patrons. No matter. A boy could always crowd through the varnished, walnut-paneled rear door of the observation lounge car, squeeze onto the platform behind someone's chair, and wait — for hours if need be — for a seat. Meantime you clattered over switch-points, swayed with the car's motion as the train gathered speed, and watched the prairie farmsteads swim into sight, then vanish in a blur. Periodically the long drawn, melodious whistle of your locomotive sounded far ahead, periodically a cloud of pungent smoke drifted across the pitching platform, now and again a cinder lodged in your hair, or on your clean white blouse. What matter?

Looking back upon that entirely satisfactory evening, I can't recall ever eating. Certainly I stayed up late, hoping to see the Mississippi River, but I can't remember crossing that geography-history book stream. A boy was obviously far more interested in the train — merely being aboard it — than the world outside. Sometime toward midnight, when virtually every cigar smoker had left the lounge, I scrambled forward toward my car, found my berth, and received my first lecture from a friendly Pullman porter. An estimable gentleman, he kept an amiable

eye on me from Chicago to San Francisco, and apparently slept, between his multitude of chores, on a tiny folding stool at the end of the car aisle.

"Conductor was looking for you. I told him I would take your ticket stub for him. I put your bag under your berth. Now you wash up in the lounge and get to bed," said he, not unkindly. Having ridden the Central just a night earlier, I was an expert on such matters as wetting my toothbrush beneath the ice-water faucet in the men's lounge, reaching the triangular-folded towels from the overhead rack, and reciting the verse warning against flushing toilets while the train is standing in the station. As for undressing and dressing in the confines of the green-curtained berth without bumping your noggin on the upper overhead, that was simple enough for a fifteen-year old. You unlaced your shoes, kicked them into the aisle, put your stockings in the odd, woven hammock beside the window, wriggled out of your knickers and shirt, and were asleep before you realized your pajamas were still in the suitcase. Miraculously, your shoes were shined by morning. Came breakfast time and you were seated grandly at a white tablecloth complete with gleaming silver, writing your order in careful Spencerian under the watchful eye of the pencil-bearing steward, Grand Vizier of the dining car. "That's the Missouri River, boy," he murmured, as the train rumbled across a heavily girdered span. "Ever hear of it?" No time to answer — I was gulping down my Number Two breakfast (juice, bacon, one egg, toast, milk — eighty cents) too rapidly — eager to clamber down to the Omaha station platform and see my first Union Pacific locomotive. The haste was worth it, since the engine being coupled to our train was the largest and most impressive I had ever seen. But time was short — the "Overland" was off almost before I could count the engine's wheels.

Back on the observation platform, a seasoned fellow traveler pointed out the Union Pacific mileposts, marked by concentric circles on telegraph poles, that would count off the miles for nearly one thousand miles to Ogden. "Near where they drove that Golden Spike, boy," he concluded. History was fine, but speed was better — and much of the remainder of that day was spent in a practical application of arithmetic that might have amazed the teachers at P. S. 138. With watch at the ready you peered round the platform corner, eyes squinting in the windstream, watching for that next milepost. One mile in one minute was — amazingly — sixty miles an hour. Two minutes equalled thirty miles an hour. Once or twice we rocketed along at the almost incalculable pace of ninety miles an hour!

Grand Island, Nebraska, at noon, a brick platform shaded by rustling cottonwood trees. North Platte, promptly at 3:00 P.M., a town vaguely connected in your history book with a river called the Platte, and with trains of covered wagons. Cheyenne, at 7:45 P.M. or thereabouts, and already I was baffled by the geography being encountered en route. There was a stagecoach and a log cabin at platform side at the Cheyenne station — but where were the western mountains, the snowy peaks I had expected? History had been written in Wyoming territory, someplace, off in the far spaces was Yellowstone with its buffalo and geysers, but where were the shiny mountains?

Finally, in the lounge car, I discovered the answer — in one of those slim Union Pacific folders of bygone years that gave the mileage, elevation, history, and geography of every spot of any importance along the line. We had passed "Elm Creek, Indian Fights, 1867" and "Julesburg, Indian Battle, 1865, 1875" before I discovered the booklet and could muse upon an Indian battle that seemed to have lasted ten years. But "Dale, Rocky Mountains to South," and "Laramie, Snowy Range" were up ahead — and we would steam past them at night. Which is why, perhaps, I was somewhat disappointed with my first western mountains ("Uinta Range to Southwest") glimpsed from my Pullman berth at sunrise next day as we rolled towards Evanston and another Number Two breakfast. Off in the distance, fully twenty miles from the tracks, the peaks seemed scarcely as high as the Hudson Highlands. And where were the summertime snowcaps?

However, back on the observation platform there were chairs for early risers, and eminently satisfactory views of the Wasatch Mountains, the huge, tumbled rocks of Echo Canyon, the glinting waters of Weber River, the sheer walls of Devil's Slide. Someone — was he a schoolteacher? — came out on the platform and held forth at considerable length about railroad builders blasting the canyon walls in 1869, widening a path for the onrushing Union Pacific as it battled towards Promontory. "No, you won't see Promontory, the line doesn't go there nowadays," he told a questioner. And, sticking in my mind to this day, the second part of his reply: "the rails should have joined at Salt Lake City, Brigham Young wanted it that way." Had I met my first Mormon?

