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The Colorado and Southern Railway: Its Heritage and Its History*

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PROLOGUE

Colorado and Southern. What a host of ideas that name suggests! Yet there is a curious thing about this railroad: few people seem to have considered it as a whole, to have thought or written or spoken about it as a unified concept, the product of mighty dreams. To anyone who reads or listens, the character and noble objectives of the Denver & Rio Grande are as familiar as the capitol dome that looks out benignly over the city of Denver. In a way—due partly to its consistently articulate managers and partly, I suspect, to its prolific historians—that railroad has been so thoroughly discussed, loved, and hated, that it has become part of the life blood of Colorado and of Denver in particular. It is virtually personified in the popular imagination as someone with a colorful past and, now, as a readily distinguishable and respected member of the community.

The place of the Colorado and Southern, both in the minds of men and in the annals of history, seems, in contrast, vague, rather puzzling, and chopped into bits. There is, of course, a perfectly good reason for this. When the Colorado and Southern was formed just 50 years ago, it sprang like Minerva from the head of Zeus as a full-fledged thousand-mile railroad, composed of no less than 27 ancestors. Some of these predecessors, like the illustrious South Park, the pioneer Colorado Central, and the tragic Denver & New Orleans had such strong and picturesque personalities, bred such loyalties, and left their marks so indelibly on the scrolls of

*This paper was delivered at the Annual Meeting of the Colorado State Historical Society at Denver on December 14, 1948. The subject was chosen particularly because the date of the meeting coincided almost exactly with the semi-centennial of the incorporation at Denver of the Colorado and Southern Railway. For assistance in locating source material I am particularly indebted to Messrs. Brayer, Evans, Hafen, McMechen, and Swan, all members of the Society, and to Mr. John Rice of the Colorado and Southern Railway. Miss Shea and other members of the Society's staff offered every possible assistance. Because of the fact that a version of this paper may subsequently appear in book form, re-publication rights are reserved by the author.—R. C. O.

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history that they completely overshadowed the new-born infant. Much as doughty old Queen Victoria eclipsed her offspring and descendants unto the third generation, so these colorful ancestors of the C. & S. have tended to obscure their own sole heir. Their exploits, admittedly, constitute a rich heritage.

Yet that is but part of the story. On December 19, 1948, the "new-born" C. & S. reached the mature age of 50 years, a period far exceeding the life span of its longest lived predecessor. This company too has a personality, more sedate at first glance, perhaps, than its individualistic forbears, but nevertheless definite, integrated, and surprisingly colorful. It is not my objective to claim an unwarranted place in the sun for the Colorado and Southern, nor to dim the lustre of the other mighty railroads that have linked the Rocky Mountain area to the nation. But it is high time to become better acquainted with the specific heritage and history of this citizen who has dwelt for half a century in our midst.

Characteristically enough, the birth of the Colorado and Southern occurred in an atmosphere of cinders, elegance, and horse trading such as only Colorado could provide at the turn of the century. Just before noon on Friday, November 18, 1898, the sun shone brightly in Denver, but in the repair yards of the old South Park line at the foot of Lawrence and Fifth Streets a capricious mountain wind was whipping up eddies of cinders and dirt to mix with the smoke and steam of the grunting switch engines. Under the circumstances it seemed more incongruous than ever that at this particular moment a string of carefully-polished carriages should drive up to the yard entrance and there deposit several loads of silk-hatted gentlemen who proceeded to walk and stumble toward the turntable only to take final refuge in the lee of a string of U. P. stock cars. There, despite the din of shunting and the piercing cries of the engine whistles, they gathered in a tight knot and for half an hour listened attentively while an apparently well-rehearsed dialogue took place between two of their company. At the end, cigars were passed to all and sundry, and those present picked their way back to their carriages. Meanwhile the yard crews stolidly went on with their grimy chores, doubtless unaware of the fact that the first stage of the Colorado and Southern's birth had proceeded strictly in accordance with the plans of the attending physicians. Yet here it was among the cinders and steam that Special Master Marshall E. Johnson sold at foreclosure the bankrupt Denver, Leadville and Gunnison Railway Company, 336 miles of narrow-gauge line whose tentacles stretched into the mineral-laden mountains southwest of Denver. As had been previously arranged, the sale was made at an agreed price to a specially-constituted Purchasing Committee representing the bondholders of the old com-

pany, itself a successor of the historic Denver, South Park and Pacific.¹

The second act of the birthday drama took place just 26 hours later at a certain railroad switch, colloquially known as "Old Line Junction," near the foot of Twelfth Street, Pueblo.² Shortly beforehand an elegant train, composed of the private cars "Colorado," "Iolanthe," and "South Park Special #2," had come to a gentle halt at the appointed spot. Within were Special Master Johnson, the same eastern bankers whose money had played such a necessary role in the previous day's proceedings, and a handful of Colorado railroaders—notably Messrs. Trumbull, Whitted, and Winchell—who were destined to operate the system in the making. Once again papers were read, words spoken, and hands shaken all around. When the business was finished, the participants climbed aboard the waiting cars and chuffed off to the south, bent upon inspecting a portion of their newly-acquired property.³

As at Denver, the sale at Pueblo constituted a foreclosure and transfer of railway lines to a Purchasing Committee named by former bondholders. The properties involved, however, were both more extensive and more important, for they included the entire Union Pacific, Denver and Gulf, a 900-mile standard-gauge system controlling a through line from Denver to Fort Worth, as well as a complex and disjointed network north and west of Denver.⁴

The final act of the drama took place the following month. On December 19, 1898, the State of Colorado incorporated the Colorado and Southern Railway for the specific purpose of acquiring and operating all the properties bid in by the Purchasing Committees at Denver and Pueblo save the 151-mile Julesburg Branch which, by prior arrangement, was sold to the Union Pacific. On December 28 and 29, therefore, the purchasers duly turned over to the new corporation title to no less than 1,085 miles of railroad.⁵ Thus quickly and quietly did the Colorado and Southern join the nation's family of railways.

PART I: HERITAGE OF THE COLORADO AND SOUTHERN

Although technically its corporate being and pleasing title were brand new, the Colorado and Southern of 1898 possessed not only a railroad already in operation but a distinctly colorful past as

¹*Denver Evening Post*, November 18, 1898. The "Denver" Purchasing Committee was composed of Messrs. Henry Budge, Charles A. Peabody, Jr., and Henry De Coppet. (*Ibid.*)

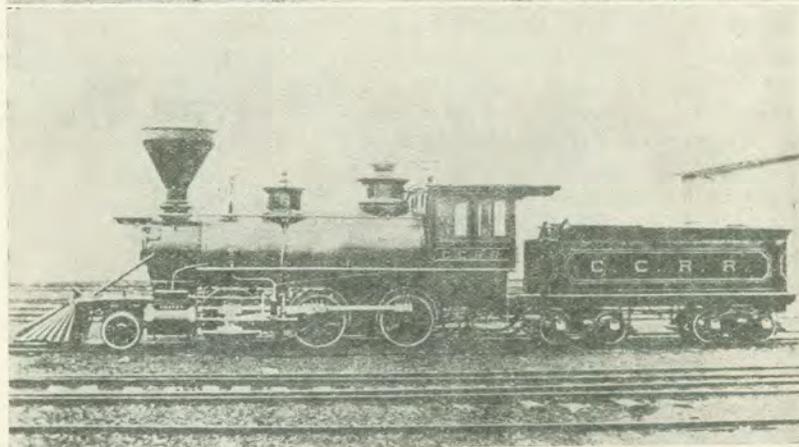
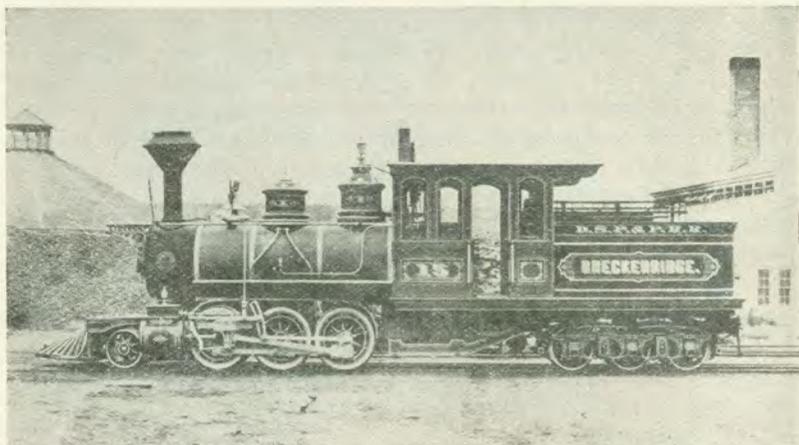
²Colorado and Southern Railway, Minutes of Directors' and Stockholders' Meetings, vol. 1 (hereafter this volume will be referred to as CSM), pp. 21 ½ et seq.

³*Pueblo Daily Chieftain*, November 20, 1898. The "Pueblo" Purchasing Committee was composed of Edward C. Henderson, John K. Tod, and Henry Budge. (CSM, *loc. cit.*)

⁴T. S. McMurray, "The Colorado and Southern Railway Corporate History," (MS. in Company Archives; hereafter referred to as VH), pp. 37-38, 51; Interstate Commerce Commission, *Reports*, vol. 134 (hereafter referred to as 134 ICC), p. 707.

⁵VH, p. 55.

well. Indeed, the roster of hardy spirits who helped lay its foundations reads like a Colorado Hall of Fame: Captain E. L. Berthoud, Jerome B. Chaffee, Governor John Evans, David H. Moffat, W. A. H. Loveland, Frank Trumbull, and a score of others. Nor were its fortunes untouched by vigorous spirits outside the state. Jim Bridger, George Francis Train, Jay Gould, Russell Sage, General Grenville M. Dodge, Morgan Jones, John Dillon, and Charles Francis Adams, among others, had a hand in its making.



UPPER: DENVER, SOUTH PARK AND PACIFIC ENGINE NO. 15, IN 1879.
LOWER: COLORADO CENTRAL NO. 8

Let it not be supposed for a moment that these men worked in sweet harmony or in accordance with any single master plan. They were all far too individualistic for any such story-book outcome. Evans and Chaffee were bent upon creating a great east-

west transcontinental route that would pass squarely through Denver. Loveland and his Golden colleagues, along with Jay Gould, were determined to tap the mighty Union Pacific artery to the north and the Rio Grande to the south; in so doing they would eclipse the glory of Denver. Even the scheme to provide Colorado with an outlet to the Pacific Northwest was hatched in the 1880s. Evans, Dodge, and Jones set out to link their mountain paradise with the heart of Texas and, by way of the Gulf, with the East Coast and Europe. On the other hand, Adams, Dillon, Sage, and Dodge were equally determined to gather the lucrative Colorado traffic for their Union Pacific and its all-rail connections to the Midwest and the Atlantic Seaboard. These grandiose objectives were bound to clash. Indeed, each new scheme produced a lusty crop of protagonists and antagonists, and at least one man, General Dodge, seems to have played both roles simultaneously on one famous occasion. Intercorporate rivalry was likewise inevitable. No railroad thrown squarely across the path of such giants as the Union Pacific, Rio Grande, Burlington, Rock Island, Santa Fe, Missouri Pacific, and Texas Pacific could hope to escape unscathed from the internecine warfare or (much worse) the combined attack of these systems.⁶ The miracle of the Colorado and Southern's birth in 1898 was not that it began life in disconnected parts with a heritage of diverse and often conflicting aims, but that it survived its riotous progeny at all.

Thus, although it is unnecessary (and quite impossible) to recount here the complete and complex pre-natal history of the current corporation, the salient points must be considered in order to understand the pronounced inherited characteristics of the newborn babe of 1898. Since there were, in all, no less than 27 corporate predecessors of the present company, the task would seem difficult enough, but fortunately these numerous ancestors can be conveniently grouped into three regional divisions and then discussed in the order of their appearance.

(1) *Predecessors North and West of Denver*

Two days after the Territory of Colorado was created on February 28, 1861, Congress authorized the first daily overland mail to California and stipulated that Denver should receive either main or branch line service. Denverites instantly took action; Captain Berthoud was commissioned to search at once for a feasible pass through the mountains. Without awaiting warmer weather he set out promptly, and by mid-May had established the existence of the pass that bears his name. But mere feasibility was not enough. Nothing was done to improve the route he marked out, and on July 1 the daily mail route was established through Wyoming.⁷ Denver

⁶See map, p. 89.

⁷LeRoy R. Hafén, *The Overland Mail, 1849-69* (Cleveland, 1926), p. 223.

and her deadly rival Golden, however, refused to give up so easily. On October 11, 1861, the Apex and Gregory Wagon Road Company obtained a special charter to build up Clear Creek as a step toward the faraway Pass. There is no evidence that this company ever did anything at all, but it does hold the distinction of being the oldest corporate ancestor of the Colorado and Southern. More ambitious in both title and accomplishment was the Colorado and Pacific Wagon, Telegraph and Railroad Company, chartered by special act on November 6, 1861, and created specifically to build over Berthoud Pass.⁸ It is said that the indomitable John Evans, after arrival in Denver, helped raise subscriptions for this project; at any rate some six miles of rough terrain were graded at a cost of \$50,000.⁹ The chief effect of this activity, however, was to prompt William Loveland, ever anxious to promote Golden at the expense of Denver, to organize the Clear Creek and Guy Gulch Railroad Company on November 10, 1862;¹⁰ nine days later he leased the rival Denver concern and here, beneath the forbidding mountains, the projects rested while plans for the nation's first transcontinental railroad crystallized.¹¹

As the Union Pacific finally started to push its tenuous rail-head west from Omaha in 1864, the citizens of Golden thought they saw their Big Chance: why not build the railroad over Berthoud Pass and sell it as a ready-made segment to the advancing through line?¹² No sooner said than done—on paper. February, 1865, witnessed the birth of the Colorado and Clear Creek Railroad Company which a year later took the more purposeful title of Colorado Central and Pacific Railroad Company;¹³ with five Union Pacific directors on its board, this newest concern was obviously hitching its fortunes to the sought-after transcontinental. So far, in defiance of what the future held in store, the unborn Colorado and Southern seemed destined to become an east-west railroad. But fate—and good engineering judgment—soon upset these rosy prospects. Over the violent protests of both Golden and Denver, General Dodge, chief engineer of the Union Pacific, advised his directors on November 15, 1866, against the Berthoud route; they thereupon decided once and for all to build through Cheyenne.¹⁴

The effect of this decision completely altered the course of Colorado railroad history. Loveland, quickly turning his sights

⁸134 ICC, 612.

⁹Glenn C. Quiett, *They Built the West* (New York, 1934), p. 147; VH, p. 9; 134 ICC, 674-675.

¹⁰134 ICC, 621. The best recent account of the proverbial Denver-Golden rivalry, with special attention to railroads, appears in Herbert O. Brayer's "History of Colorado Railroads," in *Colorado and Its People* (LeRoy H. Hafen, editor), Denver, 1948; see esp. pp. 637-643.

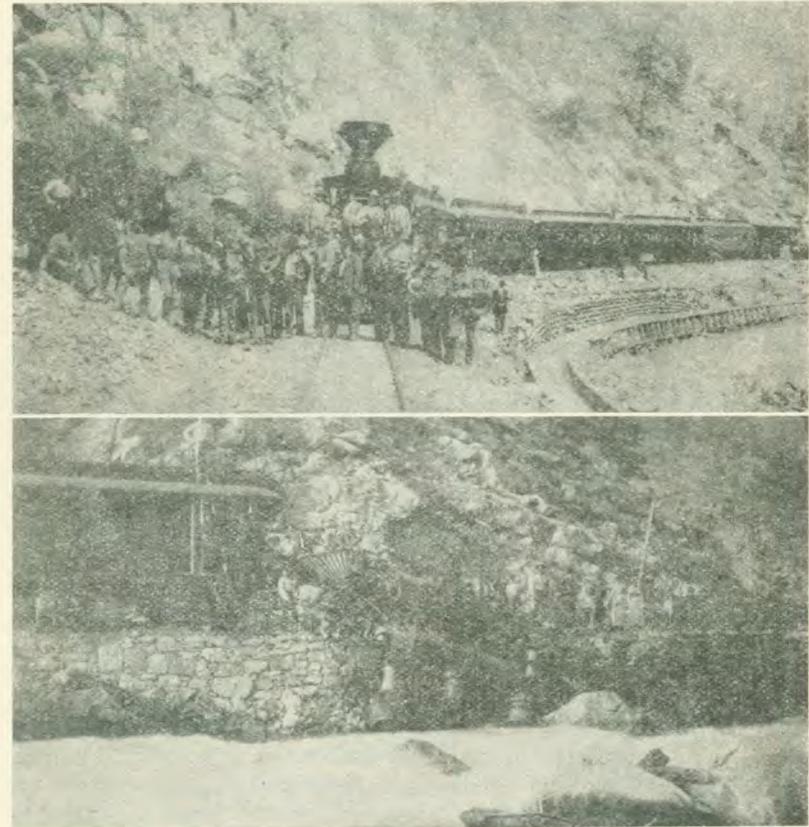
¹¹VH, p. 10.

¹²Quiett, *op. cit.*, p. 154.

¹³134 ICC, 612, 674.

¹⁴Brayer, *loc. cit.*, pp. 638-639. For a careful analysis of the relative merits of the various transcontinental rail passes see Ralph Budd, "Railway Routes Across the Rocky Mountains," in *Civil Engineering*, vol. 10, nos. 2, 3, 4 (February, March, April, 1940), pp. 97-99, 161-164, 222-224.

northward, persuaded Denver to join in building his Colorado Central and Pacific to Cheyenne, but when the Denverites learned that the main line would proceed from Golden, with only a branch to Denver, they promptly withdrew their promised financial support. Instead, under the leadership of John Evans, they built their own 107-mile Denver Pacific to Cheyenne, completing the job under countless difficulties on June 22, 1870. Two months later the Kansas Pacific rolled into Denver from the East.¹⁵



UPPER: UNION PACIFIC, DENVER AND GULF, NO. 8, IN CLEAR CREEK CANYON.

LOWER: TRAIN DERAILED IN BOULDER CANYON.

Meanwhile Loveland, having alienated Denver, was forced to witness the triumph of his rival. As if to symbolize his diet of humble pie, he dropped the "Pacific" from his company's title early in 1869,¹⁶ and in the summer of 1870 built his modestly-

¹⁵Brayer, *loc. cit.*, pp. 639-643; Quiett, *op. cit.*, pp. 154-164.
¹⁶134 ICC, 612.

styled Colorado Central Rail Road Company 15 miles eastward to Cut-Off Junction, just north of Denver, where the Denver Pacific and Kansas Pacific met. Utilizing the former's rails beyond the junction, Loveland brought his first train into Denver on September 23.¹⁷ To that metropolis the event may have been anticlimactic, but in C. & S. annals it was indeed noteworthy, for this modest strip of railroad (running east and west after all) was the first segment of the future Colorado and Southern to go into actual operation.

Had it not been for the vagaries of competitive railroad strategy, the Colorado Central might well have remained a strictly local line. But the Union Pacific, wholly dependent on the home-owned Denver Pacific for access to Denver, now hastened to renew its alliance with the Golden promoters; early in the 1870s plans were made to connect the two properties and to extend branches into the mineral-laden Rockies. The Panic of 1873 delayed the realization of these objectives, but finally, with the Union Pacific funds, the Colorado Central was built northward to Cheyenne by the autumn of 1877, thus giving the transcontinental an alternate entrance to Denver.¹⁸ Meanwhile the Colorado company bought up the previously-mentioned wagon and railroad companies holding franchises along Clear Creek,¹⁹ and by 1878 had reached Central City as well as completing a line to Georgetown.²⁰ To make certain that this expanding network would not fall into unfriendly hands, the Union Pacific leased the Colorado Central on March 1, 1879.²¹

Thanks to the shrewd and self-serving skullduggery of Jay Gould, the year 1880 witnessed another sudden shift in Colorado railroad strategy. In January of that year Gould, who then controlled not only the Kansas Pacific and Denver Pacific, but the Missouri Pacific as well, forced the Union Pacific to acquire the first two at grossly inflated prices in order to liquidate his threat of building a competitive transcontinental line.²² Consequently the bewildered Union Pacific, so lately worried over its access to Denver, now found itself with two parallel lines linking Denver and Cheyenne. Under the circumstances, it followed a most logical course. Utilizing the Colorado Central's charter and operating organization, it built, in 1880-82, the 151-mile Julesburg Branch as a shortcut between Julesburg (on the U. P. line in eastern Colorado) and La Salle (on the Denver Pacific 47 miles north of Denver).²³ The

¹⁷VH, pp. 8-9; Edgar C. McMechen, *Life of Governor Evans* (Denver, 1924), p. 169. The Colorado Central built its own rails into Denver in 1874 (VH, p. 16).

¹⁸Brayer, *loc. cit.*, pp. 645-646; VH, pp. 16-17. Actually, that portion of the Cheyenne-Denver line lying in Wyoming was separately incorporated in that state as the Colorado Central Railroad Company (Wyoming) (VH, *ibid.*).

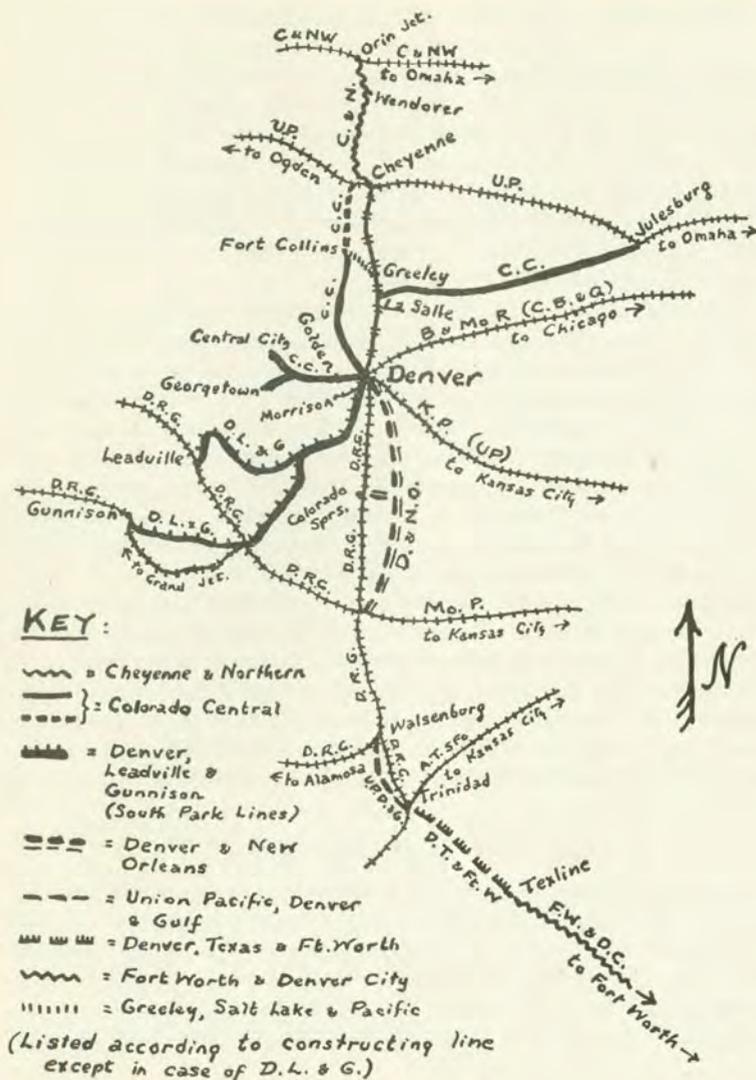
¹⁹134 ICC, 612-613.

