

Louis Max Nell: Colorado Mapmaker

By Wesley A. Brown

In the 1880 edition of the *American Naturalist*, a popular scientific journal of the time, Henry Gannet, geographer of the U.S. censuses of 1880, 1890, and 1900, wrote, "It is strange that in this country there are no map-makers worthy [of] the name. The only decent maps, either of the whole or portions of the country, are those published by the General Government ... I am roused to this philippic by the appearance of a map of Colorado, which is a vast improvement both in style and in correctness of compilation, over anything heretofore published for sale in this country."¹ Gannet was referring to the 1880 publication of *Nell's New Topographical and Township Map of the State of Colorado*. In the conclusion of his review, Gannet remarks "It is to be hoped, in the interest of map-making in this country, that Mr. Nell may see his way clear to extending his work and making this one of a series." Indeed, Nell would go on to publish eighteen updates to this map through the year 1907. During this period, Nell's "pocket map of Colorado," as it was affectionately known, became the standard. Who was this man and what is the story of his map?

Louis Max Nell was born in Altenkirchen, Germany, on January 3, 1842, educated in Coblenz, and took a full course in civil engineering and surveying in Berlin, graduating in 1863. Soon thereafter, he emigrated to New York (Figure 1).² Records of the Immigration and Naturalization Service show he arrived at Castle Gardens, New York, on June 14, 1865, on the ship *Geestemünde* at the age of 23. Herr von Nell, as he was known in the old country, spoke seven different languages. Such skill, evidencing his strong intellect, proved a great resource as he integrated into business in America. He went to work immediately as a civil engineer and surveyor, producing commercial maps of the state of New York, New England, and even California.³

In the nineteenth century, Germany produced the world's greatest mapmakers, many of whom came to the United States to work for the government in the great effort to map the West. These included Charles Preuss, the mapmaker for John Charles Frémont's various expeditions, and Baron R.W. von Egloffstein, who produced some of the finest maps ever published by the government, most notably of Captain John Macomb's Expedition to the Four Corners region of the Southwest and Lieutenant



Figure 1. Louis Max Nell (1842–1908).

Charles Ives' survey of the Grand Canyon. Nell moved to Washington, D.C., in 1870 and by 1872, he (along with several of his fellow Germans) was working for 1st Lieutenant Geo. M. Wheeler on his famed Survey West of the 100th Meridian. During the decade of the 1870s, Nell would participate in mapping much of the western United States. Specific to Colorado, Nell's name appears as topographical assistant to the Wheeler survey on 16 different quadrangles published during the years 1873, 1874, 1876, and 1879 (Figure 2).

During this time, Wheeler's survey mapped most of the state from east of Denver west to Utah and from Denver south to New Mexico. Thus, Nell personally participated in mapping the major part of Colorado's most rugged terrain. Consider how many mountains he must have climbed to obtain triangulation and altitude measurements and to sketch the nearby topographical features.

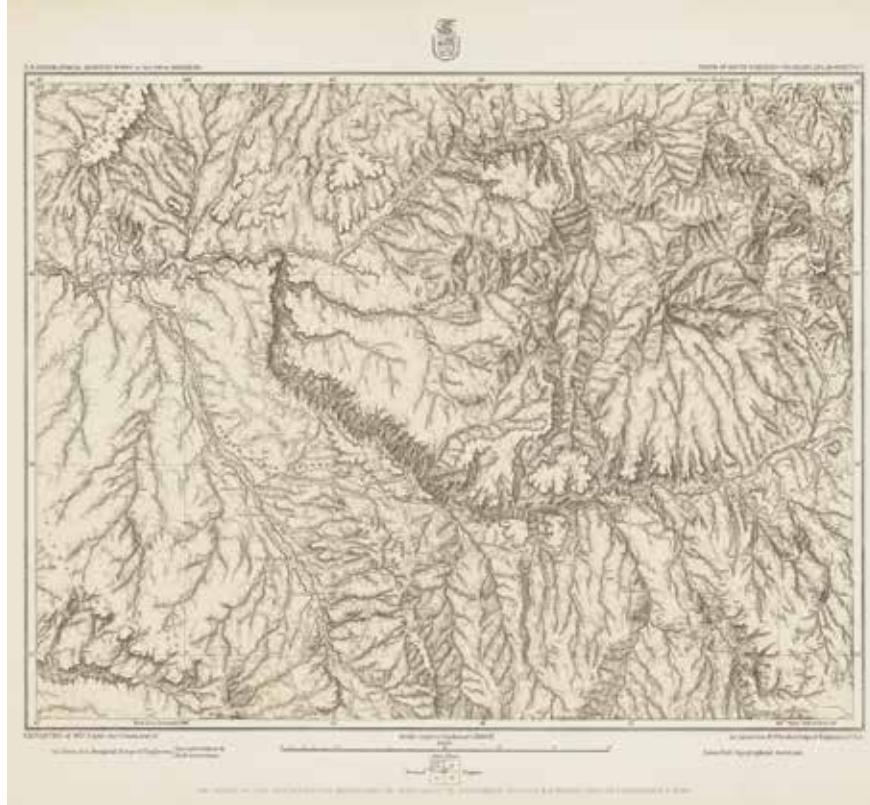


Figure 2. *Parts of South Western Colorado, Atlas Sheet 61A, U.S. Geographical Surveys West of the 100th Meridian.* Louis Nell was the topographical assistant for many such maps. Printed area 45 by 49 cm.