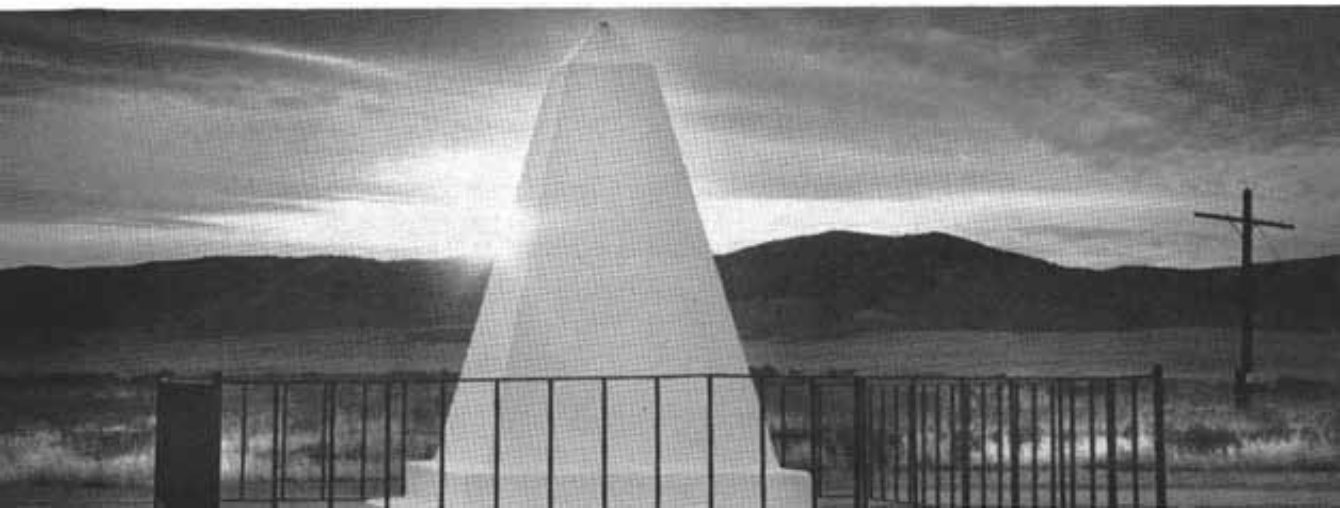
No matter. The "Overland" wound through lush farmlands and narrow canyons, emerged to the broad valley just south of Ogden, then swung noisily into the depot where I was to spend a pleasant half-hour watching switch engines split the train into a Los Angeles and a San Francisco section, attach new mail cars, remove a diner, add a diner.

When a switch engine hooked another observation-lounge onto the San Francisco "Overland," the first passenger to scramble to a seat for the touted "rail trip to sea across the Great Salt Lake" was assuredly a boy from New York City, aged fifteen.

Twenty years sped by before I finally found myself on the dusty, rutted road to the spot where a Golden Spike had been driven in a very different era. By 1948, north and west of old Corinne, an occasional airliner flashed overhead, far above the ducks and geese seeking sanctuary in the nearby marshlands. Now and again off toward Brigham City, one could hear the growl of a diesel locomotive and the rumble of a freight train rolling to Idaho. Otherwise, there was silence at Promontory. A decrepit ranch house and windmill stood in a field of winter wheat. A sagging structure marked the station site and now vanished main line. But there, guarded by a battered fence, stood a simple whitewashed marker, telling those who sought it out that the rails had joined here, 1,086 miles west of the Missouri River, 690 miles east of Sacramento City. A war had been fought in Europe and the South Pacific since a fifteen-year-old boy had last given thought to the meeting of the rails. How many men who had traveled coast to coast would not come back? How many ship loads of cargo were carried across the continent to sink to the ocean floor? Somehow it seemed the lonesomest monument in all the West. Such thoughts were inescapable.

Now, happily, there will be a more fitting monument at Promontory, and a National Park Service Center will properly tell the story of the railroad builders. For this wind swept bit of Utah upland has a very real and very rich meaning to every boy, to every adult in these United States.

In the decade following the turn of the century, the railroads erected a concrete obelisk to mark the site of the joining of the rails. This marker stood as the only reminder of this significant event until 1968 when the National Park Service began the construction of a Visitor Center and reconstruction of the old rail beds and lines. Harry Harpster photograph.



Telegram

Promontory, U.T.
May 10, 1869

"THE LAST RAIL IS LAID! THE LAST SPIKE IS DRIVEN!
THE PACIFIC RAILROAD IS COMPLETED!
THE POINT OF JUNCTION IS 1,086 MILES WEST OF
THE MISSOURI RIVER, AND 690 EAST OF
SACRAMENTO CITY."

Leland Stanford
CENTRAL PACIFIC RAILROAD

T. C. Durant
Sidney Dillon
John Duff
UNION PACIFIC RAILROAD

GOLDEN SPIKE CENTENNIAL CELEBRATION COMMISSION

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Murray M. Moler, ex officio member

The United States Congress authorized the striking of special medals in commemoration of the one hundredth anniversary of the completion of the first transcontinental railroad. Designed by Frank Gasparro, engraver with the U.S. Mint in Philadelphia, the medallion shown here is two and one-half inches in diameter and of bronze and silver alloy. One side of the medallion depicts the engines "Jupiter" and No. 119 at Promontory, Utah; the other shows a section of rail with a spike separating the dates.