²⁰VH, pp. 14-15.

²¹134 ICC, 674.

²²Nelson Trotman, *History of the Union Pacific* (New York, 1923), pp. 155-164.

²³134 ICC, 674-675.



Schematic Map (not drawn to scale)

Showing principal components and connections
of the FORE-RUNNERS
of the
COLORADO & SOUTHERN
RAILWAY COMPANY

next move, completed in July, 1882, was to link the Denver Pacific and Colorado Central by financing construction of the Greeley, Salt Lake and Pacific Railway Company between Greeley and Fort Collins (and on to Stout).²⁴ Finally, and of particular importance to the future C. & S., the now unnecessary line of the Colorado Central between Fort Collins and Cheyenne was torn up during 1889-90.²⁵ Meanwhile, however, in order to tap central Wyoming, the U. P. financed construction of the 125-mile Cheyenne and Northern Railway Company from Cheyenne to Wendover; this road was opened in November, 1887.²⁶

Thus matters stood on April 1, 1890, when the Union Pacific consolidated the Colorado Central, the Greeley, Salt Lake and Pacific, the Cheyenne and Northern, and four other short lines north and west of Denver,²⁷ as well as other properties to be mentioned,²⁸ into a subsidiary known as the Union Pacific, Denver and Gulf Railway Company.²⁹ From the standpoint of the Union Pacific, this new corporation dovetailed neatly into the network of the parent company (which, of course, included the Denver Pacific).³⁰ But it is essential to note that, standing alone, the U. P., D. & G. north of Denver was in three disconnected parts: one connecting Denver and Fort Collins (and including the four short lines), a second linking Cheyenne and Wendover (extended 28 miles to Orin Junction in 1890)³¹ and a third joining La Salle and Julesburg.³² This situation took on practical significance when the Purchasing Committee acquired the U. P., D. & G. as a separate entity at the Pueblo sale of 1898, and was faced with the problem of welding the scattered system into a unified Colorado and Southern.

(2) Predecessors West and Southwest of Denver

The second group of railroads eventually incorporated into the Colorado and Southern may be loosely referred to as the "South Park Lines." Few roads in America have had a more romantic history; the full story, as meticulously related in M. C. Poor's long-awaited volume, fills over 600 pages of text, pictures, maps, and charts.³³ To retell a story of such proportions here is both

²⁴*Ibid.*, pp. 616, 683-684; VH, p. 27.

²⁵134 ICC, 614, 616.

²⁶VH, pp. 41-42.

²⁷Namely the Denver, Marshall and Boulder Railway Company (29.97 mi.), which had absorbed the Denver, Western and Pacific Railway Company (13.07 mi.) in 1885; the Georgetown, Breckenridge and Leadville Railway Company (8.47 mi.); and the Denver and Middle Park Railroad Company (4.56 mi.). At the time of consolidation, the Greeley, Salt Lake and Pacific operated 62.53 miles (134 ICC, 683-694).

²⁸See below, p. 91.

²⁹134 ICC, 665.

³⁰Trottman, *op. cit.*, p. 160.

³¹134 ICC, 614.

³²See map, p. 89.

³³Copies of the strictly limited edition, scheduled for publication in the fall of 1949, may be ordered from S. L. Logue, Treasurer, Rocky Mountain Railroad Club, 3227 Bryant St., Denver 11, Colorado. I am indebted to Mr. Poor for permission to use information from his manuscript in this paper.

impossible and unnecessary; a summary of the salient facts and the system's relation to the C. & S. must suffice.

As in the case of so many other forerunners of the Colorado and Southern, the idea of the South Park lines sprang from the fertile brain of John Evans.³⁴ Originally conceived and incorporated in October, 1872, as the Denver, South Park and Pacific Railway Company to burrow westward under the Rockies and eventually reach the Pacific, the company was reorganized as the D. S. P. & P. Railroad Company in June, 1873, with more modest objectives. A narrow gauge line was completed from Denver to Morrison in 1874. After the Panic of 1873 had run its course, and in response to the new mining activity around Leadville, the rails were pushed to Buena Vista in 1879 whence, in the summer of 1880, trains reached Leadville over Rio Grande trackage.³⁵ At this point the ever-ominous figure of Jay Gould appeared. Securing control late in 1880, he foisted the property upon the Union Pacific in January, 1881, at a grossly-inflated price.³⁶ This move aroused the enmity of the Rio Grande, which promptly cancelled the trackage rights into Leadville and forced the struggling South Park to build its own tortuous and equally round-about line from Como to Leadville, an expensive feat accomplished in 1884. Meanwhile, the old main stem was extended from Buena Vista to Gunnison.³⁷ Saddled with soaring operation costs and indifferent absentee control, the South Park headed for inevitable bankruptcy.³⁸ The property was foreclosed in July, 1889, sold to men acting for the Union Pacific, and reorganized as the Denver, Leadville and Gunnison Railway Company. Its fortunes failed to improve, however, and in October, 1893, it followed the parent Union Pacific into another bankruptcy. For ten months it was operated by U. P. receivers until John Evans, convinced that management by the transcontinental was ruinous for the mountain road and for Denver, persuaded Judge Hallet to put the property under Frank Trumbull, then serving as receiver for the Union Pacific, Denver and Gulf.³⁹ Under his careful guidance the company not only survived but added enough trackage to bring its mileage to 336, where it stood when the "Denver" Purchasing Committee bought it for the C. & S. at the sale on November 18, 1898.⁴⁰

³⁴McMechen, *op. cit.*, p. 179; John Evans, "Speech of ex-Governor John Evans, President of the Denver and New Orleans Railroad, to the Stockholders" (Reprint dated October 29, 1881, in John Evans Papers, made available to the writer through the kindness of John Evans, Esq., of Denver).

³⁵134 ICC, 613; Brayer, *loc. cit.*, pp. 653, 658; McMechen, *op. cit.*, pp. 179-180; M. C. Poor, "Denver, South Park and Pacific" (MS.), p. 644.

³⁶Brayer, *loc. cit.*, p. 657; Trottman, *op. cit.*, pp. 193-194; Poor, *loc. cit.*, p. 644.

³⁷134 ICC, 618; McMechen, *op. cit.*, pp. 185-188; Brayer, *loc. cit.*, p. 664; Trottman, *op. cit.*, pp. 194-195.

³⁸Trottman, *op. cit.*, pp. 195-196, 250; McMechen, *ibid.*; Brayer, *loc. cit.*, pp. 671, 675; *Denver Evening Post*, November 18, 1898.

³⁹134 ICC, 718, 723. Trottman, *op. cit.*, p. 250.

⁴⁰134 ICC, 718, 729.

(3) *Predecessors South of Denver*

The roads in the third group destined to become part of the Colorado and Southern were built in the 1880s to realize the long-standing dream of connecting Denver with Texas and the Gulf so that the Rocky Mountain region could compete with the Middle West for the trade of the eastern seaboard and Europe.⁴¹ As early as May, 1873, the Texas Legislature had incorporated the Fort Worth and Denver City Railway, endowing it with a name that expressed its purpose.⁴² But it was not until 1881 that matters took a practical turn. In January of that year, John Evans and Grenville Dodge, for the moment working in harmony, agreed on plans contemplating simultaneous construction from each end of the proposed through route. To activate the northern link, the Denver and New Orleans Railroad Company was incorporated in Colorado,⁴³ and in March, Evans and his associates formed a construction company to build the line (or obtain trackage rights where feasible) to the Canadian River; this road and its successors became known familiarly as the "Evans Road."⁴⁴ In April, 1881, the Fort Worth and Denver City stockholders made a contract with Dodge to build their line north to the Canadian River, at which point this so-called "Dodge Road" would meet the rails from Denver.⁴⁵

To make sure that these two companies—visualized from the outset as a unified through route—would have appropriate traffic outlets in Texas, a further contract was made in April, 1881, with the Missouri Pacific, Texas and Pacific, and Missouri-Kansas-Texas by which it was agreed that these companies would operate their respective railroads as through lines in conjunction with the Evans and Dodge roads, charging pro rata rates and fares on through business. The absence of a similar agreement with the connecting lines in Colorado, however, was ominous. Whether Evans knew it or not, in March, 1880, the Union Pacific (of which Dodge was an official), the Santa Fe, and the Rio Grande had drawn up a Tripartite Agreement designed to monopolize and allocate among themselves all Colorado business. These companies obviously had

⁴¹These purposes were repeatedly stated. For a succinct expression, see published version of the Amended Bill of Complaint of John Evans in Case No. 3001 before the U. S. Circuit (now District) Court in Denver. This and other pertinent documents were apparently published by the Union Pacific Railroad at Omaha in 1894; the statement alluded to appears on page 3, and was made by Evans on September 15, 1893. This volume will hereafter be cited as CCR (for Circuit Court Record); it was made available to the author through the kindness of C. B. Matthal, U. P. R. R. Co., Omaha.

⁴²134 ICC, 747.

⁴³VH, p. 29.

⁴⁴134 ICC, 700; John Evans, "Statement regarding the Denver and New Orleans Railroad... to the Board of Directors" (New York, 1882), p. 1 (Evans Papers).

⁴⁵S. G. Reed, *A History of Texas Railroads* (Houston, Texas, 1941), pp. 393-394; 134 ICC, 748.

no intention of allowing their lucrative eastbound business to be drained away through Texas and the Gulf.⁴⁶

So it was that it required seven years of constant battling to consummate the project so optimistically begun. By mid-1882, Evans had completed his line 124 miles from Denver to Pueblo,⁴⁷ and Dodge had built northwestward 110 miles to Wichita Falls; thereupon the warfare in Colorado entered an acute stage.⁴⁸ Evans found his antagonists were charging him extortionate rates on construction materials, and he was harrassed by a series of time-consuming lawsuits. Even the entry of the independent Burlington and Missouri River Railroad (a C. B. & Q. subsidiary) into Denver in May, 1882, provided no relief, for that company quickly made an alliance with the members of the Tripartite Agreement. Beset on all sides but undismayed, Evans struck back by directing repeated appeals to the public and by bombarding the Colorado Legislature, the State Railroad Commission, and Congress with petitions and memorials for relief.⁴⁹ But despite public and private sympathy, Evans was unable to break the stranglehold of his opponents. In February, 1886, the Denver and New Orleans was forced to the wall; the most Evans could do was to persuade his backers to form a new corporation, the Denver, Texas and Gulf Railroad Company, to buy in and operate his defunct concern.⁵⁰

Thus matters stood until the spring of 1887 when Evans and Dodge, again working in harmony,⁵¹ secured eastern financial aid and incorporated the Denver, Texas and Fort Worth Railroad Company; its sole purpose was to purchase control of both the Denver, Texas and Gulf and the Fort Worth and Denver City, and to arrange for completing them to a junction point at the Texas-New Mexico state line.⁵² At the moment they were separated by a 464-mile gap, the distance from Pueblo to Childress (to which the Fort Worth had advanced during 1885-87).⁵³

Fortunately, both corporate and construction details were worked out with heartening alacrity. Within a few months the new Denver, Texas and Fort Worth had acquired all the stock of the Denver, Texas and Gulf, and 84% of the Fort Worth and

⁴⁶John Evans, "Statement regarding the Denver and New Orleans Railroad... *loc. cit.*, p. 1.

⁴⁷VH, p. 30; CCR, pp. 37-40.

⁴⁸"Organization and Construction of Fort Worth and Denver City Railway Company," a mimeographed memorandum prepared in the Office of the General Auditor, FW&DCRyCo, Fort Worth, no date, p. 1. This statement will hereafter be referred to as SGA (Statement of General Auditor).

⁴⁹John Evans, "Speech... to the Stockholders..." (1881), *loc. cit.*, passim; John Evans, "Address... to the Board of Trade, June 28, 1883," passim; John Evans, "Memorial to Congress, November 30, 1883," reprinted in *Denver Daily News*, December 23, 1883. (Copies of all the foregoing are in the Evans Papers). *Denver Tribune*, March 29, 1884. *First Annual Report of the Railroad Commissioner of the State of Colorado for the Year ending June 30, 1885*, Denver, 1886, pp. 526-556.

⁵⁰VH, pp. 29-36; 134 ICC, 613, 695, 700; Brayer, *loc. cit.*, p. 669.

⁵¹McMechen, *op. cit.*, pp. 195-197.

⁵²134 ICC, 707; CCR, pp. 3-4.

⁵³SGA, p. 1; 134 ICC, 748-749.

Denver City shares; the latter transaction, incidentally, laid the basis for the Colorado and Southern's present control of the Fort Worth line. Under a new contract, Dodge began building northward from Childress, while Evans secured an agreement to use the Rio Grande's tracks from Pueblo to Trinidad, from which point Dodge undertook construction southward. On March 14, 1888, the railheads were joined at Texline, and on April 1, at long last, the through route between Denver and Fort Worth was opened for business. From the beginning the combined lines were managed as a single system, although to comply with Texas law and tradition, the Fort Worth and Denver City operated its own property in Texas, while the Denver, Texas and Fort Worth operated the road between Denver and Texline.⁵⁴

No sooner had trains begun to roll over the "Pan Handle Route" than the parent company (the D. T. & Ft. W.) started issuing a series of pamphlets describing the agricultural resources and homeseekers' opportunities along the line. Announcing to the world that "a new agricultural empire of vast extent" was now easily accessible for the first time, the company hastened to point out that it had no landed interest of its own; that it proposed to be "a people's railroad, and the plow and the locomotive are to unite for a common end." With this in mind, a Bureau of Information and Emigration was organized, and potential immigrants were advised of the low price and easy credit terms offered by the State of Texas for its lands.⁵⁵ Later on the railroad issued elaborate illustrated pamphlets describing the individual counties along the route.⁵⁶

Business on the new railroad boomed.⁵⁷ But such success, so long in coming, proved fatal to the system's independence. Dodge, thoroughly familiar with the gratifying prosperity of the road, promptly passed the information along to his associates on the Union Pacific, and in particular to Charles Francis Adams, since 1884 president of the transcontinental, in whose offices a master plan was already brewing.⁵⁸ As indicated above, the Union Pacific had controlled the Colorado Central since 1879 and had owned the South Park system since 1881.⁵⁹ In the intervening years it had quietly acquired the remaining C. & S. predecessors north and west of Denver. Now, in November, 1889, Adams and Dodge (the latter in his capacity as president of the Denver, Texas and Fort Worth)

⁵⁴134 ICC, 705-708, 748-749; SGA, p. 2.

⁵⁵D. T. & FtW. R. R. Co., "Agricultural Resources in the Pan Handle of Texas..." (Buffalo, 1888), pp. 5-9. The Colorado State Historical Society has a copy of this 48-page pamphlet.

⁵⁶*Official Time-Table and Gazetteer* (H. H. Brooks, editor; circulated by D. T. & FtW. R. R. Co.), vol. 1, no. 1 (Dec., 1888), *passim*. Copy in C. S. H. S. The colonization work of this railroad might be a fruitful topic for research.

⁵⁷SGA, p. 3.

⁵⁸CCR, pp. 1-5; Trotman, *op. cit.*, p. 210.

⁵⁹See above.

agreed to consolidate these various properties with the newly-completed Denver-Fort Worth roads into a single subsidiary which would at once become the dominating factor in respect to Colorado traffic. Stockholders of the constituent lines were offered the opportunity of exchanging their securities share-for-share for stock in the new corporation, the Union Pacific, Denver and Gulf.⁶⁰

When Evans heard of this Adams-Dodge deal a fortnight later, he at once mobilized all his efforts to prevent its consummation in its original form. Fully mindful that the new subsidiary would be directly under the thumb of the Union Pacific, and that these same properties "had in times past been wholly mismanaged, debauched, and the value thereof destroyed" by similar absentee control, he insisted that the new pact be so modified as to preserve the independence of the U. P. D. & G. in fact as well as in name. In particular he demanded that the Union Pacific should freely interchange through business on a pro rata per mile basis with the "Gulf Road" (as it came to be known), and that the latter should always maintain its principal headquarters and shops in Denver. To these stipulations Adams and Dodge agreed, either through written contracts or on the basis of their solemnly pledged words.⁶¹ Consequently, but not without obvious misgivings, Evans assented to the proposed consolidation which was legally effected on April 1, 1890.⁶²

(4) *The Union Pacific, Denver and Gulf Railway Company*

The new corporation thus formed owned a total of 823 miles, and in addition fell heir to the trackage rights over the Rio Grande between Pueblo and Trinidad (93 miles), as well as stock control of the Fort Worth and Denver City, so that the total system operated amounted to some 1,400 miles of railroad.⁶³

The three and one-half years of Union Pacific control of the Gulf system is a story in itself; it should be told in detail when the necessary records become available.⁶⁴ The resignation of Adams in November, 1890, and return of the Gould-Sage administration, together with the fact that the Union Pacific was staggering under a heavy load of unfunded liabilities, dimmed the chances for an enlightened and unselfish policy toward the company's subsidiaries.⁶⁵ As early as 1891 Evans realized that the Union Pacific had no intention of living up to its agreement with the Gulf road. He busily began accumulating evidence to that effect and tried in

⁶⁰CCR, pp. 5-6.

⁶¹*Ibid.*, pp. 6-17.

⁶²134 ICC, 612. During 1888-89, The Denver, Texas and Fort Worth financed three small feeder companies, aggregating less than ten miles, which were included in the consolidation: the Canon de Agua Railroad Company, the Chiosa Canon Railway Company, and the Road Canon Railroad Company. (134 ICC, 613, 617, 706, 713-718).

⁶³134 ICC, 665.

⁶⁴Notably those presumably in possession of the Union Pacific Railroad.

⁶⁵Trotman, *op. cit.*, pp. 238-247.

vain to present his lengthening bill of particulars to the directors and officials of the Union Pacific.⁶⁶ The day of reckoning, however, was fast approaching. In October, 1893, as the nation-wide financial panic became acute, the transcontinental, along with the Gulf system and the South Park lines, fell into receivership.⁶⁷

Evans did not even wait for the final crash to take action. Before the United States Circuit Court for the District of Colorado in Denver on September 15, 1893, he filed a bristling bill of complaint against the U. P. D. & G., in reality aimed at the parent Union Pacific. The latter, he charged, had unlawfully and secretly planned from the outset so to use its subsidiary as to "destroy and stifle" the competition formerly maintained with the controlling road, and to "dismantle, extinguish, and destroy" the Gulf road as an independent line.⁶⁸ Duly impressed, the Court, on December 11, appointed Frank Trumbull of Denver as receiver. Just a week later the Union Pacific receivers surrendered the Gulf properties to his care.⁶⁹ By means of a similar suit filed against the Denver, Leadville and Gunnison, Evans succeeded in ousting the Union Pacific receivers in August, 1894, and placing that property as well under Trumbull.⁷⁰ These two moves marked the exit of the Union Pacific from control of all properties destined to become part of the Colorado and Southern, and paved the way for the formation of an independent system. They likewise marked the crowning achievement of the aging John Evans in his long fight to establish Denver as a railroad center in its own right.⁷¹

In a practical, if not in a legal sense, the history of the Colorado and Southern as a unified system began when the Gulf road won its independence late in 1893. Its five years of gestation under the receivership of the young and vigorous Frank Trumbull witnessed a steady improvement in plant and increase in revenues. New steel was laid along 114 track miles, and over a million and a quarter new ties were installed. New and heavier motive power was steadily added, aggregate capacity of freight cars was sharply increased, and new technical devices were adopted all along the line.⁷² In 1895 the company completed its own line between Trini-

⁶⁶CCR, pp. 59-65; E. T. Wells to John Evans, Sept. 20, 1891 (Evans Papers),
⁶⁷134 ICC, 664, 718.

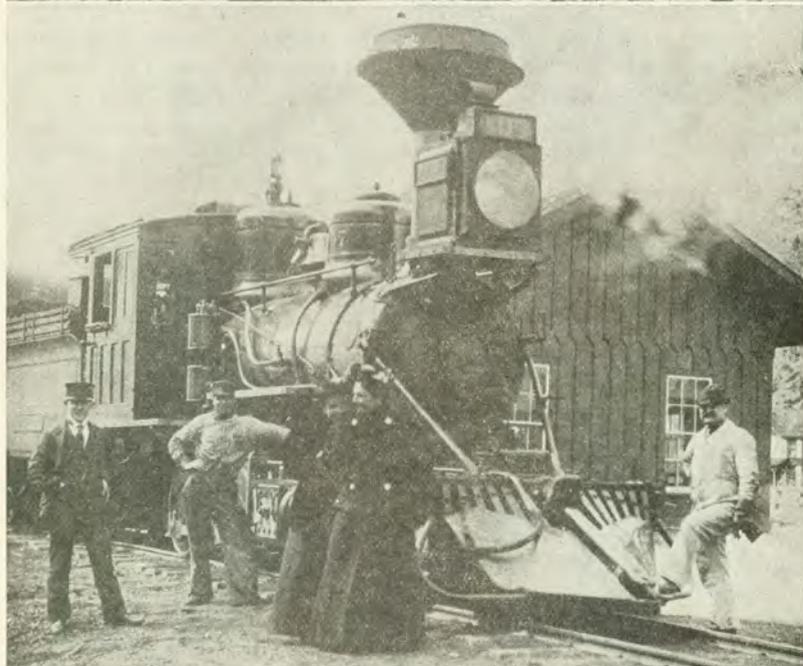
⁶⁸CCR, pp. 24-57.

⁶⁹Union Pacific System, *Fourteenth Annual Report* (1893), pp. 15-16; 134 ICC, 664.

⁷⁰134 ICC, 718, 729; *Denver Evening Post*, November 18, 1898.

⁷¹Evans' role in connection with the Denver-to-Gulf railroads, and particularly his relations with Dodge, deserve further study. The private papers of these two men, located in Denver and Des Moines, respectively, would throw much light on these matters in particular, and on the railway strategy and ethics of the day in general.

⁷²Report of Frank Trumbull, Receiver, concerning the Administration of the Union Pacific, Denver & Gulf Railway, for the Year 1898" in documents pertaining to Case No. 3158, United States District Court Records, Denver, pp. 5-8, 21-22. Trumbull, only 35 when appointed receiver in 1893, was highly regarded as a railroad manager. See William N. Byers, *History of Colorado* (Chicago, 1901), vol. I, pp. 347-349, and Frank Hall, *History of the State of Colorado* (Chicago, 1895), vol. IV, pp. 595-596.



UPPER: DENVER, LEADVILLE AND GUNNISON, ENGINE NO. 197, PICNIC TRAIN AT THE PALISADES IN THE LATE NINETIES.