Nell divorced his first wife, Matilda Nell, in early 1873 (they had no children). By 1875, he had another sweetheart, and in December 1875, he married Elise Petzel in Washington, D.C. She was also German by birth and eleven years his younger, born in January 1853. The couple took up residence in Washington D.C. where they had four children: Louis, Antonia, Gustav, and Arnold.⁴ During this period, Nell would spend the long surveying summer season out west while Elise raised the children. He would return to Washington for the winter to compile maps from his field notes. Records show that he took his maturing family to visit the "old country," spending the summer of 1886 in Germany. They remained in Europe until the following summer.

When the U.S. Geological Survey was formed in 1879, the Wheeler survey lost its funding and wound-down its affairs. Presumably, Louis found himself out of a job, and perhaps, it was this intervening period of unemployment, which began at the end of 1879, that gave Nell the opportunity to begin publishing his own maps of Colorado.

During the 1870s, there was tremendous interest in mining in southwestern Colorado, where the San Juan mining stampede was in full force. The Wheeler survey had done extensive mapping of this area of Colorado in which Louis Nell had participated fully. He must have anticipated a great demand for a quality map focusing on this region. In early 1880, he published *Topographical & Township Map of Part of the State of Colorado Exhibiting the San Juan, Gunnison & California Mining Regions* (Figure 3).⁵ This map, on a scale of 9 miles to the inch (1:570,240), covers the southwestern third of Colorado, and by far its most complex terrain: essentially all the mountainous land south of the Colorado River.⁶

What Nell depicts on this map is remarkable. Hachures are used to give the detailed shapes of the mountains, and contours are spaced every 1,000 vertical feet for specific accuracy. Every known road, village, and creek are shown along with all county boundaries. Only a government survey could compile such vast information and that is exactly what Nell used, presenting it in an attractive style and with wonderfully usable format. The map must have