LOWER: UNION PACIFIC, DENVER AND GULF, NO. 107, AT SILVER PLUME STATION, MARCH 27, 1896.

dad and Walsenburg, thus improving operating conditions and saving money paid out for trackage rights.⁷³ Net railway operating income (excluding the Julesburg branch) leaped from \$128,500 in 1893 to \$980,293 in 1898.⁷⁴ It was undoubtedly this performance which attracted the support of the capitalists who formed the Colorado and Southern and who financed the Purchasing Committees at the Denver and Pueblo sales of November, 1898. They, in turn, improved the company's outlook by devising a reorganization plan which added further elements of strength: all liens prior to a new consolidated mortgage were extinguished, and fixed charges were cut virtually in half.⁷⁵

In his final report as receiver, Trumbull congratulated the new company upon its rosy prospects. After commenting enthusiastically on the reorganization plan, he added that "litigation and claims have been reduced to a minimum, and the administration of the new company in these respects, as well as in the matter of physical conditions is, therefore, inaugurated under favorable auspices."⁷⁶ As the new year 1899 dawned, this parting comment appeared to be eminently justified.***

⁷³"Report of Frank Trumbull... for the Year 1895," *loc. cit.*, pp. 3-4; "Report... for the Year 1898," *loc. cit.*, p. 8.

⁷⁴"Retrospect on the Tenth Anniversary of the Taking Over of the Property from Frank Trumbull, Receiver..." in CSM, Jan. 14, 1909 (no page).

⁷⁵"Report... for the Year 1898," *loc. cit.*, p. 9; 134 ICC, 620-622.

⁷⁶"Report... for the Year 1898," *loc. cit.*, p. 9.
***Part II, covering the history of the Colorado and Southern Railway from 1898 through 1948 will appear in a subsequent issue of the *Colorado Magazine*.
—Ed.

about fifty miles southwest of Denver. It is 212 feet high and has four outlets controlled by valves, of which the largest is five feet two inches in diameter. About 2,700,000 cubic feet of masonry and 100,000 barrels of cement went into its making. The face of the dam is all dressed stone, cut in huge blocks; the backing is of rubble and cement. It has formed a reservoir seven miles long, eighteen miles around, and its capacity is 79,064 acre feet or 25,763,000,000 gallons of water. The cost of building it was approximately \$4,000,000.

At the time of my arrival, the height of the dam was about fifty-six feet. The facing stone was obtained at a quarry one mile from the building site. There it was blocked out and cut by a force of drillers and stone cutters, then loaded on wooden barges and towed over by a small wood-burning steamboat, about twenty feet long, operated by one man. All the cement, sand, steel, firewood, and other materials used in its construction were also towed by the small boat when the weather permitted.

At the quarry we had a large steam derrick with a mast and a boom to handle the stone at the upper level and a hoist and upright boiler to generate the steam. Another hand-operated derrick with a boom was used at the water level to load the stone on the barges. There was also a blacksmith shop where Dick Probert, an expert tool dresser, sharpened the dull tools for the workmen. The shop was located up the mountain a little ways above the quarry, behind a large boulder which made it invisible from the quarry.

My duties were to fire the boiler and run the hoisting engine when the stone had to be moved; also, when not doing that, to pick up and carry dull tools to the blacksmith and bring down and distribute the sharp ones—chisels, points, and hand drills—also, carry drinking water, help the drillers at times on double jacking, and to single-jack the rough stone into five foot blocks. This last was done by making a series of shallow holes about four inches apart in a straight line with a three and one-half pound hammer and a three-quarter inch drill, then insert plugs and feathers—after greasing the plugs and tapping them with the hammer, first nicking the stone on the line with a chisel. The pressure exerted by the plugs would cause the hard stone to split into sections. They would then be finished by the stone cutters.

The quarry was under the supervision of my brother-in-law, William Wiborg, who acted as foreman and cut stone himself, at which he was an expert workman. He also conducted the blasting operations.

Wiborg was of Swedish descent, a giant of a man, strong and muscular, six feet tall, of heavy build and sandy complexion, wore

Experiences in the Building of Cheesman Dam

CHARLES BJORK*

In the late summer of 1901 I commenced work on the construction of the Cheesman Dam being built on contract by the firm of Geddes and Seerie of Denver. David D. Seerie was born in Scotland and Robert J. Geddes was born in the north of Ireland, but was of Scotch descent. They also conducted the Denver Sewer Pipe and Fire Clay Company, and had followed the construction business for many years. Their buildings included Colorado's beautiful, imposing, and durable State Capitol. Both men were of the highest business integrity.

The dam was being built for the Denver Union Water Company to form a storage reservoir for the city of Denver Water Works System. Construction work had been started in 1900 and was completed in 1905. It is one of the outstanding granite dams of the world, and is built across the channel of the South Platte River,

*Mr. Bjork lives in Denver today.—Ed.

number twelve shoes, and was horny-handed. One of his fists would equal in size both of mine and there appeared to be no limit to his endurance. He was endowed with the strength of an ox.

On the morning of my first day at the quarry he told me to gather up all the dull tools and bring them to the blacksmith shop, omitting to tell me where it was located. As mentioned heretofore, it couldn't be seen from the quarry on account of the view being obstructed by the large boulder. I concluded it must be located somewhere near the site of the dam. I had two carriers full of used tools—they must have weighed at least ninety pounds. Valiantly I struggled up the long hill with the heavy load, puffing, blowing and sweating; necessitating several pauses to rest and recover my wind. By the time I had reached the shop which was by the river below the dam, fully three-quarters of a mile from the quarry, I felt like my load had weighed 150 pounds instead of ninety. Wearily I set it down on the floor.

Archie Izzett, the blacksmith at that shop, and Aleck Doull, foreman of the masons on the dam, were there—both looked at me with raised eyebrows.

"Here are some dull tools from the quarry for you to sharpen," I said to Izzett. "What quarry?" he asked. I replied, "Bill Wiborg's quarry, where the dressed stone is being cut."

Then you should have heard how gleefully both of them laughed at my expense and discomfiture. When the merriment had subsided Izzett exclaimed, "Do you mean to say that you packed those tools all the way from over there?" I meekly replied, "Yes, sir."

"Well son, I guess there is nothing for you to do, except to lug them back again! Dick Probert is supposed to do the sharpening for that quarry at his shop," he added.

Ruefully I started back up the long trail again with the same tools—eventually I saw smoke coming out from his shop behind the boulder—from where I was then I could see it on my return, but could not when going away from the quarry.

Probert, the blacksmith, and Wiborg were there, as well as a number of the quarry workmen, who had gone up there to eat their lunches as it was then noon. They had seen me leave an hour and a half before that time, saw me trundling back over the mountain before I reached them and had watched me with amazement and wonder.

Now I was in for another outburst of laughter and merriment, with plenty of quibs and wise-cracks. Wiborg looked at me questioningly and Probert said, "Well, bud, I guess the next time you'll know where my shop is."

One day two barges laden with cement, 300 sacks on each one, were being towed by the steamboat. One became overbalanced, turned turtle and sank immediately to the bottom of the lake. No attempt at recovery was made—it would have been useless, because when cement comes in contact with water it precipitately hardens and becomes unfit for use. That involved a loss of \$300—50 cents per sack purchase cost, and 50 cents per hundred pounds freighting expense from the railroad point of delivery. No one was blamed, nothing was done about it; it was considered one of the hazards of the construction game.

Frank Anderson was the general superintendent of construction. Peter Seerie, a brother of David D. Seerie, was foreman of construction on the dam and had charge of the quarry where the rubble stone (used in backing) came from. Sometimes I would cut threads on bolts and tap nuts made by Archie Izzett at the blacksmith shop and occasionally I would assist on derrick work on the dam, when not engaged at the Wiborg quarry.¹

With the advent of cold weather, the water in the lake started to freeze, the ice getting a little thicker each night—eventually it got so cold that the frozen surface interfered with navigation. The boat towing the barges would sometimes be slowed up by the now freezing ice.

One afternoon Wiborg said, "Mr. Doull sent word he thinks Mr. Dan Smith, the boat engineer will need a man tonight to help him break the ice and try to keep the channel open as long as possible. After supper you'd better report to him." "All right," I answered.

At seven o'clock that evening I got aboard with him and we made several trips from the various boat landings up to the dam and back again, each round trip the ice would freeze a little thicker, but we managed to keep the channel open for three nights running.

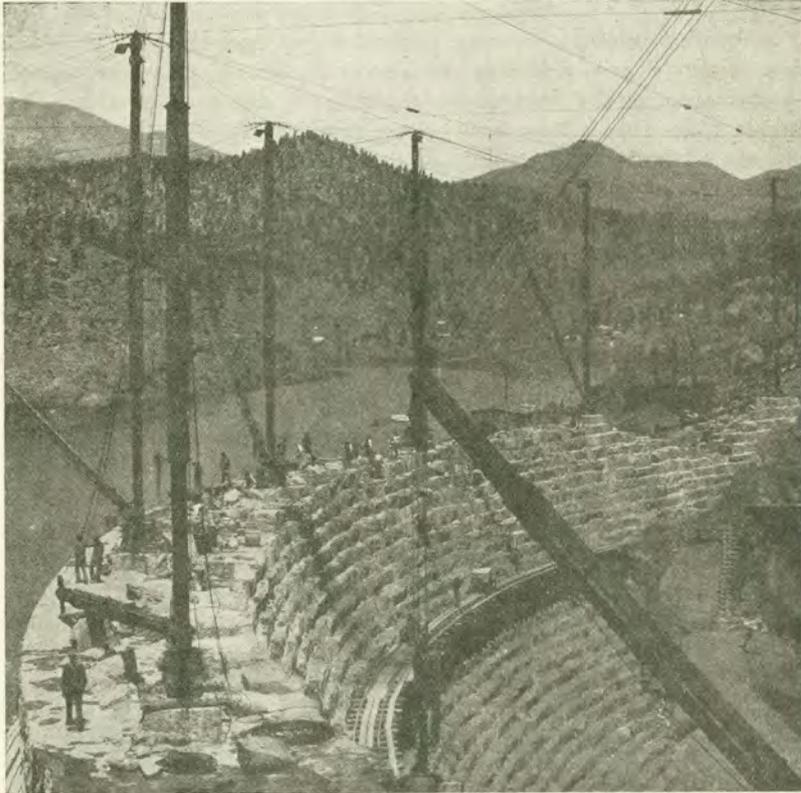
On the fourth night it was extremely cold. We made several trips without incident, except that I had to use an ax frequently to chop and break newly frozen ice in front of the boat.

At one o'clock a. m. we were on a trip and had reached a point near the dam where the ice was thicker than usual. Here the lake was about 100 feet deep. I was in the forward end of the boat energetically working with the ax, when suddenly I heard a grating noise and the boat stopped. The prow had gone under the old rim ice, the forward part of the boat tipped down, the stern rose upwards and water poured in over the low end! "Dan, Dan, we are sinking!" I called out. He acted instantly, pushed the throttle

¹William Wiborg died at Pasadena, California, in 1928. Archie Izzett and Frank Anderson were drowned in a boating accident while out fishing in a lake near Longmont, July 22, 1933.

lever over, reversed the engine to back out, and wasn't slow doing it. His quick action in reversing the engine undoubtedly saved us both from a watery grave or at least a base ducking.

We managed to make the return trip safely and as we neared the beach, our starting point, Dan pulled the whistle cord and let out a long piercing blast, then two short ones. We ran the boat alongside the landing dock and Mr. Doull came running down to it to meet us.



CHEESMAN DAM UNDER CONSTRUCTION, 1903.

"What's wrong, boys?" he asked, "I heard your distress signal." "The lake is freezing over faster than we can break the ice, sir," Dan exclaimed. "All right," he said, "pull your boat out on the dry land on the shore and let her freeze."

After about two weeks, the ice had become two feet thick, strong enough to support a team of horses. The company then had some horses rough shod and put on several teams with drivers and

sleds, and pulled the material over on the ice instead of using the boat and barges; and the work continued.

About that time smallpox broke out in camp. Several men, including Bill Wiborg and some Italian stone masons, were stricken with the virulent disease. They forthwith set out on the stage to Buffalo, distance twenty-three miles, then on the railroad to Denver, where they were isolated in a pesthouse until their recovery or demise.

The stage driver was Dick Prosser, who was reputed to drink immoderately at times and was an unusual person. The story goes that on one trip he had a lone passenger with him on the front seat, an Italian called Tony. When the stage was nearing Buffalo, Prosser evidently became lonesome and to be sociable tried to engage his passenger in conversation. There was no reply from Tony. Prosser repeated a remark he had made. Still there was no reply. Then Prosser shook him and asked, "What's the matter, Tony? Why don't you talk to me? Are you mad at me?" Even then no answer. Prosser then looked intently into his face, and discovered to his consternation that Tony's spirit had departed this world! He became so utterly frightened at this amazing discovery that he threw down the lines and leaped out on the ground. The horses kept on the road without a driver, and the stage rolled into Buffalo with a dead man on the seat!

One Sunday not long after that episode, and after Wiborg had recovered and returned from Denver, he told me to carry over from the magazine twenty-five kegs of blasting powder. Then he said, "You'd better bring a case of giant powder (dynamite), too." It was sixty per cent—very powerful, the gelatin type of Du Pont powder. I had seen it used before and knew about what it would do. I became alarmed, and remonstrated against using so much in one shot. He retorted, "Oh, I guess I know what I'm doing, I want to open things up, bring down some stone; go ahead and get the dynamite. I ain't taking no advice from a kid." I brought it over reluctantly.

The holes had already been drilled and loaded when he suddenly shouted "Fire!" and started to light the fuses. When one hears that cry of fire, repeated several times and coming from a powder man, it's time to get in the clear and duck for cover.

It was then almost five o'clock, quitting time at the dam, and I knew the men from the dam would be coming right by there—walking on the ice of the lake. Sometimes they quit a little earlier on Sundays. I looked down at the frozen lake surface. Some of the men were actually in sight, unconscious of danger. Frantically I rushed down the mountainside, waving both of my arms for them to get under cover and repeating the call of "Fire!"

Then the great shot went off! The ground shook and trembled. I thought all hell had broken loose. Hundreds of tons of rocks were torn loose from their beds and went hurtling down the mountain into the quarry and some out on the lake. The top of the ice looked like a pepper-box, where flying spalls had landed and left gaping holes.

When the smoke and dust had cleared away I noticed that the scenery around there and things about us had been materially changed. My engine boiler was turned over and it had rolled down the mountain. One large boulder had struck, splintered and sheared off the mast of the steam derrick, causing it to tumble to the ground. Another one had gone straight down hill like it had been shot out of a cannon, struck the boom of the hand derrick and tore it loose. Some of us didn't find our dinner buckets and coats until two weeks afterward, as they were covered with debris from the blast. Riggers had to be sent for to Denver, to equip the large derrick with a new mast, rebuild the boom on the other one, and restore the boiler to its proper place.

Wiborg certainly had really and truly opened things up! Fortunately, no one was hurt.

You would naturally think that a man who had caused so much property damage would be discharged—summarily dismissed. Some of us workmen did. But he wasn't! Instead of firing him the company officials praised him and actually increased his pay! Guess they figured the damage done to be of minor importance—that he was a good man, who knew how to bring down so much stone, get results and carry on.

tions" of those halcyon days in the life of our club, during the early Gay Nineties, which it was my privilege to have enjoyed and to have played a small part in.

There are only three of us *young* fellows left, who were members of the club in 1891: Mr. Hagerman, Dan Casement (now a non-resident member living in Manhattan, Kansas), and myself, all dear friends *still*.

It is unfortunate that the early records of membership up to about 1904 have been lost, so that whether or not I am the oldest member is a moot question; but, Mr. Hagerman and I do know that we joined the Cheyenne Mountain Country Club Association about six months apart, he first in November, 1891, soon after it was started, and I in May, 1892; so we must be close rivals here also. At least, gentlemen, I have the advantage of being older than he in *years*, so you may draw your own conclusions upon this *important* point.

I realize that the older members present are fully aware of the early history of our club, but, because of the large number of new members, about 100, elected during very recent years, it has been suggested that a very brief outline of *how* and *when* the club was founded and its rapid development and importance in the social life of Colorado Springs may prove of interest.

By way of preface I would like to state that the El Paso Club is the *oldest* gentlemen's club west of Chicago. The Chicago club was incorporated in 1869, the Chicago fire in 1871 destroyed its home and it was reorganized in 1872.

The Denver Club was organized and incorporated in 1880. The El Paso County Club was organized in October 23, 1877, and incorporated in February, 1880. It continued under this title until December, 1891, when it was merged into the El Paso Club, a change of name only.

Soon after the townsite of Colorado Springs had been completed in 1871; and as a result of some excellent advertising by the Colorado Springs Company, colonists began to arrive in large numbers. In fact, Mr. Howbert tells us in his splendid history that the new citizens arrived so fast that a *housing problem* arose, to meet which it became necessary to purchase in Chicago 150 prefabricated houses to meet the demand. So you see, our city had its "housing" troubles at an early date.

After completion of the Denver and Rio Grande Railway to Colorado Springs in January, 1871, thus providing a rail connection with the east via Denver, the town grew still more rapidly. Dr. Wm. A. Bell, an Englishman and close associate of General Palmer's, and Dr. S. E. Solly, a member of both English and

El Paso Club of Colorado Springs*

GEORGE H. WEBSTER

Mr. President and Gentlemen:

I think it was Herodotus or his friend Sophocles who, some 2500 years ago, observed that "A fly on a bald head occupies a very ticklish position," and so, gentlemen, like the aforesaid fly, I find myself, at the moment, placed in a position, which if not as conspicuous, is certainly equally as ticklish.

You know it is not altogether an easy task to recall with entire accuracy the many interesting and often amusing episodes which permeated the daily life of this unusual and delightful Men's Club *57 years ago*. I am therefore grateful to your committee for the suggestion that I confine my remarks to the "Rambling Recollec-

*An address given by Mr. Webster at the 70th Annual Meeting of the El Paso Club on Feb. 21, 1948.—Ed.

American medical societies, also an Englishman and friend of General Palmer's, who had come here for reasons of health, did much to set forth the advantages of the Rocky Mountain Region and Colorado Springs through excellent advertising and magazine contributions in England and our own eastern states and cities. "A most healthful climate; cattle and sheep raising and agricultural pursuits" were emphasized. A most desirable type of citizen soon appeared with the arrival of many young Englishmen and men of means from the East, seeking health and ranching occupations. They bought ranches, built homes in Colorado Springs and in the Fountain Valley and surrounding country, and added much to the social life of the community.

The cultural elements developed rapidly also. Fine schools were soon established (thanks to Mrs. Palmer). Churches of various denominations: Presbyterian, Methodist and others were built in 1872. A large stone Episcopal church was completed in 1873 at the corner of Pikes Peak and Weber streets, which the Village Inn now occupies. The Fountain Valley Irrigation System had been completed in 1872 also. Our newspaper, *The Gazette*, was flourishing. Colorado College was incorporated in 1874.

In 1874 the U. S. Supreme Court had upheld the liquor restrictions, which the Colorado Springs Company had placed in all deeds. There were no saloons operating in Colorado Springs. Colorado City and Manitou were "open" and their population also increased by *night* and day. In 1871 also the "Manitou" and the "Mansions" and soon after the Cliff House had been constructed in Manitou and were attracting large numbers of tourists. A little railroad was also constructed between the two towns.

"LITTLE LONDON" WAS COMING INTO ITS OWN

By 1877 it became evident that the establishment of a Men's Social Club was most desirable. Accordingly in October, 1877, the "El Paso County Club" was organized with Major Wm. Wagner (an important citizen from New York) as President, Dr. Jacob Reed, Vice-President, and C. E. Wellesley (Secretary of the Colorado Springs Co.), became Secretary-Treasurer, the object being: "To promote social intercourse among ourselves and our associates in said club." The membership was at first limited to thirty. In 1878 the Club was reorganized and the membership increased to ninety and its Club rooms established in the Union Block, where the Exchange National Bank now stands, pending the erection of a new building next to the First National Bank Building, the upper portion of which they desired to occupy. In 1879 W. S. Jackson, a leading citizen and bank president, became President of the Club, after Maj. Wm. Wagner had returned to New York. The Board

of Directors in 1879 consisted of W. S. Jackson, Irving Howbert, Dr. Solly, Chas. H. White, E. J. Randall and B. F. Crowell—and the Club moved into its new quarters. Here it remained for three years. In 1880 Dr. Solly became President and remained our President until 1897.

In October, 1882, the Club again moved, this time into the upper floor of the new and larger Carpenter Building, on the northwest corner of Tejon and Kiowa Streets, now called the Perkins-Shearer Building, where it remained for eight years. At the expiration of the lease on the Carpenter Building, the need was again felt for still better and larger quarters and the decision was made to acquire a permanent home. Accordingly in 1889-1890 the Club bought of Prof. James H. Kerr (who was associated with Colorado College) his house and lot on the northwest corner of Platte Avenue and Tejon Street (*this building*), and began to remodel it to suit their needs. Curiously enough, on this corner in the earlier days stood the home of Maj. Wm. Wagner, the first President of the Club, and the first mayor of the city. While the remodeling operations were proceeding, the Club had temporary quarters in the Count Pourtales house on the southwest corner of Cascade Avenue and Kiowa Street.

In 1891 the "El Paso County Club" was merged in the "El Paso Club," which was organized and incorporated in 1891. The incorporators being Dr. Solly, H. G. Lunt and George Rex Buckman. The membership was also increased during that year. The new Club was ready for occupancy in January, 1891, and the opening was celebrated by a large ball on February 20th.

And so, gentlemen, we find ourselves upon the eve of that delightful period of our country and our Club, affectionately termed "The Gay Nineties," the "Horse and Buggy Days," which for the next few years, at least, enabled our Club to carry on in a spirit of enjoyment and camaraderie among members.

Benjamin Harrison was president. Six of our western states were admitted to the Union in 1890; Cripple creek, discovered in 1889-1890, was bringing great prosperity and much excitement to our citizens. The new clubhouse became a most popular gathering place.

In those days the big living room looked much as it does now, even some of the old furnishings—that long table and some of the leather chairs were here then. Papers and a few magazines of the period were available. There was no bar, but good liquor was served generously in the other rooms. The present bar room was the dining room. The rule against the admission of ladies was rigidly adhered to, but later a very small ladies' dining room was added; the entrance to which was through that little alley on the north side

and the door, which is still there. It was not very popular in my day.

The first Antlers Hotel had been built in 1886 and was much used for dinner parties.

Our first opera house had been built in 1881, where the Ferguson building now stands, by Mr. Howbert.

The billiard room upstairs was a most popular spot, five pool and billiard tables had been installed and pool and billiard contests were frequent. It was the scene, sometimes, of amusingly serious misunderstandings among the players, in which the audience invariably participated. The card rooms, of which there were two or three small ones and one large one, were also in constant use. The favorite games were poker, whist, vingt-er-un (21) and piquet. A library on the second floor was much used and well furnished with the best books.

This dining room addition to the building was added in 1910, I believe.

A Mining Stock Exchange had been established in the city and many brokers set up their offices in the downtown area. Many of them became members of the Club. Wm. A. Bonbright & Co. from New York, with whom Wm. Fisher and Geo. Rex Buckman were associated, both lived here at the Club at the time I did. Wm. A. Otis and Co., also Verner Z. Reed and A. E. Carlton were among the young mining men and brokers who used the Club a great deal. Their offices were on Cascade Avenue opposite the Antlers Hotel.

I well remember when, I think in 1892, Spencer Penrose, this Club's outstanding friend and benefactor, arrived to join his brother of the firm of Penrose and Barranger, mining engineers. He spent much time at the Club and beat us all at piquet with great regularity. He was an extremely popular member.

Many, many members rode horseback or kept driving horses in their own stables. Others rode in from their ranches and tied their steeds to the posts in front or sent their carriages to some stable. There were many stables about town, just as there are garages today.

All kinds of vehicles were in use, from farm wagons to four-in-hand coaches and tandems hitched to high-wheeled English carts, not to mention the phaetons, landaus, and the coupes the ladies used.

E. C. G. Robinson and Wm. H. Sanford, both from New York and here for reasons of health, drove beautiful four-in-hand coaches. There were two other members, besides myself, who drove tandems.

Much interest was also taken in polo and tennis at the Country Club and the Casino in Broadmoor was a popular resort. A nar-

row gauge horse car line was constructed from town over Lake Avenue to the Casino. This Casino unhappily burned down, but another building was soon constructed through the efforts of a committee largely composed of members of this Club. After the Broadmoor Hotel was constructed this Casino building was moved and now, I believe, serves as the Broadmoor Golf Club.

It was, indeed, an attractive sight to see one or both of those four-in-hands drawn up in front of the Club, loading guests for the drive to these places.

When I first came here I bought a little ranch at Widefield, twelve miles south of town in the Fountain Valley and after I joined the Club some of my friends used to send their horses down for over-night and early the next morning Robinson would drive his coach down with the guests for a coyote hunt. The country was mostly open range; the coyotes were numerous and much fun and oftentimes "good luck" resulted. We used greyhounds to stalk our coyotes.

Every afternoon these Club rooms could be found filled with members. All in jovial mood, talking over new strikes in the gold camp or on the range and fishing and hunting conditions in their bailiwicks. Arthur Connell and also the Gilpin brothers (Frank and Bernie) had ranches in the Black Forest area and their houses are still occupied. An Englishman named Charles E. Hamilton lived on the fine ranch a few miles north of town, now owned by Mr. R. E. Johnson. The Hamp brothers had a sheep ranch out to the east. So did other members.

Full dress attire, "pig-tails," was imperative in the evening in those days, even at stag parties here in the Club. For instance, I have a photograph of a fine farewell supper given for Ralph Preston, a very popular chap, in 1895, when he was about to leave for New York to be married. Horace Devereux was his best man at this wedding.

Our annual Club ball was an outstanding feature of the Club life. A buffet supper was served and "after the ball was over" late supper parties were held at various homes, where chafing dishes were much in vogue.

Here also is a very interesting article published in the *Evening Telegraph* of December 16, 1893, describing a splendid ball given by the Club in honor of Commodore and Mrs. Elbridge T. Gerry of New York and Mr. and Mrs. Mitchell Harrison of Philadelphia, who were visiting here at the time. In view of the regrettable fact that our membership lists, covering this period, have been lost, it might interest the older members here to have the list read, although I find it is by no means a complete list of those present.

At this particular entertainment in December, 1893, the town's most distinguished visitors were honored—the Commodore Elbridge T. Gerrys of New York and the Mitchell Harrisons of Philadelphia, so that about everyone who moved in the smart set was there. Mrs. Frederick H. Morley and Mrs. James Addison Hayes received the guests. Those received were Messrs. and Mesdames:

Dr. Solly	L. W. Chamberlain, and	Wm. A. Platt
D. V. Donaldson	Geo. W. Lawrence	Lewis R. Ehrlich
Walter Monteith	William A. Otis	E. G. C. Robinson
Chas. H. White	Mason Davidge	S. D. Bradford
Frank Pastorius	H. B. Hayden	Dr. H. B. Moore
Verner Z. Reed	H. G. Lunt	Thos. H. Edsell
Nelson B. Williams	T. G. Condon	Mrs. De Coursey
John L. Armit	Thos. C. Parrish	Mrs. Farnsworth
	W. S. Jackson	Mrs. F. E. Robinson

Mrs. J. B. Wheeler of Manitou

Mrs. Wooley of Chicago

Mrs. Helen Waterman and Mrs. E. Barnett.

The Misses: Morley, Gerry, De Coursey, Fannie and Daisy Anderson, Gordon, Littleton, Ranney, Goodrich and Lowry of Minneapolis, Elsie Wheeler, Lillie and Alma Solly, Wheatland, Farnum, Williams, Ferriday, Harkness and Higginson.

The unattached gentlemen, most of them bachelors, were:

Will H. Evans	Chas. L. Tutt	C. P. Thursby
Judson Bent	H. W. Bowker	D. C. G. MacNeill
Pelham	W. T. DeHaven	Duncan Chisholm
Chas. B. Seldomridge	Percy Hagerman	W. G. Doubleday
C. T. R. Bates	Dr. C. Hunter	W. E. Barnes
Clarence Edsall	J. A. Doubleday	E. S. Wooley
A. H. Baker	J. Arthur Connell	Gerald M. King
A. M. Baker	W. H. Rusch	J. S. Hunt
Chas. Farnsworth	H. Keep	W. M. Whitney, Jr.
Dr. B. P. Anderson	Arthur A. Carnduff	Jno. W. Proudfit
O. C. Townsend	Van Rensselaer	Spencer Penrose
Griswold	Frank H. Pettengell	C. H. Seitz
F. O. Wood	Chas. Silliman	W. F. Hamp
A. C. Proudfit	Hiram V. Wandell	Fred Steher
J. S. Luckraft	D. H. Rupp	Mr. Harkness
Hiram S. Cable	H. E. Halladay	Robert L. Armit
M. Chevillon	Horace Devereux	Casement
H. Leonard	W. H. Sanford	Geo. Rex Buckman
Braggiotti	George H. Webster	Wm. Fisher

and many others.

We had a number of interesting characters among us in those "Gay Nineties" also, who contributed to our amusement. One was Walter Cash, a heavy set athletic type, who had been captain of a recently famous Princeton football team. Mr. W. S. Jackson, one of our most prominent citizens and an early President of the Club, played cards at the Club frequently. Another was a little English health-seeker named Alfred Rope, quite odd in manner and speech, whose favorite drink was ale-and-milk mixed together.

We had a very fine flower parade every fall. All the coaches and other fashionable vehicles took part, and beautiful floats loaded

with fresh flowers and pretty girls. Each year, little Rope fantastically dressed in Coster's costume, led the parade in a tiny two-wheeled cart drawn by a little burro and piled high with fresh fruit and vegetables. He took it all very seriously and was always loudly applauded by the crowd.

I shall not mention the names of our many able and prominent members of this period or refer to the beautiful homes they occupied on Cascade and Nevada avenues, and later in Broadmoor, during these pleasant and busy years, because they have left a well-known and indelible mark upon our civic history, with which you are all familiar. We also enjoyed many visits from members of the Denver Club, including Senator Wolcott of Woolhurst, Lucius M. Cuthbert, Wm. C. Daniels, C. J. Hughes and others.

Our Club has lost some outstanding elder members in recent months, namely Wm. A. Otis, Arthur Connell, Dr. C. A. Gardner, Harry Leonard (who was an active and much loved member during the time he lived among us), Ralph Giddings, Dr. E. N. Neeper and Dr. Gerald B. Webb.

We are fortunate in having those fine portraits of Dr. Solly, Tom Parrish, Judge Lunt and Dr. Hart. You must preserve them carefully. Both Dr. Jas. A. Hart and Dr. Anderson, long devoted members of the Club, have presented us with some very valuable ornaments and keepsakes.

The Club service was always maintained at high standard, as it is now. I was sorry to note in Mr. Collins' last report, the retirement of old Robert Buckner, who served the Club for many years and who once helped Horace Devereux and Harry Leonard pick me up after having been thrown from a horse out near the Country Club in 1893. I am fond of Bob and would like to see him back again.

I desire to thank Mr. J. J. Lipsey, one of our members, for his kindness in assisting me in obtaining some of the very early history of the Club.

Seventy years is a long time and we have seen many changes in our Club life, but this anniversary—on which we find ourselves free of debt and going strong—should make us all realize the debt of gratitude we owe our retiring President and his able assistants. Let us hold the hope that our prosperity may continue under their splendid management and interest or that of their successors.

And now, gentlemen, I will "end this strange, eventful history" by telling you a little story about a young Irishman—in the hope that *you* will not feel toward *me* the way he did about himself. The little Irishman had been run over by a truck and while he was

lying on the sidewalk, waiting for the ambulance, a policeman broke through the crowd and kneeling by the injured lad said:

“Oh, me poor boy, I see ye’s badly hurted. What is your name?”

“My name is Dennis,” said the boy.

“And where do ye’s live?”

“At 44 Astor St.,” he replied.

“Are ye married?” asked the officer.

“No, thank God,” said the little Irishman, “this is the worst thing that ever happened to me.”

Rise of the Vegetable Industry in the San Luis Valley

IRWIN THOMLE*

The vegetable industry of the San Luis Valley developed slowly, even though the area was admirably suited to the cultivation of such crops. There were two primary reasons for the slow expansion of vegetable acreage: (1) the plants required expert care during the growing season, hence only experienced farmers dared to entrust large portions of their land to vegetable crops; (2) all vegetables required special handling in transit from the field to market. However, all vegetables were not equally difficult to raise, nor were they equally perishable in transit. Therefore, the potato industry became significant in the valley earlier than the fresh vegetable industry which included highly perishable crops.

Through the year 1897 there were very few potatoes raised in the San Luis Valley for export. The market price was 75 cents or less per 100 pounds, and this fact combined with high freight rates left the potato raiser too small a margin on which to realize a profit.¹

There were those who believed the valley was an ideal place to raise potatoes, and they lamented the fact that the hauling charges were prohibitive. At the close of 1897 a reduction was made in the wheat rate to Galveston, and this caused the few valley potato growers to reason that if such a reduction were possible on wheat, it should also be possible on potatoes to Pueblo and Denver.²

The freight rate on potatoes did not change in 1898, but the war, and more than that, the war fever, caused the price to advance

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¹San Luis Valley Courier, February 19, 1898.

²San Luis Valley Courier, February 19, 1898.

considerably by the time planting season arrived. In April and May potato prices took an acute swing upwards, so that on May 28 the "tubers" were listed at from \$1.50 to \$1.65 per cwt. instead of the 75 cents of the previous fall.³ Because of this, additional farmers planted some acreage to potatoes, acreage which normally was used for other purposes. Approximately 100,000 bushels of potatoes were marketed out of the valley during the 1898 season.

For the year 1899 additional valley farmers decided to enter, though somewhat timidly, into the potato business; the price was steady and potatoes appeared to be a good cash crop. In that year there were 309,157 bushels of potatoes harvested in the San Luis Valley.⁴ Approximately one-third of these were kept for local use, and the rest were sold in Pueblo or Denver.

The price stayed around \$1.50 per cwt, and the farmers continued to raise potatoes as a cash crop. They were very cautious, however, about entering this business with any large acreage; they remembered the price could go down just as fast as it had gone up. In 1901 there were fewer acres planted than in 1900 and 1899, which had been close to 3,000, but the farmers knew more about raising "tubers" so the crop was larger in 1901 than in either of the two previous years.⁵

The price held, and during the next two years more land was planted to potatoes. When the harvest season of 1903 was almost completed the situation was described as follows:

Within the past few years the San Luis Valley has come to the front as a potato country. It is estimated that there will be three hundred cars shipped out of the valley this season.⁶

The potato business of the valley was still very small, but it showed possibilities of developing into a major agricultural enterprise.

When the farmers started to harvest the crop of 1904 the potatoes looked good enough to enter into competition, so they were entered in the State Fair at Pueblo and placed on exhibit in the Louisiana Purchase Exposition at St. Louis. At St. Louis, in competition with the whole country, the valley potatoes rated very high but did not take the prize, as did the wheat, oats, barley, rye, and flour from this area.⁷ At Pueblo that year the valley potatoes of Mr. Homer Neel won the first prize.⁸

The crop of 1904 was excellent, but it was also the crop that, over the country as a whole, broke the market. On March 18, 1905, the potato price in Alamosa was only 50 cents per 100 pounds.⁹ At

³Ibid., May 28, 1898.

⁴Twelfth Census of the United States, 1900, Vol. VI, Table 22, p. 363.

⁵The Alamosa Courier, September 14, 1901.

⁶Monte Vista Journal, October 14, 1903.

⁷The Alamosa Courier, October 22, 1904.

⁸The Antonito Ledger, November 2, 1904.

⁹The Alamosa Courier, March 18, 1905.

the end of that year the price recovered somewhat and potatoes were sold at 75 cents.¹⁰ After that the rise in price was very slow; it was not until 1907 that potatoes again topped \$1.00 per 100 pounds.¹¹

Farmers who entered the potato business during the years of good prices decided to continue with that crop and take the bad years with the good. There was no rush away from potatoes when the price fell; in 1906 there were 7,390 acres planted to this crop in the San Luis Valley.¹² The 1907 acreage dropped a little, but in 1908 it was back up again, this time to 7,534 acres.¹³

In March, 1908, a so-called "Potato Special" visited the valley. This was a train made up with a baggage car and two passenger coaches. In the baggage car various implements and machinery useful for the raising of potatoes was carried. The coaches were used for lectures and demonstrations, presented at each stop by Professors Henry M. Cottrell and E. R. Bennett of the Agricultural College. When the train reached a station all interested persons were seated in the coaches and the lectures were given, usually occupying two hours. Each stop consumed about three hours. This gave the people an opportunity to attend the lectures, view the exhibits, and ask questions on the subject of raising and marketing potatoes. The train was sponsored jointly by the Agricultural College at Fort Collins and the Denver and Rio Grande Western Railroad. Stops were made in every town that had a station, and over 2,000 valley people heard the seven lectures presented.¹⁴

In the same year a Potato Growers Association was incorporated in Rio Grande County to do a commission business in potatoes and other farm produce. This company was organized, not only to handle produce, but also "to buy, own and operate such real estate and warehouses as are necessary in the management of said business." The capital stock was \$20,000, divided into 2,000 shares of \$10 each.¹⁵ Since the shares were so cheap, it was possible for any farmer, desiring the service, to buy a share in the company. Thus, for all practical purposes, it became a farmers' mutual marketing association.

During the years when individual farmers did not produce enough to own their own potato cellars this company did them a great service. As the potato business expanded, however, the farmers began to provide their own storage space and do their own carlot shipping. The company passed out of existence with all bills

¹⁰*The Alamosa Courier*, December 9, 1905.

¹¹*Ibid.*, May 25, 1907.

¹²*Thirteenth Biennial Report of the State Engineer* . . . , 173.

¹³*Fourteenth . . . Report of . . . Engineer* . . . , 179, 182.

¹⁴*The Alamosa Courier*, March 21 and April 4, 1908.

¹⁵*Articles of Incorporation*, Del Norte Potato Growers Association, Vault of the County Clerk, Rio Grande County Court House, Instrument No. 33398, dated April 18, 1908.

paid on March 21, 1917.¹⁶ In the other counties where storage and shipping services were needed they were supplied by individual commission men.

There were 6,874 acres planted to potatoes in the four counties of the San Luis Valley in 1909. Production that year mounted to the unprecedented total of 1,131,464 bushels.¹⁷

Valley potato acreage increased considerably during the next two years. In 1911 there were more than 13,000 acres planted to this crop.¹⁸ In the same year potato production over the United States as a whole was low—but the price did not rise! This was due to the fact that the American people bought other starches to substitute for scarce potatoes.¹⁹

The valley farmers were discouraged by such a turn of events. They had produced a good crop in a year of scarcity, and they were justified in expecting a high price. Because of the potato growers' disappointment, acreage was reduced somewhat the following year.

The area planted to potatoes continued to decline slowly until the outbreak of the first World War. The crop, however, did not shrink with the acreage. The 1912 crop was the largest shipped up to that time; it totaled 1,800 loaded refrigerator cars, which meant about 1,200,000 bushels.²⁰

The quality of valley potatoes was maintained during this pre-war period of high production. In 1910 Conejos County took first, second, and third prizes on the potatoes exhibited at the State Fair.²¹

During the war period the price of potatoes went up, along with prices on all other agricultural commodities. The farmers of the valley who were raising "tubers" when the war came remained in the business, but very few acres were added to this crop during the war years. With prices rising, each man attempted to plant that crop which would give him the highest *secure* income. The drawback to potato raising, for the farmer just entering the business, was the insecurity; one had to be familiar with the crop to be sure of a good yield.

The farmers who cultivated potatoes in the San Luis Valley during the war years realized tremendous profits. Early in 1917 the price followed the demand by rising in a phenomenal manner.

¹⁶*Notice of Dissolution*, Del Norte Potato Growers Association, Vault of the County Clerk, Rio Grande County Court House, Instrument No. 51959, dated March 21, 1917.

¹⁷*Thirteenth Census . . . 1910*, Vol. VI, 213, 217.

¹⁸*Sixteenth . . . Report of . . . State Engineer*, Division Engineer's Report, 1911 and 1912. The rapid expansion of potato acreage was a direct result of the difficulties being experienced by the hog industry at this time.

¹⁹*The Alamosa Courier*, October 28, 1911.

²⁰*Ibid.*, October 5, 1912.

²¹*Ibid.*, September 24, 1910.

The last part of the 1916 crop was sold as truly premium produce. One shipper of Del Norte received \$4.50 per cwt. for 10 carloads of potatoes shipped in one lot.²² Another shipment, made in April, 1917, was sold for \$4.25 per cwt. This price was considered to be a little low!²³

Production went up considerably during this period, even though acreage was not expanded. Some of the yields reported by farmers were astounding; in 1916 a man in Rio Grande County established a world record by harvesting 847½ bushels of marketable potatoes from one measured acre of ground.²⁴ In 1917 there were 11,307 acres of valley land planted to potatoes, and they yielded 1,745,823 marketable bushels.²⁵

When the harvest began on the 1917 crop railroad cars were scarce, due to the war effort, and it appeared that the potato yield was going to be larger than ever. In this situation a plan was adopted whereby certain areas sent affidavits to the railroad stating acreage and estimated car needs. The time for the harvesting of each field was also placed on the affidavit. Under this plan the railroad was expected to spot cars at loading platforms the same day the crop came in to be loaded. Thus, no cars would stand on sidings even for as short a period as three or four days; they would always be either rolling, loading, or unloading.²⁶

This plan would have been satisfactory except for the fact that the railroad assumed the farmers had overestimated their car needs. As a result, there was an acute shortage of cars in the district from Center through Monte Vista to South Fork.

The railroad cars the farmers needed were controlled by the American Refrigerator Transportation Company and, when additional cars were requested in October, 1917, the company refused to send them into the valley unless the shippers agreed to route the cars over the Missouri Pacific and Wabash railroads in shipments to the East. This ruling was made because other roads were crowded with traffic, but in the valley the reaction was as follows:

... This is prima facie evidence that the same pirates who control those companies also have control of our own dear D. & R. G. which road maintains the highest freight rates of any railroad on earth. They have a monopoly and they are exercising their prerogative in boldly and blatantly asserting it. With the all-hog railroads on one side and the attempt of several of the buyers to beat down the price, the poor spud raiser might just as well be in hell with his spinal column unjointed.²⁷

Other problems also plagued the potato farmers. Shipping difficulties and labor shortages caused the 1917 harvest to extend

²²*The Alamosa Courier*, February 24, 1917.

²³*Monte Vista Tribune*, reprinted in *The Alamosa Courier*, April 14, 1917.

²⁴*The Alamosa Courier*, February 24, 1917.

²⁵*Year Book of the State of Colorado*, 1918, 35.

²⁶*Monte Vista Journal*, September 5, 1917.

²⁷*Center Post-Dispatch*, reprinted in *The Alamosa Courier*, October 6, 1917.

into the winter months. By December a number of the potatoes were frosted in the fields and ruined for market. The price also declined in an alarming manner; late in November it was down to \$1.90, and early in December, due to reports of poor quality and other adverse influences, it was only \$1.50 per cwt.²⁸

The shipping troubles, falling prices, and other difficulties were common throughout Colorado during the spring of 1918. "With 70,000,000 pounds of potatoes in Colorado in danger of being wasted because of lack of demand, the U. S. Food Administration . . . set aside the week of April 21 to 27 as 'Potato Week'."²⁹ Everyone ate potatoes and, in one way or another, the crop disappeared! Most of the potatoes in danger of spoiling were fed to livestock.

The potatoes planted in the spring of 1918 were the last war crop, and the yield was very good. All summer the water situation was satisfactory, and as soon as the harvesting started the railroad made a determined effort to provide the cars for shipment. By the middle of October 1,467 cars had been shipped; only 956 cars had been loaded by the same date in 1917.³⁰

Valley farmers complained somewhat about freight rates, particularly on the San Luis Central from Center to Monte Vista. Prior to 1918 that railroad charged five cents a hundred for hauling from any of their switches down to the Denver and Rio Grande. Just as the 1918 shipping season started, the government raised freight rates 25 per cent. The Central, however, was not under government control. Therefore, when this little branch line simply "tacked on a cent and one-half" there was justified complaint about the railroad making money out of the war effort. With the additional charge, however, the rate was less than what it would cost the growers to "haul to Monte Vista by wagon even from the nearest switch."³¹ So, the farmers grumbled, but they continued to use the San Luis Central.

By February 1, 1919, the San Luis Valley had shipped 3,082 cars from the 1918 potato crop, the greatest amount from any potato district in Colorado.³² The valley had now attained a place of quantity and quality leadership in this agricultural product.

In 1919 both the labor and the car shortages were overcome. When shipments started that year, potatoes went out of the valley very rapidly. By the first of November 2,500 cars of the 1919 crop had been marketed at an average price of \$2.00 per 100 pounds.

²⁸*The Alamosa Courier*, December 1, 1917.

²⁹*Ibid.*, June 1, 1918.

³⁰*Monte Vista Tribune*, reprinted in *The Alamosa Courier*, October 19, 1918.

³¹*The Alamosa Courier*, November 16, 1918.

³²*Ibid.*, March 15, 1919.

Only 1,500 cars were kept in storage for the late market in the spring of 1920³³

The farmers made a mistake by holding any of the 1919 crop. In the spring, when a scarcity market should have brought an increase in price, potato quotations were lower than in the fall. The late market price averaged only 80 cents per bushel, i.e., about \$1.05 per cwt.³⁴ The fall market had been so completely filled that retailers and consumers held a supply over the winter.

The total crop for the 1919 season was very large. That year there were 2,947,949 bushels of potatoes harvested from 17,792 acres of land.³⁵ The yield averaged 200 bushels to the acre. Individual farmers learned by experience that they could rely on gathering from 165 to 265 sacks of marketable produce for each acre cultivated.³⁶

In the fall of 1919 representatives from the Falk American Potato Flour Corporation of Pittsburgh visited the valley to determine whether or not a potato flour factory could be successfully operated in the region. The farmers favored such a project, as it would provide a market for their unsaleable produce; any sound potato was satisfactory for mill use, regardless of the size. At this time all the very small culls were fed to hogs or allowed to rot on the fields.

The agents of the Falk company signed contracts with a number of farmers whereby the company agreed to pay 60 cents per 100 pounds of culls and the individual farmers agreed to sell all unmarketable potatoes to the Falk company.³⁷ A small flour mill was built in Monte Vista, and operations were started early in January, 1920.³⁸ It was run for a short time and then dismantled; the farmers failed to bring in enough potatoes to supply the mill.

In 1920 a number of valley farmers discussed with each other possibilities and the advisability of marketing their potatoes in some co-operative manner. In October of that year a large mass meeting was held at the Sargeant Consolidated School. At the meeting the fact was brought out that under a disorganized method of marketing the speculative buyers were "easily able to demoralize the local market by willfully underbidding on outside markets in anticipation of forcing the local market down."³⁹ It was advocated that the growers form an organization which would do

³³The Alamosa Courier, November 1, 1919.

³⁴Wilbur G. Erickson (ed.), *Spuditems, Summary 1944-1945 Season*, The San Luis Valley Potato Improvement Association, Monte Vista, Colorado, 1945.

³⁵Fourteenth Census . . . 1920, Vol. VI, Part 3, Colorado, County Table IV. The primary potato district was from Center south to Monte Vista and west to South Fork. Exactly 2,473,007 of the bushels in the 1919 crop came from 12,317 acres in Rio Grande County.

³⁶Charles I. Felthousen, *Official Directory of Industries*, issued by Freight Traffic Department, the Denver & Rio Grande Railroad (Denver, 1921), p. 27.

³⁷Monte Vista Journal, November 19, 1919.

³⁸Hooper-Mosca Tribune, January 10, 1920.

³⁹The Alamosa Courier, October 9, 1920.

the marketing for the body as a whole. Such an organization would be able to obtain information concerning the market, and then sell at the very best price during any given season. Also, if the farmers would contract to sell only through the organization, the representatives of the growers could deal directly on the large markets and thus eliminate jobbing or commission fees. Nothing significant, however, was accomplished at the meeting.

In June, 1921, another meeting was held at the same school, and this time some rules and regulations were composed. A few of the farmers signed contracts to do their marketing through the organization if it could be formed and in operation by the time the marketing season arrived.⁴⁰ When the harvesting began in the fall of 1921 there was no marketing organization!

As Colorado potatoes began to arrive on the market in the fall of the year the price gradually declined. In January, 1922, an unprecedented 38 cents per bushel was received for high grade Brown Beauties, Triumphs, and Rurals.⁴¹ Prices on all commodities declined at the same time, so the farmers took the attitude that they were suffering in a general depression about which they could do nothing. The price did recover somewhat that summer, but the next marketing season brought an average of only 57 cents per bushel.

In the fall of 1923 co-operative marketing associations for potato growers were finally formed. Both The Del Norte Potato Growers' Co-operative Association and The Monte Vista Potato Growers' Co-operative Association were officially organized on October 8 of that year.⁴² The associations, however, were formed too late to do much of the marketing that season.

The major portion of the 1924 crop was marketed co-operatively, and the average price received was \$1.55 per bushel, even though the yield was much larger than it had been during any of the three previous years.⁴³ The contracts the farmers signed with the associations remained in force through the crop of 1927, and during most of this period successful marketing was the general rule. The last crop, however, brought a low price in spite of anything the associations could do. The market was oversupplied in Colorado and elsewhere; the valley shipped more than 10,000 cars of potatoes that season.

In 1928 the co-operative marketing movement became statewide through an exchange. The Colorado Potato Growers Exchange

⁴⁰The Alamosa Courier, October 9, 1920.

⁴¹Erickson, *op. cit.*

⁴²Articles of Incorporation, *The Del Norte Potato Growers' Co-operative Association*, Rio Grande County Court House, Vault of the County Clerk, Instrument No. 70469, October 8, 1923, and *Articles of Incorporation, The Monte Vista Potato Growers Co-operative Association*, Rio Grande County Court House, Vault of the County Clerk, Instrument No. 70468, October 8, 1923.

⁴³Erickson, *op. cit.*

was originally formed for warehousing purposes, but it gradually became a grading and marketing association, and in 1928 the farmers signed marketing agreements with the Exchange through their local organizations.⁴⁴ Market conditions were bad for both the 1927 and 1928 crops, but the 1929 yield, sold just before the depression, brought an average of \$1.18 per bushel.⁴⁵

Potato production during the 'twenties was erratic. From 1919 through 1924 annual acreages fluctuated from a low of 15,000 in 1920 to a high of 35,000 in 1922. In spite of such acreage variation, the yields for all of these years were about the same. During the seasons when large areas were planted, water was scarce; when the acreage was low the yield per acre was very high.⁴⁶

After 1924 both acreage and production increased steadily except for a slight contraction in both in the 1928 season. During 1929 there were 8,127,049 bushels of potatoes produced on 38,274 acres of valley land.⁴⁷ The average production was 212 bushels to the acre.

During a large part of the period to 1930 potatoes remained the only significant cash vegetable crop raised in the San Luis Valley. The amount of other vegetables grown during the pre-war years was negligible. At that time valley farmers did not feel competent to enter the truck-farming business. There were two reasons for this: (1) they knew very little about raising highly perishable vegetables in quantity, and (2) there was no inexpensive supply of ice for refrigeration.

It was realized, however, that the valley was an ideal place for the cultivation of fresh vegetables. The crops from the little gardens scattered throughout the area were excellent. The farmers received high prices in the local markets—but the business remained a sideline.

During the war boom the fresh vegetable business failed to become established because farmers did not want to plant anything that was definitely a "risk" crop. It was not until the early 'twenties that highly perishable vegetables were raised in the San Luis valley on a commercial scale.

Agricultural development in this field centered around three crops, head lettuce, garden peas, and cauliflower. In September, 1921, the people of Creede were assured that if they would "put in 75 acres of lettuce the buyers would put in a loading plant and make all arrangements for the handling of the crop." At the same time Alamosa was promised that if 250 acres could be guaranteed

⁴⁴*The Alamosa Journal*, May 1, 1928.

⁴⁵Erickson, *op. cit.*

⁴⁶*Ski-Hi-Stampede Book*, 1940, p. 12.

⁴⁷*Fifteenth Census . . . 1930*, Vol. II, Part 3, Colorado, County Table V.

in the vicinity, a loading plant would be provided.⁴⁸ That summer a test crop of lettuce, 12 acres, was harvested in Mineral County.⁴⁹

In the late fall of 1921 the Alamosa Chamber of Commerce succeeded in interesting the Fort Produce Company of Denver in establishing packing houses in the valley. Arrangements were made for planting lettuce seed on "150 acres near Alamosa, 150 acres at Monte Vista, 150 acres at Del Norte, and 100 acres near Center" for the 1922 season.⁵⁰ As had happened with various other valley agricultural enterprises, the acreage did not materialize as promised. In 1922 there were only 138 acres of lettuce harvested in the whole area, and 64 of these were in Conejos and Costilla counties, where no promises had been made in the fall of 1921.⁵¹ Since the crop did not appear, there were no packing sheds built.

During the next two years lettuce acreage was expanded considerably. Packing sheds were constructed at various points along the Denver and Rio Grande Western Railroad, principally near Antonito, La Jara, Monte Vista, Del Norte, and Center. The farmers near Alamosa were not anxious to enter the lettuce business, and perhaps they were wise; the western part of the valley produced the best crops. In 1925, however, a packing shed was built for the Alamosa district, and there was enough business to keep it busy during the harvest season.⁵² During the summer of that year there were 4,127 acres planted to lettuce in the valley; this included numerous patches along the railroad tracks all the way to Creede.⁵³ In the valley proper (below Wagon Wheel Gap) there were 3,180 acres of this crop.⁵⁴

There was a general realization that lettuce had possibilities of becoming one of the most important valley products. W. H. Olin, an agricultural official, offered an admonition to valley lettuce growers, part of which was as follows:

Head lettuce in our higher altitudes has become a dependable commercial crop. We need to do all that we can as growers and shippers of this mountain lettuce to keep quality up to what we know these mountain lands can and should produce. We must gain and hold our reputation for the best quality lettuce to be found . . . We have the soil, the altitude, the climate and the irrigation that insures quality in our mountain truck crops and vegetables.⁵⁵

After 1925 lettuce acreage continued to climb slowly; it went up to 4,350, including the Creede district, in 1927. In 1928 the acreage of the valley proper was 3,550.⁵⁶

⁴⁸*The Alamosa Courier*, September 3, 1921.

⁴⁹*Year Book*, 1922, 58.

⁵⁰*The Alamosa Courier*, November 26, 1921.

⁵¹*Year Book*, 1923, 58.

⁵²*The Alamosa Journal*, April 2, 1925.

⁵³*Ibid.*, June 4, 1925.

⁵⁴*Year Book*, 1926, 78.

⁵⁵*The Alamosa Journal*, June 4, 1925.

⁵⁶*Ibid.*, June 5, 1928.



UPPER: PICKING PEAS AT LA JARA.
 LOWER: HARVESTING LETTUCE IN SAN LUIS VALLEY.
 Courtesy State Publicity Department.

More important than expansion, to the farmers, was the fact that they realized profits from these crops. During the 1926 season a group of 60 cars netted over \$1,350 each. Individual cars often sold for very high prices; one car loaded with 230 crates of lettuce and 90 crates of peas netted \$2,403.43 after freight and commission charges were deducted; another car evenly divided between lettuce and peas brought \$2,709.22 net.⁵⁷ By 1929 the lettuce industry had advanced to a rather important position in the valley agricultural economy; that year there were 3,359 acres planted to this crop and the produce was valued at \$240,319.⁵⁸

The garden pea industry in the valley went through a slow early development, and then expanded rapidly. Peas were first grown as a cash crop in 1922; 13 acres in Conejos County were cultivated that season.⁵⁹ This vegetable was extremely perishable, so the farmers were reluctant to risk much acreage to it. In 1925 there were only 490 acres of peas in the valley.

Through observation and experience, however, it was learned that peas could be raised by anyone willing to give them proper care. Cash returns from a good crop were very high. Therefore, a large number of farmers planted new land to peas in 1926, 1927, and 1928. In the latter year pea acreage was up to 3,830.⁶⁰ In 1929 there were 5,450 acres of peas cultivated in the valley and the crop was valued at \$252,361.⁶¹

A large portion of each pea crop was canned in small factories built for the purpose throughout the valley. The first of these canneries was built in Monte Vista late in 1924.⁶²

Soon after the lettuce and pea industries were established, a few farmers started to raise cauliflower as a cash crop. The men believed that if they had three marketable vegetables, certainly at least one of them could be relied on to give high returns in any given season.

Cauliflower was first cultivated in the South Fork—Del Norte district during the growing season of 1924.⁶³ The crops were a success and during succeeding years additional acreage in the valley was devoted to this vegetable.

In 1925 there were 410 acres planted to cauliflower and the yield was shipped in 182 railroad refrigerator cars.⁶⁴ During 1926 and 1927 the acreage advanced to 500, and then in 1928 it declined again to about 410.⁶⁵ For the 1929 season 1,542 acres were culti-

⁵⁷*The Alamosa Journal*, September 30, 1926.

⁵⁸*Fifteenth Census . . . 1930*, Vol. II, Part 3, Colorado, County Table VI.

⁵⁹*Year Book*, 1923, p. 57.

⁶⁰*Ibid.*, 1928-1929, p. 72.

⁶¹*Fifteenth Census . . .*, op. cit.

⁶²*The Alamosa Courier*, July 26, 1924.

⁶³*Ibid.*, October 4, 1924.

⁶⁴*Year Book*, 1926, 80, and *The Alamosa Journal*, April 15, 1926.

⁶⁵*The Alamosa Journal*, June 5, 1928.

vated, and the crop was valued at \$180,931.⁶⁶ Production remained steady for the next few years. By 1930 cauliflower had emerged as a major agricultural industry of the valley.

All of these fresh vegetables had to be iced when shipped, and the icing business of the valley grew to be a very important corollary industry. Late in 1925 an immense central ice house was constructed by the Western Railways Ice Company one mile east of Alamosa. At that time the plant was described as follows:

...The Alamosa investment amounts to approximately \$125,000, consisting of 40 acres of land, a 15-acre pond with a depth of four feet, a six-inch artesian well...four ice cutting machines and other modern equipment necessary to take the ice from the pond to the storage house and from the house to the loading dock...a building 145 by 20 by 39, divided into six compartments, with 30-inch walls constructed with double air space and cork insulation and celotex over the top...The capacity of the storage house is 24,000 tons. ...much of the ice will be shipped to other points as required. Last week the company shipped 100 cars of ice to San Acacio for storage there until the opening of the vegetable season.⁶⁷

Empty cars were iced at Alamosa before being spotted for loading. A considerable amount of ice was also placed in each car to be used in the vegetable crates. When the loaded cars returned to Alamosa, they were re-iced at the loading dock of the ice house before being sent out of the valley. During the years following 1925 the icing plant was enlarged as the vegetable business expanded.

In the valley vegetable industry, as in other agricultural pursuits, marketing associations were formed. During the summer of 1927 a group of Japanese and Korean growers formed The San Luis Vegetable Packers, Incorporated.⁶⁸ This company extended its activities over that portion of the valley contained in a triangle formed by the towns La Jara, Alamosa, and Fort Garland. The association shipped to both eastern and western markets.⁶⁹

Marketing groups were also formed from South Fork to Alamosa; these were composed of white members and were organized under The Co-operative Marketing Act of the State of Colorado. The purposes for which each of these associations were formed were:

... to promote, foster and encourage the marketing of head lettuce, cauliflower, pod peas, string beans, celery, spinach, carrots, cabbage, onions and other like vegetables (but not including potatoes); to minimize speculation and waste in the production and marketing of said vegetables; to stabilize vegetable markets; to handle co-operatively and collectively the problems of vegetable

growers; to engage in any activity in connection with the production, handling, grading, packing, icing, shipping and marketing of vegetables of the members of this Association; and also to handle the vegetables of non-members provided that such handling for non-members shall be incidental.⁷⁰

These associations were formed in 1926 and operated successfully during the succeeding years.

⁷⁰Articles of Incorporation, *The Del Norte Vegetable Growers' Co-operative Association*, Rio Grande County Court House, Vault of the County Clerk, Instrument No. 81763, dated December 9, 1926.

⁶⁶Fifteenth Census . . . , 1930, Vol. II, Part 3, Colorado, County Table VI.

⁶⁷*The Alamosa Journal*, February 18, 1926.

⁶⁸*Ibid.*, June 2, 1927. The Japanese and Koreans came to the valley from California in 1925 and 1926. They were attracted to this region by reports of successful vegetable crops in 1923 and 1924.

⁶⁹*The Alamosa Journal*, June 30, 1927.

Early Public Transportation in Denver

HENRY GOEDDERTZ*

Denver's horse-drawn street cars were inaugurated December 17, 1871. The line started at 7th Street and Larimer, in West Denver, and extended on Larimer to 16th Street, and out Champa Street to 27th. At each terminal the car was turned around on a turntable.

But this was not the first means of public transportation in Denver. I am informed that previously Herdies were used extensively. The name "Herdie," apparently now a lost word, was used for a type of street car. Peter Herdie invented a low-hung cab that usually had two wheels, but sometimes four, with side seats and entrance at the rear. When I came to Denver in 1885 there were, as I remember, a number of them, about seven or more standing on a vacant lot back of a billboard on 22nd Street and Larimer.

They were built in Denver by the Robinson and Doll Carriage Co., so I have been told. They were painted a copper brown, and had three windows on each side. Maybe some of you can remember them. Some of them were later used as a portable workshop on wheels, in some cases for grinding butcher tools. The reason I remember them so well is that I attended the Washington School on the corner of Eleventh and Lawrence Streets. Once on my way home I saw a man grinding some butcher tools. When I started to leave I noticed that there was no fifth wheel and no king pin on it to be seen, and to my surprise I found that both front wheels were pivoted, the same as those on our automobiles. The driver sat outside in front, on a seat mounted on two brackets; the seat was about three feet wide and accommodated two persons. When the Herdies were used for mass transportation they were pulled by two horses; only one horse was used afterwards when the vehicles were used by private owners. Originally they had side seats on both sides, lengthwise, and a step in the back entrance.

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The history pertaining to the horse-drawn rail cars has been covered by others. I may add that it was a common practice to use different colors on the panels. The cars were usually painted white and striped, with the street name and number. When directing a stranger what car to take, we told him the color of the car instead of the name of the street. The car for Larimer Street was red, for Broadway was green, and others used different colors. They also used a bell on the horse collar. The heating was done with a coal stove. When paying your fare it was necessary to go to the front of the car and deposit it in a coin receiver. When you wanted change, you passed your coin to the conductor and you would receive your change in a paper envelope.

Professor S. H. Short of the University of Denver invented an electric street car system. It had feeder wires underground, the electrical connection being made from beneath the car through a mid-track slot to a sub-surface wire. One objection to the Short System was that contact with the mid-track slot-way and one of the rails by pedestrians and animals resulted in electric shocks. This system was not a success when the ground was water soaked. I have known of seven horses being killed one rainy day, on 15th Street between Arapahoe and Larimer Streets. The power house was at 15th and Tremont. In order to hold their franchise after giving up the electric system, they operated their cars with a team of mules to each car, having a cowbell on one mule, attached to the collar. They operated for one year that way. The court finally ruled that out, since their franchise called for electric power. It was said that the court could not rule otherwise because there was no mechanical energy in their mules.

The horse also rode on the street cars. About forty-eight years ago Mr. Cook promoted Cook's Addition for private homes, located at 34th Avenue and Cook Street. There being no street car accommodations above Williams Street, Mr. Cook put in his own track and car, and operated it himself. The horse pulled the car up the hill; coming down the hill the horse stood crosswise on the rear platform of the car. This same street car was later used for similar service and was known as Cherrilyn. This car to my knowledge was last in the junk yard on West Colfax where the Colfax viaduct begins, about 7th Street.

Denver's first cable cars were started December 22, 1888. They went on 15th Street, out Colfax to City Park, and out Broadway to Alameda. The power house was at Broadway and Colfax. The company was known as the Denver Tramway Co. The Denver City Cable Co. built their powerhouse on 18th Street and Lawrence Street at about the same time. I remember one Saturday afternoon the Denver Tramway Co. started to lay a cable track on

Lawrence Street starting on 15th Street to 20th Street. They had an army of laborers digging two trenches to put their track in before the next Monday. The courts being closed, the City Cable Co. had no way of stopping them. They used coal oil torches for light when it got dark. The City Cable Co. then tunneled up 18th Street to Arapahoe Street, to 16th Street, all underground, and on 16th and Arapahoe they built a large room underground, which was known as a dead man. They had two large shive wheels to convert their cable power up and down 16th Street. The City Cable Co. had grip cars independent from their passenger coaches. The Denver Tramway Co. had an extended platform on the front of their cars for their grip levers and grip men.

The overhead electric trolley street car began operating in 1890. John Beeler was the first to use the open trailer cars during rush hours. The John Beeler rail street car trailer was about the same length as the inclosed car, with this difference, there was no center aisle. The seats were crosswise; the backrests of the seats were reversible; the sides of the car were open but there was a canvas roller curtain at each seat for some protection; the step ran the entire length of the car on both sides. They were built by the Webber Bros. Carriage Co. on Eleventh Street between Larimer and Market Streets.

I remember when the street cars had folding racks on the back to accommodate bicycles; the charge was one extra fare.

The transportation now available is anything you get. Rail cars are the most dependable in all kinds of weather.

I am of the opinion that the Peter Herdic street car was the first trackless, also the first street car in Denver.

The Influence of California Upon the Placer Mining Methods of Colorado

FRANCIS S. WILLIAMS*

The early miners in the Pike's Peak region were fortunate if they had a very minimum of mining equipment, but this does not necessarily mean that they were ignorant of its use. The fact remains that in their travels over the mountains, they had little room to carry more than the bare essentials for mining, and to old Californians, this meant that a "crow-bar, sheath-knife and pan constituted a full set of mining tools."¹ However, they knew of

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¹(San Francisco) *The Golden Era*, January 4, 1857.

the use of the other machines, and could readily construct them out of the material that lay at hand.

An excellent example of the ingenuity of the Americans is shown by the miners of Colorado. Here many devices were used in the search for gold, from the most primitive to the highly complex methods. But before studying the various methods and tools that were used, let us consider where gold is found. Gold occurs in nature in either a free state or in combination with other minerals.² In a free state, it is called *free gold*.³ This is almost pure "native or virgin"⁴ gold. It is found in various forms, from nuggets to a fine powder, that is called *flour gold*.⁵

Free gold is frequently found in a placer, of which a general definition is "a place where gold is found in dirt near the surface of the ground."⁶ To be more specific,

"... Where deposits of gold are found in gulches, on bars or in river beds, mixed only with the sands and alluvial washings of the mountains or hill sides, and requiring only the action of water, by sluicing or hydraulics, to separate the earthy mixture, the term 'placer' is applied."

There are two types of placers, *residual* and *transported*. In the first type of placer, the gold has been left in its original approximate position.⁸ But this type of placer has not been as important as the transported placers. Transported placers result from the moving of the gold from its original position, usually by running water, and the transporting of it to a new position.⁹ Gold being naturally heavy, is deposited where the current of the water was less, as in the beds of streams, or on the banks when the stream curves. This is called a "bar, a low bank of sand or gravel, at the side of a river, deposited by the stream."¹⁰ These bars are

²S. F. Emmons, *Abstract of a Report upon the Geology and Mining Industry of Leadville, Lake Co., Colorado*, U. S. Geological Survey (Washington: Government Printing Office, 1882), 235-36.

³Frank Fossett, *Colorado, Its Gold and Silver Mines, Farms and Stock Ranges, and Health and Pleasure Resorts. Tourist's Guide to the Rocky Mountains* (2nd ed.; New York: C. G. Crawford, 1880), 210; in the following footnotes, this book will be referred to as, Fossett, 2nd ed.; also see Albert H. Fay, *Glossary of the Mining and Mineral Industry*, Bureau of Mines, Bulletin 95 (Washington: Government Printing Office, 1920), 287.

⁴Bayard Taylor, *Colorado: A Summer Trip* (New York: G. P. Putnam & Son, 1867), 62.

⁵George J. Young, *Elements of Mining* (3rd ed., Second Impression; New York: McGraw-Hill Book Company, Inc., 1932), 426; John S. Hittell, *Mining in the Pacific States of North America* (San Francisco: H. H. Bancroft and Company, 1861), 44-46; Fay, *op. cit.*, 277.

⁶(San Francisco) *Daily Alta California*, June 17, 1859; also see Fay, *op. cit.*, 517.

⁷Edward Bliss, Esq., *The New Gold Fields, Mineral Resources of Colorado*, as quoted by William Blackmore (ed.), *Colorado: Its Resources, Parks, and Prospects as a New Field for Emigration; with an Account of the Trenchera and Costilla Estates, in the San Luis Park* (London: Sampson Low, Son, and Marston, 1869), 124-25.

⁸Charles F. Jackson and John B. Knaebel, *Gold Mining and Milling in the United States and Canada, Current Practices and Costs*, U. S. Bureau of Mines, Bulletin 363 (Washington: Government Printing Office, 1932), 12; Fay, *op. cit.*, 565.

⁹Fossett, *op. cit.*, 2nd ed., 201; Fay, *op. cit.*, 698; also see Charles F. Jackson, *Small-Scale Placer-Mining Methods*, U. S. Department of the Interior, Technical Paper 591 (Washington: Government Printing Office, 1938), 27.

¹⁰(San Francisco) *Daily Alta California*, June 17, 1859.

also called *creek placers*.¹¹ Both transported and residual placers are areas of ground containing loose particles of gold. Placers are not very deep, hardly ever going deeper than bedrock.

The chief difference between placer deposits and lodes is that placer mining is the separation of the gold from the sand or gravel that is combined with it, in the beds or banks of streams. "Washing with water is the universal method of getting at these deposits of gold."¹² But in lode mining, the gold is combined with quartz, especially in the lodes that are discovered near the top of the ground. The method of getting this gold-bearing ore is merely to crush the quartz and then to separate the gold as in placer mining. But as the lode goes deeper into the ground and becomes more refractory, or mixed with other metals, the method of processing the gold becomes increasingly difficult.

The early gold seekers were in search of free gold. They expected to find placers from which small deposits, or even larger nuggets, of pure gold could be easily removed. They had their experience in the mines of California where fortunes were washed out of the sands of old creek beds. This was the kind of gold they were looking for, and this was the kind that they found first. The experienced miner knew that gold generally comes from lodes or veins in the rock.¹³ He also realized that placer deposits were made by the transporting of gold to a new place, and usually this place would be in the beds of streams or along the bank where the velocity of the current was less, thus allowing the gold to settle. Thereupon the experienced miner would search, or *prospect*, for a protruding shelf of the creek bed or a bend in the stream where it looked promising.

To prospect, means, not only "to hunt for gold diggings," but to ascertain if gold is in any portion of earth or rock; as "to prospect" a claim, "to prospect" a pan of dirt, "to prospect" a quartz lode, "to prospect" a piece of quartz.¹⁴

In prospecting along a stream, the prospector panned gravel at several points, selecting those places that showed concentration of heavy minerals by the presence of black sands.¹⁵ Since gold and heavy sands would ordinarily be found concentrated on bedrock,¹⁶ the prospector investigated bedrock along the stream.

¹¹Charles Wells Purington, *Methods and Costs of Gravel and Placer Mining in Alaska*, U. S. Geological Survey, Bulletin 263 (Washington: Government Printing Office, 1905), 27; Fay, *op. cit.*, 190.

¹²Samuel Bowles, *Across the Continent: A Summer's Journey to the Rocky Mountains, the Mormons, and the Pacific States, with Speaker Colfax* (Springfield, Mass.: S. Bowles & Co., 1865), 304.

¹³Richard Sopris, "Settlement of Denver" (manuscript, Denver, October 20, 1884), 5.

¹⁴(San Francisco) *Daily Alta California*, June 28, 1859; also see *ibid.*, June 17, 1859; Jerome C. Smiley, *History of Denver with Outlines of the Earlier History of the Rocky Mountain Country* (Denver: J. H. Williamson & Company, 1903), 291.

¹⁵Jackson, *op. cit.*, 29.

¹⁶G. Thomas Ingham, *Digging Gold Among the Rockies, Or, Exciting Adventures of Wild Camp Life in Leadville, Black Hills and the Gunnison Country* (Philadelphia: Hubbard Bros., 1880), 52; Jackson and Knaebel, *op. cit.*, 13, 34.

Upon finding a likely place, the miner would settle down to work his pan. In prospecting, the *gold pan* was an indispensable tool. It was first introduced into the New World by the Spaniards,¹⁷ and called a *batea*, or wooden pan.¹⁸ Some of these are still to be found in Mexico, where sheet iron pans are not to be had. The *batea* was carried from Mexico to California by Baptiste Rouelle, A Frenchman who had worked in the mines of Mexico.¹⁹ This *batea* was soon imitated by anything that could hold water, such as bowls or pans. This is shown by one of the favorite songs of the Forty-Niners as they went to the gold fields. This was sung to the tune of "Oh, Suzanna," with the following words:

I came from Salem City,
With a washbowl on my knee,
I'm going to California
The gold dust for to see.
It rained all night, the day I left,
The weather it was dry,
The sun so hot I froze to death,
Oh; brothers, don't you cry.

Chorus

Oh! California,
That's the place for me,
I'm going to Sacramento
With my washbowl on my knee.²⁰

The early miners used anything that would hold water, and Cantrell, while prospecting in Colorado, "dug out three ounces of gold with a hatchet and washed this out with a frying pan."²¹ But usually the gold pan was made of ordinary sheet iron,²² because the gold would stick to the bottom, and the color of gold showed better against the darker background. The pan was usually circular in shape, ten to eighteen inches wide and from two to three inches deep.²³ The sides sloped to the bottom at an angle of from thirty-five to forty degrees.²⁴ The miner filled this pan with gravel and clay until the pan was about two-thirds full, and held the pan under water. The lumps of clay were broken with the hands, and the rocks and pebbles were picked out and discarded. After all of the material in the pan was broken up, the panning process began.

¹⁷Eugene B. Wilson, *Hydraulic and Placer Mining* (2nd ed.; New York: John Wiley and Sons, 1912), 30

¹⁸Fay, *op. cit.*, 68.

¹⁹Myron Angel, *History of Placer County, California* (Oakland: Thompson & West, 1882), 187.

²⁰Robert E. Riegel, *America Moves West* (rev. ed.; New York: Henry Holt and Company, 1947), 431.

²¹(Kansas City) *Journal of Commerce*, August 26, 1858, as quoted by LeRoy R. Hafen (ed.), *Colorado Gold Rush—Contemporary Letters and Reports, 1858-1859* (Glendale: Arthur H. Clark Co., 1941), 31.

²²Fay, *op. cit.*, 487.

²³Hubert Howe Bancroft, *History of California* (San Francisco: The History Company, 1888), VI, 87.

²⁴Jackson, *op. cit.*, 31.

The pan was held slightly below the level of the water, and shaken from side to side in a circular motion,²⁵ the pan being tilted away from the miner.²⁶ This motion served to concentrate the gold and heavier material at the bottom of the pan,²⁷ while the lighter materials were washed away. The process continued until only the gold and the heavier residue remained in the bottom of the pan.²⁸ The residue was heavy black sand,²⁹ and as this was carefully washed, a few *colors* were exhibited. A *color* is "a visible quantity of gold found in prospecting. If a prospector finds one or more particles of gold in his search, he says he has found the *color*."³⁰ There might also be a fine yellow border along the black sand. This border was *flour gold*. After this process was completed, there were several methods of collecting the gold. It might be picked out of the sand with a pair of tweezers. Or after allowing the pan to dry in the sun, a magnet could be used to pick the black sand from the the gold.³¹ But the best method of collecting all of the gold was to add a small quantity of mercury to the pan.³² Mercury has a great affinity for gold, and all of the colors could be collected in this manner, from nuggets to flour gold.

The gold pan was not only the first method of finding gold, but also one of the most important, for the miner could tell where the heart of the placer was, by the quantity and quality of the gold that he found in his pan. After *pay dirt*, that is, "auriferous dirt rich enough to pay the miner,"³³ was found, and other faster methods were used in cleaning the dirt from the gold, the pan was again used as the last process to gain the pure gold. The usual practice was that of prospecting and panning at the same time. But the practice was slow, and the average miner could only pan about one hundred pans in ten hours,³⁴ and unless the placer was unusually rich, he continued his prospecting elsewhere.

²⁵Bancroft, *History of California, op. cit.*, VI, 87.

²⁶Jackson, *op. cit.*, 32.

²⁷J. P. Whitney, *Colorado, in the United States of America. Schedule of Ores Contributed... to the Paris Universal Exposition of 1867. With Some Information About the Region and Its Resources* (London: Cassell, Petter & Galpin, 1867), 37.

²⁸Ingham, *op. cit.*, 54-57; Smiley, *History of Denver, op. cit.*, 292; Hittell, *op. cit.*, 115-18.

²⁹Charles Collins, *The Rocky Mountain Gold Regions and Emigrants' Guide* (Denver City, J. T.; Rocky Mountain News Printing Company, 1861), 37.

³⁰(San Francisco) *Daily Alta California*, June 17, 1859; also see *The Miners' Own Book. Containing Correct Illustrations and Descriptions of the Various Modes of California Mining, Including All of the Improvements Introduced from the Earliest Day to the Present Times* (San Francisco: Hutchings & Rosenfield, 1858), 7; Smiley, *History of Denver, op. cit.*, 291; Fay, *op. cit.*, 171.

³¹Mrs. Tabor, "Cabin Life in Colorado" (manuscript, Denver, October 22, 1884), 3; this manuscript is also published in the *Colorado Magazine*, IV (March, 1927), 72; also see Alice Polk Hill, *Tales of Colorado Pioneers* (Denver: Pierson & Gardner, 1884), 226.

³²William N. Byers, "History of Colorado" (manuscript, Denver, 1884), 38; Percy Stanley Fritz, *Colorado, the Centennial State* (New York: Prentice Hall, Inc., 1941), 157; Jackson, *op. cit.*, 32; Ingham, *op. cit.*, 63-64.

³³(San Francisco) *Daily Alta California*, June 17, 1859; also see Fay, *op. cit.*, 493.

³⁴Jackson, *op. cit.*, 32.

Panning in itself was slow and hard work, with "constant stooping" and "the immersion of the hands in water."³⁵ As soon as the placer turned out rich returns, the miners turned to other methods that would be faster and easier. These succeeding methods depended on the location of the placer and the amount of water on hand. Each method was an improvement on the last in disposing of the debris, but the use of each method that was employed in the *diggings* depended on four things: the amount of water, the availability of this water, the proximity of the water to the placer, and the richness of the mine. The *diggings* were a general name for placer gold mines.³⁶

Wet diggings are in the banks and bars of unfailing creeks or rivers; *dry diggings* are in flats or the beds of gullies which are dry the greater portion of the year.³⁷

The first improvement on the gold pan was the *rocker*,³⁸ sometimes called the "mining cradle."³⁹ This was glorified in a poem published in 1857:

'Tis in vain that ye seek any longer to hide
Your treasures of gold in your rivers so wide,
In your gulches so deep, or your wild canon [sic] home,
For the Anglo-American race are come;

And the noise that ye hear, is the sound of the spade
The pick, the bar, and the bright shining blade
Of the knife, and the shovel, the cradle and pan—
Brave adjuncts of toil to the laboring man.⁴⁰

The man responsible for the invention of the mining cradle was Isaac Humphrey, a miner in California. The rocker of Humphrey was

Anything that was a trough, four to six feet in length, set at an angle of from two to four inches, into which auriferous earth was placed, water poured upon it, and the implement rocked back and forth.⁴¹

This was introduced in California sometime either late in 1848,⁴² or early in 1849, for the Mariposa Mining Company that was organized in April, 1850, had among its machinery, "rockers."⁴³ Soon this machine caught the fancy of the miners in California, for in

³⁵*The Emigrants' Guide to the Golden Land, Showing Him When to Go, Where to Go, How to Go; California: Its Past History; Its Present Position; Its Future Prospects: Containing a History of the Country from Its Colonization by the Spaniards to the Present Time; a Sketch of Its Geological and Physical Features and a Minute and Authentic Account of the Discovery of the Gold Region, and the Subsequent Important Proceedings* (London: M'Gowan and Co., 1850), 84.

³⁶Fay, *op. cit.*, 218.

³⁷(San Francisco) *Daily Alta California*, June 17, 1859.

³⁸Jackson, *op. cit.*, 34.

³⁹(San Francisco) *Daily Alta California*, June 18, 1859; Fay, *op. cit.*, 189, 575.

⁴⁰"A Rallying Song for the Gold Diggers" (San Francisco), *The Golden Era*, January 18, 1857.

⁴¹Angel, *op. cit.*, 187.

⁴²Hittell, says in 1848, *op. cit.*, 22: *The Emigrants' Guide to the Golden Land, op. cit.*, that was published in 1850, mentions cradles, 81-85.

⁴³*San Francisco Evening Picayune*, April 21, 1850.

August and September of 1850, "crowds of rockers" were "seen constantly in motion."⁴⁴

And anywhere you went to work
A fortune could be made, sir
With nothing but a rocker [sic], pan
A bucket or a spade, sir.⁴⁵

The rocker resembled a child's cradle, with holes punched in one end. The operation was fairly simple, for the dirt that contained the gold was placed in a top box that was called the *sieve box*.⁴⁶ This was a small box in the top of the rocker, and it had a sieve bottom. After dirt was placed in the sieve box, water was poured on the dirt as the sieve box was rocked back and forth. The clay was dissolved, passed through the sieve, and was caught by a canvas apron, placed at an angle from the bottom to the top of the lower box. Thus the clay was sent to the back of the lower box of the rocker, and the heavier material was caught by the riffles,⁴⁷ usually three-fourths inch high and an inch wide, that were in the floor of the rocker.⁴⁸ The water and the lighter materials, or *tailings*, were carried out of the holes in the far end of the rocker. *Tailings* were "the waste of a sluice, tom, rocker, or quartz mill."⁴⁹ When all of the soil was washed away and the water came out of the bottom of the rocker clear, the rocker was *cleaned up*.⁵⁰ This process was to take all of the material that was caught by the riffles,⁵¹ and pan it in the usual way.

The first use of the rocker in Colorado was by the Green Russell party in July, 1858. This was done on the Platte River, and after making a rocker, they "rocked and washed out about eight dollars' worth of gold dust."⁵² But here the work was difficult, and "the men working diligently with a rocker and carrying their dirt from 200 to 300 yards to the river, made from three to five dollars per day."⁵³ D. C. Oakes, arriving there in October, 1858, confided to his diary that this was the average yield.⁵⁴ William McKimens wrote in November, 1858, that he had been working a small placer above

⁴⁴*Ibid.*, September 11, 1850; also see *ibid.*, August 31, 1850.

⁴⁵M. Taylor, *The Gold Digger's Song Book, Containing the Most Popular Humorous & Sentimental Songs* (Marysville, California: Marysville Daily Herald Print, 1856), 13. This song was called "Old Forty-Niner," and was sung to the tune of "Mrs. Tuckle Tobey."

⁴⁶Jackson, *op. cit.*, 34-35; Ingham, *op. cit.*, 57-58.

⁴⁷Fay, *op. cit.*, 570.

⁴⁸W. H. Storms, "How to Make a Rocker," *Engineering and Mining Journal*, XCI (June 24, 1911), 1243-44; Hittell, *op. cit.*, 129-31; *The Miners' Own Book*, *op. cit.*, 7-8.

⁴⁹(San Francisco) *Daily Alta California*, June 18, 1859; also see Fossett, *op. cit.*, 2nd ed., 213-14; Fay, *op. cit.*, 671; *The Miners' Own Book*, *op. cit.*, 9.

⁵⁰Jackson, *op. cit.*, 35.

⁵¹Fay, *op. cit.*, 160.

⁵²James H. Pierce, "The First Prospecting of Colorado, Who Did It and What Lead [sic] to It; Story of the Green Russell Expedition as Told by the Only Living Survivor," *The Trail*, VII (October, 1914), 8.

⁵³J. D. Miller (ed.), "Early Day Experiences of Col. T. C. Dickson," *The Trail*, III (March, 1911), 8.

⁵⁴D. C. Oakes, "The Man Who Wrote the Guide Book," *The Trail*, II (December, 1909), 8.

the mouth of Cherry Creek, "realizing from five to eight dollars per day."⁵⁵

Before the miners went into the mountains, the rocker was used chiefly because of the absence of water. On the Platte River during the winter of 1858-1859, the record seems to have been "\$7.50, the proceeds of one day's work,"⁵⁶ using a rocker. As the miners gradually moved toward the mountains, the pay dirt became richer.⁵⁷ Still prospecting the dry diggings, rockers were used, "as there was only a limited supply of water."⁵⁸ Villard reports that two weeks after the discovery of the Gregory Diggings, "rockers were in full operation."⁵⁹ In the three months closing with January, 1860, the owner of a placer claim in Nevada Gulch, using a rocker, washed out gold to the value of \$24,000.⁶⁰ But once in the mountains, "the rocker was chiefly used in the winter, because of the scarcity and freezing of water in the gulches."⁶¹

It is true that the rocker had the possibility of washing away the lighter particles of gold, but this was offset by the fact that it handles more dirt than the gold pan. It was estimated that two men operating a rocker, one carrying dirt and the other operating the rocker, turn and turn about, could handle three to five cubic yards of dirt per day,⁶² as compared with the panning process where a good miner could only pan about half a cubic yard in the same period of time.⁶³

The improvement on the rocker was the *long tom*. This had been introduced in Nevada County, California, by some Georgia miners in late 1849, or early 1850.⁶⁴ The *long tom* consisted of an open box six to twelve feet long,⁶⁵ eight inches deep, and about fifteen to twenty inches wide at the head and thirty inches wide at the foot.⁶⁶ It had a perforated plate or screen on the bottom,⁶⁷ close to the foot end, with half inch holes. The screen at the foot end of the tom allowed the gold and heavier materials to drop into

⁵⁵William McKimens, "Letters from Auraria, 1858-59," *Colorado Magazine*, XIII (September, 1936), 169.

⁵⁶Jason T. Younker, "The Early Pioneer—Reminiscences of 1858-59," *The Trail*, II (January, 1910), 11.

⁵⁷Samuel Franklin Emmons, Whitman Cross, and George Homans Eldridge, *Geology of the Denver Basin in Colorado*, Monographs of the U. S. Geological Survey, Vol. XXVII (Washington: Government Printing Office, 1896), 270.

⁵⁸Morse H. Coffin, "Early Days in Boulder County," *The Trail*, III (April, 1911), 13.

⁵⁹Henry Villard, *The Past and Present of the Pike's Peak Gold Regions* (Reprinted; Princeton: Princeton University Press, 1932), 38.

⁶⁰Ovando J. Hollister, *The Mines of Colorado* (Springfield, Mass.: Samuel Bowles & Co., 1867), 102; Smiley, *History of Denver*, op. cit., 277.

⁶¹Hollister, op. cit., 103.

⁶²Purinton, op. cit., 56; C. C. Longridge, *Hydraulic Mining* (London: The Mining Journal, 1910), 187.

⁶³Wilson, op. cit., 30.

⁶⁴Angel, op. cit., 191; W. B. Lardner and M. J. Black, *History of Placer and Nevada Counties, California* (Los Angeles: Historic Record Company, 1924), 344, say 1851. This is refuted by Hittell, op. cit., 22; and Bancroft, *History of California*, op. cit., VI, 410, that say 1850.

⁶⁵(San Francisco) *Daily Alta California*, June 18, 1859.

⁶⁶Jackson, op. cit., 35-36; Ingham, op. cit., 58-59.

⁶⁷*The Miners' Own Book*, op. cit., 8.

a lower box that was equipped with riffles. The long tom had a pitch of one inch in each foot. The soil containing the gold was placed in the head of the tom, and water, or the "tom stream,"⁶⁸ from a trough washed the soil down the slope "to pass through the riffle box where the gold was saved."⁶⁹ When the riffles became full, they were cleaned in the same manner as the rockers, and the residue panned. This was a decided improvement on the rocker, for twice as much earth could be moved in the same amount of time.⁷⁰

In Colorado, A. C. Wright in company with one of the Russell party, staked a claim on the Platte River during the winter of 1858-1859. They

felled a big cottonwood tree and with the crude implements at hand constructed a "long tom" and made fair wages.⁷¹

On January 26, 1859, A. A. Brookfield, writing from St. Vrain's Creek in the mountains, said that he had his long tom in operation, "the only long tom that is set and worked in the country,"⁷² probably meaning the mountain country. With the coming of spring, the rush was to the mountains. After the news of the Gregory strike in May of 1859, many of the miners went to Gregory Gulch and its immediate vicinity. William N. Byers, in company with Henry Allen and others, staked a claim on the fifteenth day of May at Jackson's Bar. They set up a long tom, but with "indifferent results."⁷³

Charles Collins, in his emigrant guide of 1861, said that for a six months' outfit for four men coming to Colorado, it was necessary to include "3 Sheets Iron, Long Tom," and "4 Gold Pans."⁷⁴ For those who were unacquainted with the long tom in mining activity, the firm of Carman and McCullen in Kansas City, Missouri, obligingly helped these would-be miners. The following advertisement appeared in the *Missouri Republican* on February 16, 1859:

The undersigned are manufacturing long toms, rockers and all kinds of mining implements suitable for the Kansas mines, at No. 5 Washington avenue, between Main street and the Levee, and will keep a supply constantly on hand. The long toms are made so that they only weigh from thirty to forty pounds; rockers from twelve to fifteen pounds. Mr. Carman having eight years experience in California, will give any information in regard to

⁶⁸(San Francisco) *Daily Alta California*, June 18, 1859; also see *ibid.*, June 28, 1859.

⁶⁹*Ibid.*, June 28, 1859.

⁷⁰Wilson, op. cit., 38; Longridge, op. cit., 188.

⁷¹A. C. Wright, A. H. Barker, and Andrew Sagendorf, "The History of Auraria," *The Commonwealth*, I (April, 1889), 55.

⁷²(Kansas City) *Journal of Commerce*, March 16, 1859, as quoted by Hafen (ed.), *Colorado Gold Rush*, op. cit., 220.

⁷³Frank Hall, *History of the State of Colorado* (Chicago: The Blakely Printing Company, 1890), I, 190.

⁷⁴Charles Collins, *The Rocky Mountain Gold Regions and Emigrants' Guide*, op. cit., 98.

mining. Persons outfitting for the mines will do well to call and see them. The expense of taking long toms from this city to Pike's Peak is about \$4; rockers \$1.25.⁷⁵

But for the best operation of the long tom, it was necessary to have a good constant supply of water.⁷⁶ Water must be turned from the stream to enter the tom, and this soon led to the improvement of the tom, in a new device called the *sluice*. Some miners at Nevada County, California, made a trough to carry their water to the long tom, and, to save labor, put their gold-bearing dirt into the trough, expecting the water to carry it to the long tom. However, the gold was found to remain in the trough, and thus the sluice was originated.⁷⁷

The sluice was a washing or separating device that eliminated the gravel and allowed the gold to be more easily taken out. The first use of this was in the *ground sluice*.⁷⁸ It was

for the purpose of washing the useless dirt from the top of the pay dirt. It is the turning of a sufficient stream of water on the dirt to carry off the dirt without shoveling it in sluice boxes.⁷⁹

The ground sluice came into general use in California during 1851 and 1852,⁸⁰ and the operation was quite simple. The water was made to flow over the land in ditches, leaving the gold in the bottom of the cut,⁸¹ where it was then worked in the rocker or panned. Less work was thus involved in the shoveling of the ground and the stacking of the boulders.⁸² *Booming* was also similar to ground sluicing,⁸³ and it was used when the water supply was insufficient for ground sluicing. The water of the stream was dammed for a short period, and then allowed to flow in a sudden rush over the ground and through the ditches.⁸⁴ This accomplished the same means as ground sluicing. It received its name from the fact that the sound of the gates of the dam "boomed" as they opened suddenly,⁸⁵ and hence was called booming. Another common method was *wing-damming*.⁸⁶

* That is a curved dam, starting from the bank and running out towards the centre of the stream, the farther end of which turns

⁷⁵Advertisement, *Missouri Republican*, February 16, 1859, as quoted by Hafen (ed.), *Colorado Gold Rush*, op. cit., 264.

⁷⁶Fossett, op. cit., 2nd ed., 122.

⁷⁷Angel, op. cit., 191.

⁷⁸(San Francisco) *Daily Alta California*, June 17, 1859; Jackson, op. cit., 38; Bancroft, *History of California*, op. cit., VI, 411; Fay, op. cit., 321.

⁷⁹(San Francisco) *Daily Alta California*, June 28, 1859; also see (Nevada, California) *The Nevada Journal*, February 24, 1854.

⁸⁰W. F. Prisk, *Nevada County Mining Review* (Grass Valley, California: Daily Morning Union, 1895), 6.

⁸¹Charles Scott Haley, *Gold Placers of California*, California State Mining Bureau, Bulletin 92 (Sacramento: California State Printing Office, 1923), 66; Young, op. cit., 435; *The Miners' Own Book*, op. cit., 11.

⁸²Longridge, op. cit., 195.

⁸³Young, op. cit., 436; Bancroft, *History of California*, op. cit., VI, 411; Fay, op. cit., 95; Haley, op. cit., 66.

⁸⁴Jackson, op. cit., 38.

⁸⁵Fritz, op. cit., 160.

⁸⁶(San Francisco) *Daily Alta California*, June 18, 1859; Fay, op. cit., 744.

down in the direction in which the current is flowing. Thus the stream is slightly deflected and a part of its bed laid bare.⁸⁷

Usually there was another small dam constructed below, and the two dams were connected by a water-tight canal.⁸⁸ The ground inside the two dams was allowed to dry and was then worked.

The principle of damming the stream in order to work the stream-bed also came from California. Because of its extensive use, the California editors often made "witty" comments about them:

Why are California miners the most profane people in existence? Because they are eternally *damning* [sic]. They have dammed every stream in California, and still seem not satisfied.⁸⁹

Several of our exchanges say that many gold seekers are damming the rivers up country. We saw an *hombre* yesterday, who came down with the precious dust, who *blessed* those streams with all his heart.⁹⁰

All the methods were thought to be inefficient by allowing the smaller fine gold to be washed downstream.⁹¹ Soon sluice boxes were constructed. A *sluice box* was twelve feet long and from ten inches to six feet wide,⁹² depending on the land that was to be worked. Usually they were "from ten to sixteen inches wide, and from eight to twelve inches deep."⁹³ The bottom was provided with riffles set from three to four inches apart,⁹⁴ and they served a two-fold purpose: they prevented "the stones and rocks from wearing out the bottom of the sluice,"⁹⁵ as well as catching the gold. The whole box sat on an incline of six inches in twelve feet.⁹⁶ It was customary to have many of these sluice boxes telescoped together, and the bottom is usually two inches narrower at one end than at the other, in order to allow of its being spliced into the one below it.⁹⁷

This was called a "string of sluices."⁹⁸ The water rushed through the string of sluices, carrying with it sand, gravel, mud and boulders. As the water traveled along, the gold and the other material settled at the bottom and was caught by the cleats. Sluices were cleaned at regular intervals, and the *sluice head* diverted after allowing clear water to run through the boxes.⁹⁹ A *sluice head* was a

constant stream of water running through an aperture, usually two inches high and from 5 to 15 inches long, under a pressure of 7 inches.¹⁰⁰

⁸⁷*San Francisco Evening Picayune*, September 14, 1850.

⁸⁸Young, op. cit., 436.

⁸⁹(San Francisco) *The Daily Evening Journal*, October 1, 1852.

⁹⁰*San Francisco Evening Picayune*, August 14, 1850.

⁹¹*Sacramento Daily Union*, December 20, 1855.

⁹²Young, op. cit., 432-35; Ingham, op. cit., 73-74; *The Miners' Own Book*, op. cit., 10.

⁹³(San Francisco) *Daily Alta California*, June 28, 1859.

⁹⁴Jackson, op. cit., 40.

⁹⁵Ingham, op. cit., 74.

⁹⁶Jackson, op. cit., 40.

⁹⁷(San Francisco) *Daily Alta California*, June 28, 1859.

⁹⁸*Loc. cit.*; also see Bancroft, *History of California*, op. cit., VI, 410.

⁹⁹Young, op. cit., 435; Fossett, op. cit., 2nd ed., 203.

¹⁰⁰(San Francisco) *Daily Alta California*, June 18, 1859; also see Fay, op. cit., 626.

and this was "the quantity of water used in a sluice."¹⁰¹ The large rocks and boulders were taken from the sluice by a *sluice fork*,¹⁰² "similar to a manure fork, but with blunt prongs, as wide at the point as at the heel."¹⁰³ The larger rocks taken out, the riffles or cleats were then cleaned¹⁰⁴ and taken to be worked in either the pan or rocker. This was still hard work, and one of the mottoes of California was "... a weakening wrist and an aching back make a barren sluice-box at night!"¹⁰⁵ After the invention of the sluice in California, the California papers told of men that were using this new machine,¹⁰⁶ and the *Daily Evening Journal* pointed out locations where "sluice washing" was "practical."¹⁰⁷

In Colorado, the first miners that arrived with the Russell party used sluices. In June, 1858, these men "took the bottom boards of some of the wagons,"¹⁰⁸ and made two sluices to work on Ralston Creek. Sluicing was stopped during the winter of 1858-1859, both because of the lack of water, and because of the poor quality of dirt that was being sluiced.¹⁰⁹ With the coming of spring, and more water, sluicing again started.

The Chicago Company, led by George A. Jackson, went into the mountains in the spring of 1859. They followed the precedent set by the Russell party, that of using the wagon boxes and converting them into sluices. In the first seven days that they used these "make-shift" sluices, they washed out \$1,900.¹¹⁰ Gregory, after making his strike in May of the same year, did the first work on it with sluices. William N. Byers says that when he

reached the Gregory diggings on the 19th of May Gregory had 2 lengths of sluices started and had been sluicing a part of three days with one man helping him and he had taken out about \$1,000.00 in gold.¹¹¹

This estimate seems to be too high, and it is more reasonable to listen to Hollister when he says that in the five days that Gregory worked the claim with sluices, he took out \$972.¹¹² After Gregory sold his claim, the new owners continued to work it with sluices with good results. Byers claims that under this new management, "they took out from \$3,000.00 to \$4,000.00 a day."¹¹³

¹⁰¹(San Francisco) *Daily Alta California*, June 18, 1859.

¹⁰²Fay, *op. cit.*, 626.

¹⁰³(San Francisco) *Daily Alta California*, June 18, 1859; also see the advertisement in (Nevada, California) *The Nevada Journal*, January 13, 1854.

¹⁰⁴Fossett, *op. cit.*, 2nd ed., 203; *The Miners' Own Book*, *op. cit.*, 10.

¹⁰⁵(San Francisco) *The Golden Era*, December 21, 1856.

¹⁰⁶*San Francisco Daily Herald*, May 21, 1852.

¹⁰⁷(San Francisco) *The Daily Evening Journal*, October 30, 1852.

¹⁰⁸Miller, *op. cit.*, 7.

¹⁰⁹LeRoy R. Hafen (ed.), "George A. Jackson's Diary, 1858-1859," *Colorado Magazine*, XII (November, 1935), 212.

¹¹⁰Jerome C. Smiley, *Semi-Centennial History of the State of Colorado* (Chicago, New York: The Lewis Publishing Company, 1913), I, 251.

¹¹¹Byers, *History of Colorado*, *op. cit.*, 37.

¹¹²Hollister, *op. cit.*, 63; also see Samuel Cushman and J. P. Waterman, *The Gold Mines of Gilpin County, Colorado* (Central City, Colorado: Register Steam Printing House, 1876), 15.

¹¹³Byers, *History of Colorado*, *op. cit.*, 37.

The other miners wanted to put in sluices also, but lumber was expensive. At this time there were no sawmills in the mountains, and the only means of cutting the trees was the whip-saw method. This was an

arrangement by which the log was placed horizontally on trestles 8 to 10 feet high, and sawed by two men, one on the platform and the other on the ground, who operated a saw six to eight feet in length, having a handle at each end.¹¹⁴

But even this crude method of sawing lumber was better than nothing, and the customers stood in line for the boards. Because of the lack of sawmills, and the need for lumber, the price was high. Many of the miners complained of the "exorbitant price of one hundred and fifty dollars per thousand feet,"¹¹⁵ but hastened to say that they were glad to get it at this price. With lumber available, the valleys were filled with men engaged in mining activity. By the first of July, 1859, "some nine-hundred miners"¹¹⁶ were sluicing in Gregory Gulch; "there were one hundred of these sluices running within a short distance of Gregory Point,"¹¹⁷ where "the production was from \$20 to \$30 per day to the hand."¹¹⁸ In a letter dated June 9, 1859,¹¹⁹ from Gregory's Diggings, Horace Greeley, A. D. Richardson, and Henry Villard go into great lengths to describe the people that were sluicing. Of the twelve companies that were interviewed, the lowest day produced twenty-one dollars, and the highest, \$510.¹²⁰ Villard goes even farther than this, and tells of one company that summer, that "sluiced out seventeen hundred pennyweights of gold, representing a value of about \$1,500, in one day."¹²¹

After the sluice boxes had been in use for some time, they were worn by the constant washing of the water and gravel. In such cases, or when the miner decided to leave in search of richer diggings, the sluice boxes "were burned and the ashes panned for the gold that would collect in the knots and crevices."¹²²

As the miners gradually drifted to the other diggings, they took the knowledge they had gained with them. Mrs. H. A. W. Tabor tells how her husband received his start in mining by whip-

¹¹⁴Irving Howbert, *Memories of a Lifetime in the Pike's Peak Region* (Second Impression: New York and London: G. P. Putnam's Sons, 1925), 23.

¹¹⁵Jesse L. Fritchard, "To Pike's Peak in Search of Gold in 1859," *The Trail*, IV (October, 1911), 12; Howbert, *op. cit.*, 28; Wm. S. Rockwell, *Colorado: Its Mineral and Agricultural Resources* (New York, 1864), 10, says that in 1864, lumber cost "from \$80 to \$100 per M."

¹¹⁶Smiley, *History of Colorado*, *op. cit.*, I, 254.

¹¹⁷Hollister, *op. cit.*, 68.

¹¹⁸Cushman and Waterman, *op. cit.*, 15.

¹¹⁹William N. Byers, "The Centennial State" (manuscript, 1884), 19, says June 11.

¹²⁰Thomas Maitland Marshall, ed., *Early Records of Gilpin County, Colorado, 1859-1861*, in University of Colorado Historical Collection (Denver: The W. F. Robinson Ptg. Co., 1920), II: 6; also see Wilbur Fisk Stone, ed., *History of Colorado* (Chicago: The S. J. Clarke Publishing Co., 1918), I, 241.

¹²¹Villard, *op. cit.*, 54. The italics are by Villard.

¹²²Evelyn Bradley, "The Story of a Colorado Pioneer (Mrs. Charles A. Findling)," *Colorado Magazine*, II (January, 1925), 52; also see J. J. Thomas, "In the Days of the Overland Trail," *The Trail*, II (May, 1910), 6.

sawing some "lumber to make sluice boxes."¹²³ Charles Mater, arriving at California Gulch in 1860, said that the miners there "had simple contrivances for their purposes; sluices, rockers and toms."¹²⁴

For sluicing, as for most of the other methods of placer mining, it is necessary to have a large amount of water. This was soon realized, and the mining ditch was another of the improvements made by the miners of California. The first ditch for mining purposes was made at Coyote Hill, in Nevada County, in March, 1850.¹²⁵ In 1851, Placer County, California, boasted of a ditch. Soon ditches were all over the California countryside, and Governor Bigler in a message of January 3, 1855, proudly asserted that California had 1,164 miles of ditches, at a value of \$2,294,000.¹²⁶ Even though there was an increase of 3,429 miles of ditches in 1855,¹²⁷ the miners were still not satisfied. The Sacramento papers of December, 1856, pleaded

for water! water! which, if we had a supply, more gold would be taken out of this country during the next six months than a mule team could take to Stockton! Are we going to have a ditch or not?¹²⁸

Colorado also had this problem of lack of water, as much of the time the gold was not found near the streams, and "many miners had to transport the auriferous dirt in wagons for hundreds of yards."¹²⁹ William Green Russell became convinced in May, 1859, that there was not sufficient water to mine for more than two months out of the year. Other miners had already become alarmed at the scarcity of water, realizing that the gulch diggings were comparatively worthless without it. Because of the previous winter's lack of snow, "the summer and autumn of 1859 were dry seasons,"¹³⁰ and work on many claims was suspended.

Ditches had already been dug on the lowlands, one being completed to mines near the present city of Denver before the end of May, 1859, and the Cherry Creek Ditch, finished two months later.¹³¹ But nothing of this sort had been attempted in the mountains.

Russell, in company with a few others, began to explore the mountains with a view to bringing water to the mines. "He having previously had some experience in ditches and in placer mining in

¹²³Mrs. Tabor, *op. cit.*, 3; *Colorado Magazine*, IV (March, 1927), *op. cit.*, 72; Hill, *op. cit.*, 226.

¹²⁴Charles Mater, "Business in Leadville" (manuscript, Leadville, 1884), 1; also see Ingham, *op. cit.*, 419.

¹²⁵A. A. Sargent, *Sketch of Nevada County* (San Francisco, 1856), 10; Angel, *op. cit.*, 191.

¹²⁶*Governor's Annual Message to the Legislature of the State of California, Assembled at Sacramento January 1, 1855* (Sacramento, 1855), 24; also see (San Francisco) *The Pacific*, January 12, 1855.

¹²⁷*Annual Message of the Governor of California to the Seventh Session of the Legislature* (Sacramento, 1856), 16.

¹²⁸*Sacramento Daily Union*, December 30, 1856.

¹²⁹Villard, *op. cit.*, 65.

¹³⁰Smiley, *History of Colorado*, *op. cit.*, I, 272.

¹³¹*Ibid.*, I, 273.

California,"¹³² decided that the head of Fall River¹³³ would be a practical point from which to bring the water. Thus, the ditch would have "its head above the mouth of Silver Creek, at the base of the high peaks of the range."¹³⁴ Fall River was a "considerable tributary of South Clear Creek, coming in from the northwest just above Spanish Bar,"¹³⁵ and only a little more than eleven miles away.¹³⁶ Russell and his party, now being known as the Fall River Company,¹³⁷ made a claim for the water rights of this river. But, unknown to Russell, another party, "The Rocky Mountain Ditch Company,"¹³⁸ being nearer Fall River and above Russell Gulch, had also made claim to this river.¹³⁹ The two companies were organized about the same time, and both claimed "the right of possession by priority of location."¹⁴⁰ The two companies were deadlocked for several weeks, until Green Russell, and R. W. Steele, the president of the Rocky Mountain Company,¹⁴¹ merged their interests. The combined companies chose the name of "The Consolidated Ditch Company, with W. Green Russell as President; A. H. Owens, Secretary; and J. M. Wood, Superintendent."¹⁴²

The company was duly organized, and stock sold "at a thousand dollars a share."¹⁴³ The ditch, "some eleven miles long,"¹⁴⁴ was completed July 4, 1860,¹⁴⁵ at a cost of \$100,000.¹⁴⁶ Richard Sopris, one of the stockholders in the enterprise, said that "this was the first ditch in the mountains."¹⁴⁷

Soon after this, the Nevada Ditch Company finished a ditch from the head of the North Fork of Clear Creek into the diggings at Nevada Gulch.¹⁴⁸ After these ditches were completed, mining was exceedingly lively in the Gregory and Russell Gulch area.

¹³²Frank Fossett, *Colorado: A Historical, Descriptive and Statistical Work on the Rocky Mountain Gold and Silver Mining Region* (Denver: Daily Tribune Steam Printing House, 1878), 31. This work will hereafter be referred to as Fossett, 1st ed.

¹³³Hubert Howe Bancroft, *History of Nevada, Colorado, and Wyoming, 1540-1888* (San Francisco: The History Publishing Co., 1890), 379.

¹³⁴Edson S. Basten and James M. Hill, *Economic Geology of Gilpin County and Adjacent Parts of Clear Creek and Boulder Counties, Colorado*, U. S. Geological Survey, Professional Paper 94 (Washington: Government Printing Office, 1917), 153.

¹³⁵Hollister, *op. cit.*, 71.

¹³⁶Smiley, *History of Colorado*, *op. cit.*, I, 272.

¹³⁷Fossett, *op. cit.*, 1st ed., 31.

¹³⁸Smiley, *History of Colorado*, *op. cit.*, I, 272.

¹³⁹Cushman and Waterman say that there were three companies.

In July, three companies were organized for building ditches, and three ditches were commenced, viz., the Metropolitan, the Russell and the Nevada. The latter was built from North Clear Creek to Nevada, and used until 1861, when, after long difficulties with the Black Hawk mill owners, the use of the ditch was permanently stopped. The two former were consolidated and became the Consolidated Ditch. *Op. cit.*, 23.

¹⁴⁰Fossett, *op. cit.*, 1st ed., 31.

¹⁴¹Smiley, *History of Colorado*, *op. cit.*, I, 272.

¹⁴²Fossett, *op. cit.*, 1st ed., 32.

¹⁴³Sopris, *op. cit.*, 9.

¹⁴⁴*Loc. cit.*

¹⁴⁵Charles W. Henderson, *Mining in Colorado*, U. S. Geological Survey, Professional Paper 138 (Washington: Government Printing Office, 1926), 9; Fossett, *op. cit.*, says July 16, 1860, 1st ed., 32.

¹⁴⁶Henderson, *op. cit.*, 28; Bancroft, *History of Colorado*, *op. cit.*, 379.

¹⁴⁷Sopris, *op. cit.*, 9.

¹⁴⁸Smiley, *History of Colorado*, *op. cit.*, I, 273.

"Thousands of men were engaged in gulch and lode mining,"¹⁴⁹ and the Pike's Peak Gold Region was gradually living up to its name.

Along with the methods of working a placer claim should be mentioned "hydraulic mining." This had its origin in California, as did so many of the other devices, and although used in Colorado, it did not come into general usage until after 1870.¹⁵⁰ From that time onward, it progressed rapidly. In fact, William N. Byers in 1884 felt that he had to mention that there was "a great deal of hydraulic mining done in the state now."¹⁵¹ E. E. Matteson, who was working a claim in Nevada County, California, in April, 1853, conceived the idea of directing a stream of water under pressure against a bank of earth.¹⁵² The flowing water dissolved the earth and carried it off through a long line of sluices. The miners from surrounding mines soon adopted this principle,¹⁵³ while others made improvements on it.¹⁵⁴

This system was used in Colorado in 1860,¹⁵⁵ "with a hose or some other hydraulic arrangement for washing down the gold-bearing dirt."¹⁵⁶ But this method did not have a great deal of success, as "every summer brought a flood, and consequent disaster,"¹⁵⁷ washing away all of the flumes that had been constructed. As a result, this method was not used with profit, or by many miners, until later years.

Gradually, the rich placers began to give out. Henry Villard saw the handwriting on the wall as early as July, 1859, in the Gregory district. From the hundred or so sluices that had been running in June, this gradually decreased to about twenty-five, with the yield very small, "just one-tenth of what had been done in the prosperous days of June."¹⁵⁸ The miners quickly realized this fact, and, like the Arab, "silently stole away" to more prosperous diggings. By the end of the summer of 1860, most of the placers in Boulder County were exhausted, as were the thinner claims in South Park County. Many of those that had yielded generously in the few months before, began to show signs of ending the rich days of placer mining. Mining was gone about in a sys-

¹⁴⁹Fossett, *op. cit.*, 2nd ed., 126; also see Fossett, *op. cit.*, 1st ed., 32.

¹⁵⁰Frederick Leslie Ransome, *Geology and Ore Deposits of the Breckenridge District, Colorado*, U. S. Geological Survey, Professional Paper 75 (Washington: Government Printing Office, 1911), 17.

¹⁵¹Byers, *The Centennial State*, *op. cit.*, 8.

¹⁵²There is some discrepancy about the exact date. Hittell, *op. cit.*, 22, says that this happened in 1852. *The Miners' Own Book*, *op. cit.*, 28, agrees with him, setting the date in February, 1852. This may be cleared up by accepting Bancroft, *History of California*, *op. cit.*, VI, 412, when he says that it was used in 1852 without a nozzle, and by Matteson in 1853. This line of thought is taken by Prisk, *op. cit.*, 6, and by Lardner and Black, *op. cit.*, 344.

¹⁵³(Nevada, California) *The Nevada Journal*, February 3, 1854.

¹⁵⁴(North San Juan, California) *The Hydraulic Press*, September 4, 1858.

¹⁵⁵Fossett, *op. cit.*, 2nd ed., 201.

¹⁵⁶Smiley, *History of Denver*, *op. cit.*, 392.

¹⁵⁷Cushman and Waterman, *op. cit.*, 114.

¹⁵⁸Villard, *op. cit.*, 58.

tematic manner, and because of the more experience of the miners, had paid better than any time previously. But the "flush" period in this part of the country was about over, for the simple reason that the "gulches, most of them worked over three or four times, had become completely exhausted."¹⁵⁹ "Gold eagles" were "no longer to be picked up by the baskets-ful and hundred thousand dollar fortunes"¹⁶⁰ were no longer to be had. The rush of miners to this country "soon exhausted the best of these."¹⁶¹

The miners then began to turn their attention to the development of the quartz mines, and to search for veins. With this came new machinery; the miners had to learn their lessons again, and to apprentice themselves to ideas of lode mining. The fickle business of mining changed, and Colorado underwent this transformation, from placers to lodes. This new kind of mining became more permanent, and, soon, as profitable as placer mining. Gold is where you find it, and the Colorado prospectors found it in the development of the lodes and veins.

¹⁵⁹Hollister, *op. cit.*, 122.

¹⁶⁰Bowles, *op. cit.*, 40.

¹⁶¹Taylor, *Colorado*, *op. cit.*, 62.

An Indian Delegation Visits Europe¹

JESSIE MELODY RABER*

George H. Curzon Melody was a man who solicited adventure. He met it with outflung arms and wrung from it the last drop of essence to flavor the achievements of a remarkable life.

In the year 1844 it was a bold undertaking for an individual to set forth on an ocean journey to England and France, but to transport a party of primitive Indians and a ton of baggage was a hazardous enterprise. Melody, with his strange company, embarked upon the broadening waters of the Missouri River in the spring of the year. Authority had been granted to him by Secretary of War J. M. Porter, and Vespasian Ellis, Commissioner of Indian Affairs, to take a group of Ioways to Europe.

The Ioways were one of the smaller, almost unknown tribes living on the banks of the Missouri River a little north of Fort Leavenworth. They were less than two thousand in number; peaceable but poor; strictly agricultural in pursuit. They were an independent, proud little nation, a century-ago minority, but in all

¹The sources used for this article are George Catlin, *European Notes* (2 vols., 3rd edition, London, 1848), II, 1-6, 16, 29, 38, 42, 43, 50-53, 67, 83, 97; Catlin's *Indian Tribes of North America* (3 vols., Edinburgh, 1833); Ray V. Denslow, *Out of the West* (1942, a pamphlet dealing with the life of Mr. G. H. C. Melody); and family scrapbooks of clippings and letters.

*Mrs. Raber, a writer of Paonia, Colorado, is a great-granddaughter of George H. Curzon Melody.—Ed.

characteristics the usual primitive Indians. The reason for choosing members of this tribe may be found in Melody's own words, "The Ioways seem to display more intelligence, more advancement away from the aboriginal mind than other tribes."

It was his plan to unite with the well-known Indian artist, George Catlin, who was exhibiting his paintings in London at the time. Together they would introduce the American Indian, explain his habits, demonstrate his mode of living, and interpret his way of thought to a curious and interested Europe.

White-Cloud, with the musical listing of Mew-hu-she-kaw, led the party of fourteen. His wife, Ruton-ye-wee-na, or Strutting Pigeon, and his daughter, Ta-pa-ta-me, were honored members of the group. Others in the company were New-mon-ya, Se-non-ty-yah, the medicine-man; Was-ka-mon-ya, Shon-ta-yi-ga, No-ho-mun-ya, Wa-tan-ye, Wa-ta-we-bu-ka-na, Ruton-we-me (a young woman, "Pigeon-on-the-wing"), Oke-we-ne, a handsome young woman, and Koon-za-ya-me, or "Female War Eagle." The women were marked by fine features, intelligent faces and attitudes of graceful humility. There were several young children.

White-Cloud was young for a chief, only thirty-two, but wore his honors with becoming dignity. A printed notice described him as one who had gained the love of his tribe, and "also the admiration of the President of the United States (President Tyler), who has granted him the unusual permission to make the journey to Europe, and to select such a party as he chose to bring with him; and he, having chosen them according to merit as warriors, has brought the aristocracy of the tribe. The stature of the man is about five feet ten inches; and he may generally be recognized in the group by his beautiful head-dress of war-eagle's quills, necklace of grizzly bear claws, and the skin of a white wolf hanging down over his back. His features are Roman with a benignant expression."

The eldest of the group was Se-non-ty-yah, the Medicine-man, almost six feet tall and sixty-one years old. In the thoughts of his flock his value was established when the ship was becalmed for several days. After ceremonies and invocations the wind became tractable, filled the sails and the vessel was brought to port. The Indians were satisfied with the result and the other passengers were amused inasmuch as the invocations had included the sacrifice of numerous plugs of tobacco to the waves.

The most thrilling event of the journey was the birth of a papoose while they were on the Ohio River. He was promptly named Corsair, after the boat that was carrying them.

The tiresome voyage over, the party went immediately to London, where Mr. Catlin was showing his famous Indian paintings.

As he entered the room where the Indians waited he was enthusiastically greeted by those who recognized him as the artist who had painted the portraits of their chiefs in America and who had visited their camps. The air was filled with shouts of "How! How! How! Chip-pe-ho-la," meaning Medicine Paint, the name they had given him in America. They were delighted to see their old friend and he immediately took them to their lodgings, which had been reserved.

The landlady had not been informed of the identity of her guests, so was completely unprepared for the spectacle that loomed before her. When they trooped in wearing war-paint and feather bonnets, she was quite overcome, thinking of her clean sheets. She of course did not know that Indian etiquette demanded the removal of paint at night and that they would disdain her beds and roll in their blankets and buffalo robes under or beside the beds.

The next morning the sturdy First Americans awakened in a strange world, but they had confidence in their white leader and held a council pow-wow to receive his explanations.

It was in the nature of a home-coming for Mr. Melody, as he had relatives and friends in various parts of the British Isles and looked forward to showing them his Indian friends. He addressed them earnestly, according to Mr. Catlin's notes, telling them that they were in the largest city in the world and would see many interesting things. He promised that they would make many friendships if they would practice their usual proper conduct.

Mr. Catlin also spoke to them and explained his arrangements with Mr. Melody. In his notes Mr. Catlin gave these illuminating comments:

"I entered into an arrangement with Mr. Melody joining my collection, conducting their exhibitions, and sharing the expenses and receipts of the same, on condition that such an arrangement should be agreeable with the Indians."

"Mr. Melody, though a stranger to me, bearing the high recommendations contained in the letter of the Secretary of War, at once had my confidence (which I am pleased to say his conduct has kept up) as an excellent and honest man. Their interpreter, Jeffrey Doraway, a mulatto, and who had been one of the first to recognize and hail me when I entered the room, had been an old friend whom I met while traveling in that country [Missouri River country] and that acquaintance had several times been renewed in St. Louis and New York. He had been raised from childhood in the tribe, and the chiefs and all the party were very much attached to him, and his interest seemed to be wholly identified with that tribe. He was of a most forbearing and patient disposition, and of



MR. MELODY (AT RIGHT) AND HIS DELEGATION OF IOWAY INDIANS.

temperate habits, and as he was loved by the chiefs, had great influence with them and control over his party."

Jeffrey Deroin (translated as Doraway) was an individual of original and special attainments. A Hannibal, Missouri, newspaper in reporting his death in his fifty-eighth year, had this to say: "He had been a slave of Joseph Robidoux, Sr., founder of St. Joseph, and had passed a large part of his life with him until in 1835 he had earned enough to buy his freedom. He was described as a handsome mulatto with a kind, intelligent countenance, modest, respectful demeanor and was an honest man."

That he was an excellent interpreter and faithfully recorded the Indian's speeches, attitudes, and reactions there can be no doubt.

George H. C. Melody was an Englishman who had become an American citizen, and was described as a distinguished looking person five feet eleven inches tall, weighing 160 pounds. He was blond, with blue eyes and light brown hair. A person of great self-control, poise in public speaking and office, he was always immaculately dressed.

One of the exciting events in his fascinating life was the reception of General Lafayette and his son on April 29, 1825. At this time Mr. Melody opened the Grand Masonic Lodge in which the two distinguished visitors were elected honorary members. His early years were devoted to Ancient Craft Masonry and the Grand Lodge and the latter to activities of the Grand Chapter of Royal Arch Masons. For many years he was a Grand Lecturer during the times when the Grand Lecturer was known as a Grand Visitor. A chronology of his life reports visits in New York City and in Albany, where he conferred with Gov. DeWitt Clinton. He was appointed Foreign Correspondent and in connection with his duties he visited Baltimore, Washington, D. C., and New York and Maine. When he attended the General Grand Chapter, Royal Arch Masons, he was elected General Grand Royal Arch Captain. As a result of his turning his capable hands to the art of design, a committee reported: "It is a matter of no little pride to your committee to state that the apron adopted by this Grand Chapter and designed by Companion Melody, was adopted by the General Grand Chapter of the United States as a part of the clothing of a Royal Arch Mason."²

This back-drop was a colorful setting for the drama of presenting a group of American Indians to the European world of literature and nobility.

²In 1942 the Grand Secretary of the Royal Arch Masons, Mr. Ray V. Denslow, and Mr. Robert R. Wright of Columbia, Mo., became interested in the study of Mr. Melody's life and through their influence a bronze marker was belatedly erected on the Melody lot. For data on his masonic activities, see *Biographies and Engravings of Grand Masters, Grand Treasurers and Grand Secretaries of the Grand Lodge of Missouri* (1901), pp. 145-146.

After the arrangements were finished the Indians were conducted to Egyptian Hall, where Mr. Catlin's pictures were being exhibited. That seems to be the scene of their first exhibition. It was a staggering assignment as their extensive baggage which included four large wigwams with poles, ceremonial garments, and other paraphernalia had to be carried along and set up for each exhibit. The life of the American Indian, mode of transport, habits, etc., were enacted for each display.

Stirring developments were the order of the day in London. Parliament was officially opened while the Indians were in the great city and they watched the elaborate and stately processions with awe. The young Queen Victoria was only twenty-five years old and had been married to her cousin, the young Prince Albert of Saxe-Coburg, for several years. As she and the Prince passed in their royal coach, the Indians were greatly impressed and made this recorded comment:

"The little Queen and the Prince both put their faces quite out of their carriage of gold to look at us and bow to us."

The imposing figure of the Duke of Wellington captivated their interest, not because of his position in affairs of the day, but because he sat his horse in the grand manner. The Tower of London's greatest attraction was the armory which they examined with absorbed interest, but the crown jewels had such slight significance for these early Americans that they were passed with no comment.

An occasion that amused the Indians greatly was a twelve o'clock breakfast at the home of Benjamin Disraeli, who was a rising power in English politics. He royally entertained the dusky travelers at his home in Park Lane and established his importance in their eyes by showing them his extensive collections.

Soon these social affairs began to wear upon Se-non-ty-yah, the Medicine-man, and one afternoon he disappeared. After a prolonged search he was discovered on a corner of a parapet overlooking Piccadilly. Wrapped in his buffalo robe he stood motionless, ignoring the crowds that had gathered in the streets below to stare at the curious picture he made and to warn him of his insecure position. At another time, after he had climbed to one of the higher pinnacles of the York Cathedral, he solemnly stated that he "had been nearer the Great Spirit than he ever had before."

White-Cloud, who was beginning to tire of his climbing expeditions, humorously observed, "It is a pity that he didn't stay there for he will never be so near the Great Spirit again."

After many public appearances the Indians and their sponsors left London to visit other towns of England, Scotland, and Ireland.

In Birmingham they placed their exhibits in Shakespeare Hall. Then they visited in Edinburgh, Scotland, and in Dundee the young baby, Corsair, died. They held a council to determine what should be done and finally decided that they had been most impressed by the hospitality found at Newcastle-on-Tyne, so Mr. Melody took the body there and attended to its burial. This event was commemorated in verse in the paper, "The Olive Branch."

Everywhere the Indians were greeted by large crowds and always they conducted themselves with dignity and intelligence. The party continued to Dublin, Ireland, where they visited Trinity College and were received by the Archbishop of Dublin. After they returned to Liverpool, they held a conference to decide whether they should return to America or visit Paris. Desire to see their homeland strummed at their heartstrings, but their wish to visit the King and Queen of France was the stronger, so a short time later the group arrived at the Rue St. Honore in which a hall had been equipped for the exhibition. American Ambassador King entertained the visitors in Paris. At the Hotel de Ville handsome civic medals were presented to all members of the party. The Ambassador announced that His Majesty, King Louis Philippe, and his Queen would receive Mr. Catlin, Mr. Melody, and the group of Ioway Indians in the Palace of the Tuileries.

When the Indians entered the hall, the members of the royal party advanced to meet their guests. Messrs. Melody and Catlin were first presented and their charges were introduced according to rank. The impressive list of the King's party recorded, "Their Majesties, the King and Queen, the Duchess of Orleans, Count de Paris, the Princess Adelaide, Prince and Princess de Joinville, Duke and Duchess d'Aumale, and His Royal Highness, the Duke de Brabant."

King Louis Philippe told the Indians through the interpreter that he was glad to see them and dwelt at length upon the visits he had made in the wigwams of the Senecas, Creeks, Delawares, and other tribes when he once made a voyage down the Ohio and Mississippi Rivers. He introduced the Queen, his sister, his two sons and their wives, and his two grandsons, the Count of Paris and Duc de Brabant.

Before this imposing array of royalty White-Cloud gracefully made this picturesque response:

"Great Father, the Chief, myself, and our warriors have for a long time had the desire to come and see the French people, and our Great Father, the President of the United States, has given us permission to cross the Great Lake. We desired to see the Great Chief of this country, and we now thank the Great Spirit for having

allowed us to shake the hand of the Great Chief in his own wig-wam."

While in Paris the party was received by Victor Hugo, who had not yet written his famous "Les Miserables." They were presented to Madame George Sands and many others of the literary and musical world of Paris.

Baron von Humboldt escorted the Indians to the Louvre but they expressed their opinion that the museum was far too large and had too many things on parade.

Mr. Melody's portrait was painted and placed in the Louvre while the Indians waited impatiently. Then they called a council meeting and informed him that they "would sleep but six nights more" in Paris, then they would be ready to start on the return journey to America.

Before they left, two ministers called and asked if they might discuss the subject of religion with the Indians. Permission was granted and the interview is recorded:

"The Indians were all seated on the floor, upon their robes and blankets, and passing around the pipe. After the usual time taken by the strangers to examine their curious dresses, weapons, etc., one of the reverend gentlemen mentioned to the chiefs in a very kind and friendly manner, the object of their visit, and with their permission, gave them a brief account of the life and death of our Saviour, and explained as well as he could to their simple minds the mode of redemption . . . and though it might be difficult for them to understand at first, yet he was sure it was the only way to salvation."

White-Cloud's reply, made through the interpreter, was as follows:

"My Friends, the Great Spirit has sent you to us with kind words and he has opened our ears to hear them. We are glad to see you and to hear you speak, for we know that you are our friends. As to the white man's religion which you have explained, we have heard it told before in the same way many times in our own country. We do not think your religion is good, unless it is so for white people and this we don't doubt. The Great Spirit has made our skins red and our forests for us to live in. He has also given us our religion which has taken our Fathers to the beautiful Hunting Grounds where we wish to meet them. We don't believe the Great Spirit made us to live with pale-faces in this world, and we think he has intended we should live separate in the world to come. You have told us that the Son of the Great Spirit was on earth and that he was killed by white men and that the Great Spirit sent him here to get killed. Now we cannot understand all of this. This may be

necessary for white people but the red men, we think, have not got so wicked as to require that. If it was necessary that the Son of the Great Spirit should be killed for white people, it may be necessary for them to believe all this, but for us—we cannot understand it. You speak of the good book you have in your hand; we have many of these in our village; we are told that all your words about the Son of the Great Spirit are printed in that book, and if we learn to read it will make good people of us. I ask why doesn't it make good people of the pale-faces living all around us?"

A representative of yet another religion visited them a few days later and another powwow and pipe passing brought forth this reply:

"My friends, we have talked many times on this subject and some of our talks have been long; but at this time our words will be few, for we are weary . . . The Great Spirit made our religion good and sufficient for us if we do not in any way offend Him. We see the religion of the white people dividing into many paths and we cannot believe this is pleasing to the Great Spirit. Indians have but one road and they all travel that, and the Great Spirit has never told them it was not right."

After this remarkable declaration of the Indians' faith in their own philosophy, they were permitted to leave. They left Havre in July, 1845, and arrived in Boston on the *Versailles* in September. They reached their homes on the bank of the Missouri River in November of the same year. Mr. Melody's health failed after his return and he retired to the town of Rocheport, Missouri, on the banks of the great river he loved. He died in 1860 and was buried in the little cemetery.³

³George H. C. Melody married Jane Gaw of Virginia. Their only child was Jessie Melody Sampson. Her surviving son is J. Harris Sampson of Oklahoma City. The great-grandchildren of G. H. C. Melody are: Mrs. J. M. Quinn, Casper, Wyoming; Mrs. R. O. Barrett, Phoenix, Arizona; Mr. Thomas W. Sampson, Los Angeles, California; Mrs. Wells Innes, La Canada, California; Mrs. E. H. Hartman, Salt Lake City, Utah; Mrs. Thomas McHugh, Albuquerque, New Mexico; Mr. Thomas W. Watkins, Meeker, Colorado; Mr. Evan Watkins, Colorado (recently deceased); Mr. J. D. Dillard, Jr., Price, Utah; Mrs. R. C. Raber, Paonia, Colorado. There are several great, great-grandchildren, one of whom—Jean Melody Raber, of Denver—carries the Melody name.

A Hard Winter

A. R. Ross*

Anyone who lived in the plains of Colorado during the '70s can recall the winter of '71 and '72. It was one of the most severe winters in Colorado's history. And the summer of '71, which preceded, was no bed of roses either, for the inhabitants of that unde-

*Mr. Ross, of Fort Collins, has been a frequent contributor to our magazine. He died March 12, 1949.—Ed.

veloped country. Ground windstorms tore across the bare prairies that summer picking up and hurling pebbles with such force that nothing could face it, man or beast. Roofs were ripped off of buildings and houses under construction were blown down in the little frontier town in which we lived. One might say that this western country as the Lord had left it was in the rough. When the descendants of the Mayflower and the other hardy adventurous folks moved West and went into partnership with God, they changed the face of the country and climatic conditions even seemed to change.

These terrific winds came at regular intervals and the sun shone most of the time. They increased in velocity and lasted for days, until everyone, work or no work, had to hunt shelter. No crops were destroyed because there were none. This was a cattle country then and the only crop was the calf crop and the cattle were not blown away but lived through it all only to meet a more serious fate in the winter that followed.

Longhorn cattle roamed over the plains by the thousands. There were no fences to stop them and if they were driven too hard by storms, they drifted south. The particular region on which I am centering the attention of my readers lies between Denver and Cheyenne, along the Denver division of the Union Pacific Railroad. This short section was a distance of 115 miles and there was a passenger train from Denver to Cheyenne and return daily and one through freight unless weather conditions upset this schedule. At times it was known to take two weeks for the round-trip. South of where the railroad crosses the Platte River was an open grazing country and cattle were numerous there. Our first snow came early in November that winter and we did not see bare ground until April. One snow piled on the other until it was three feet on the level over the entire plains country. We had nothing but native hay, to feed to so many cattle, and very little of that. And if we had had more feed, it would have been almost impossible to get it to the cattle.

The Denver division, the shortest on the Union Pacific, had more trouble than longer ones in the state on account of conditions that could not be avoided. The south half was a cattle range, and the north was a succession of cuts through a hilly country. When the train reached the Platte River going north, it was through bucking cattle and would begin bucking snowdrifts. While the snowplow was clearing huge snowdrifts, high winds were filling the cuts behind. This performance was kept up until spring, with the temperature hovering around 40 degrees below zero most of the time. All the mercury thermometers burst before the winter was half over and alcohol tests were used to finish out the season.

As the snow piled deeper and reached up to their sides, the cattle took advantage of the railroad grade to get out of it. This was only a temporary refuge, however, for soon the shrill whistle of the engineer would give them warning to clear the track. There were so many cattle strung along the railroad that they were like black-birds on a limb and it was an endless task for the train crew to get possession of their right-of-way. It was just too bad for the half-starved animals that could not get off the track quick enough, for the engineer would often have to buck into this mass of flesh and blood and knock them off right and left into a deep, snowy grave. By the time the train reached the bridge over the Platte River near Evans, hundreds of cattle had accumulated there. The engineer would slowly nose them off at each side while the fireman would get out and tail the remaining ones over to their last resting place. In the spring when the snow had melted, I saw the carcasses of those cattle piled up to the level of the track on both sides in pyramids at the approach of a 25-foot dump or fill. All of them went over into that fill alive and well but hungry and weak, and trapped by the depth of the snow. Now the train, consisting of an engine, a baggage car, and a passenger car, was faced with a different obstacle. Cuts filled with snow to a depth of 20 feet must be removed before Cheyenne could be reached. While the snowplows and shovellers were busy clearing the track ahead, keen raw winds at a low temperature were drifting snow in behind the train. The courage and determination of the crew of that little train was an object lesson to me, a lad in my teens, as I watched them work, knowing full well that they would be compelled to face the same difficulty on their return trip. This lasted for two months with no let-up.

Winter came early and our family was caught in an unfinished house. Nothing was completed inside and we had very little heat, and I wonder today how we all survived that experience. Father worked with the train crew, which was a terribly cold job at best, and when he did get back home, it was not warm. He wore a beard, and quite often while in bed at night it froze to his pillow.

Walls of snow were common in that open country and they usually ended in a two or three day blizzard. They came when the sun was shining and with no warning. I was caught in one a block from home and the only warning I had was a cold wind from the north, and my attention was attracted to the wall of snow bearing down on me. I hurried home and found my mother in the yard trying to get her washing in from the line. The wind quickly reached the blizzard stage and the visibility was about ten feet. We were glad to get into the house with only part of the washing as it was soon a raging storm that lasted three days without a let-up.

It was so fierce people were lost in town and could not find their own homes. Being a nice sunshiny day to begin with, many riders were out looking after their stock, and it was too bad for them. A few were frozen to death while others lost part of their fingers and toes, making them crippled the rest of their lives.

Travel during that unforgettable winter was limited to commerce entirely. Most of the hauling was confined to hay, wood, and provisions. Wheeled vehicles had to be abandoned and bobsleds and sleighs were used, and no one left home unless compelled to do so. Sight-seeing people were unknown. It is impossible for anyone to imagine the road situations brought about by these storms. As the snows fell, they were frozen and packed in layers to the depth of the snow level and, of course, only the width of a wagon or bobsled. These icy tracks were very difficult to travel. Turn-outs were made at intervals but if two vehicles met, where there was no turn-out, and attempted to pass each other, there was usually a turnover. Everyone feared the thaw that would come in the spring because of the amount of deep snow over the state. Roads that had been slick, narrow tracks over the deep snow for bobsleds and sleighs now became slush and mud up to the hubs of the wheeled vehicles.

All streams on the plains had their share of cattle to shelter. The Platte in particular, where the willows were thick, gave up a large number of the carcasses that went floating down to the Missouri. It was met by trash from other streams, all going down to the Gulf. When the hot winds came, all these tributaries and gulches began to wash down their dead into the Platte that was already overloaded. From the vantage point at Fremont's Orchard, which had always presented such a pleasing and spacious view of the river, I noticed the great contrast that spring. The once beautiful stream was swollen to many times its ordinary width and was a raging torrent over its banks, carrying dead cattle and floating debris. No hint of its shiny, silver color could be seen in that dirty, brown, polluted waterway.

The high water caused by the deep snow had not subsided before the spring rains began and the country was mostly under water. Stockmen went out as soon as possible, anxious to know how many cattle they had lost and were stranded with the round-up at the mouth of the Bijou, a short distance west of Fort Morgan. They were held up and rainsoaked for days and days as they did not dare to attempt to cross a stream as wide as the Platte loaded with fallen trees and dead animals, and with dangerous quicksand bottom in many places. There were just two bridges across the Platte between the east line of the state and Denver, and one was

a railroad bridge. The estimated loss in cattle for the winter of '71-'72 was figured at 75 per cent.

My father was a Civil War veteran and had a filing on a quarter section of land in the Big Bend country, and he was anxious to move out on the claim before his filing ran out. He was sure since we had so much snow there would be no danger of any more after the middle of April. We had lost our only cow and calf in the terrible storms just past but we still had a team of horses to start with and so four of us moved out to the homestead. We had a fairly good shack built on the claim but the stable was unfinished. We had only a little feed but intended to haul more as soon as we got settled. Our nearest neighbor was seven miles away. We had homemade mattresses filled with corn husks that were very comfortable, but we hardly had time even to get unloaded and moved in until a heavy spring storm struck us and lasted two days and nights. Our horse feed ran out and in desperation we emptied the corn husk mattress to feed our hungry team, all the time wondering how much longer the storm would last. We then worked frantically in the slush and bitter wind and cleared patches of snow away so the horses could graze a little until the storm was over. That summer when we did get our crops up, our wheat was blown out and our corn was eaten by grasshoppers, so all we had left was the experience. In later years, we often joked about how we had helped to build up the West on corn husks.