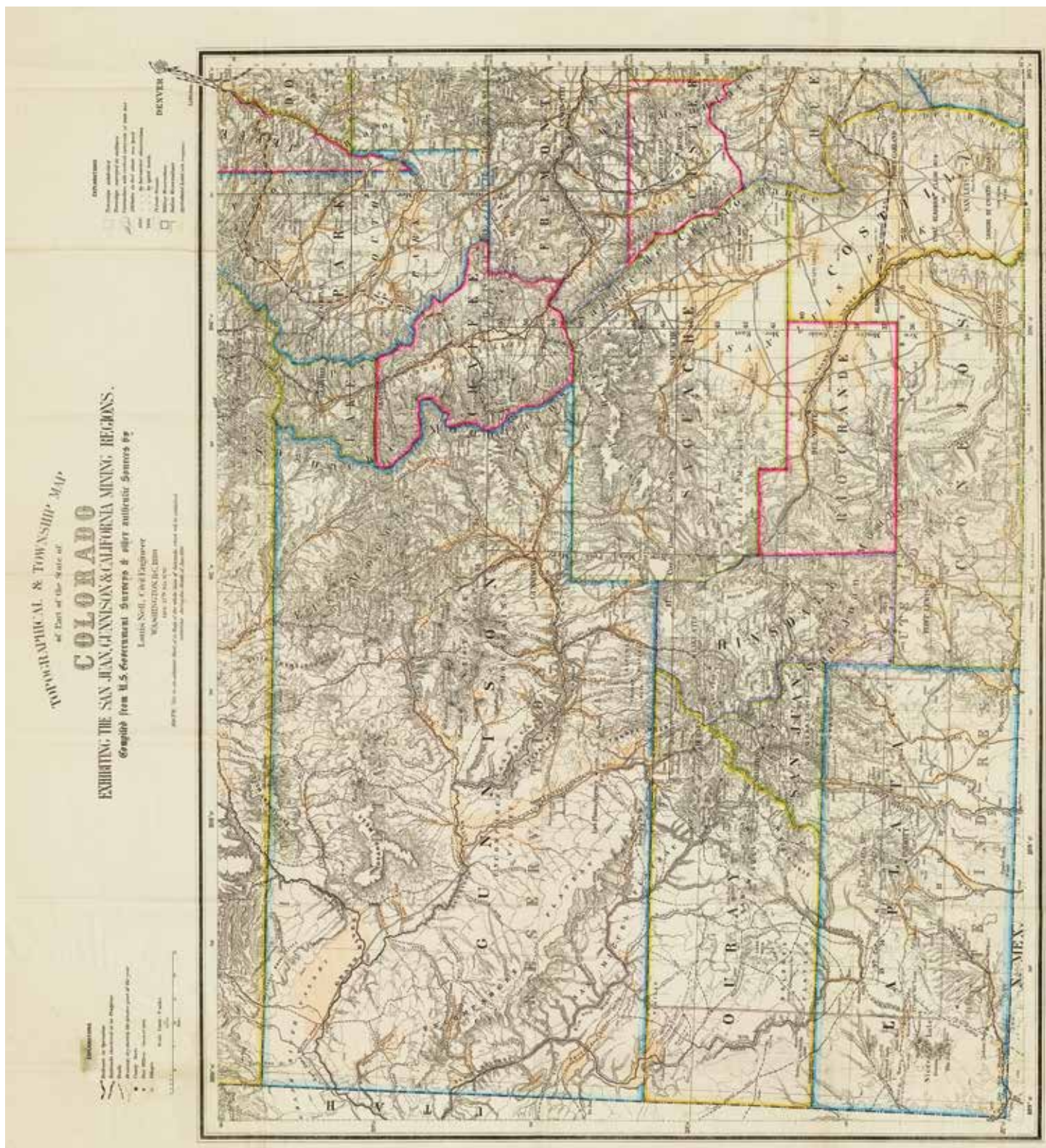


Figure 3. Nell's Map of Southwestern Colorado (published in 1880).
Printed area 61 by 66 cm.

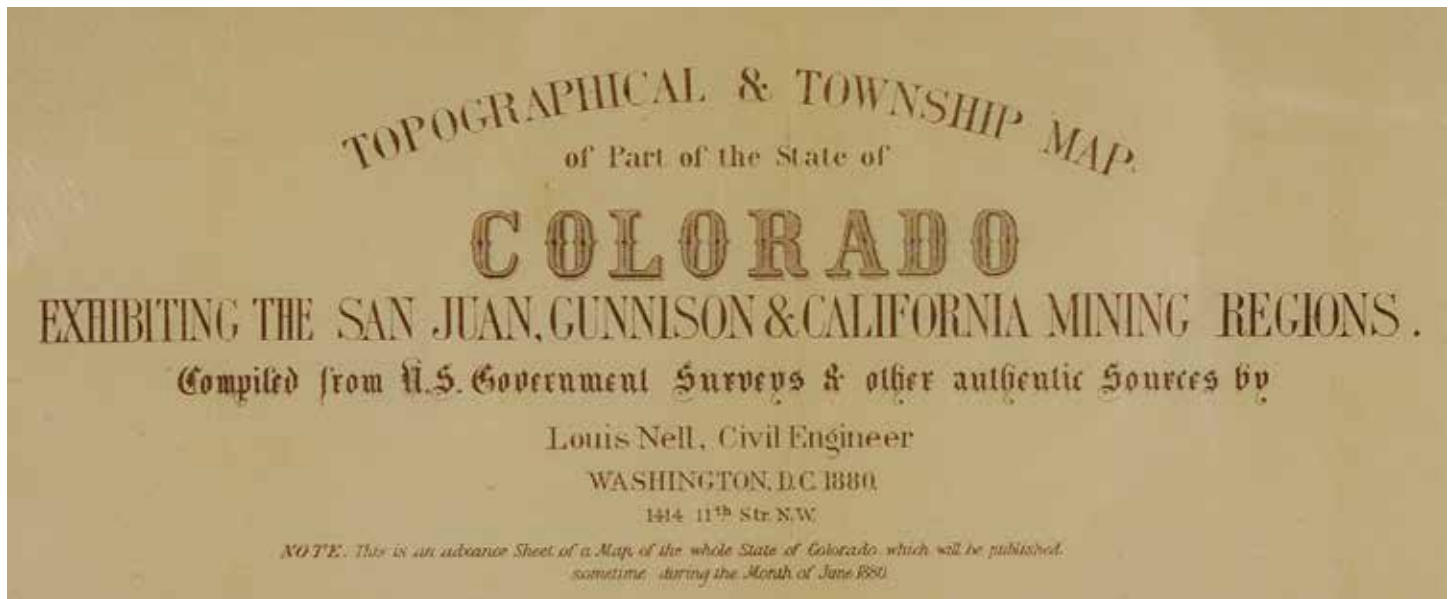


Figure 4. Title block of map with note about state-wide map to be published.

been a sensation and of tremendous interest, although very few survive today.

Nell had bigger things in mind; on his map of southwestern Colorado he states, "Note. This is an advance sheet of a map of the whole State of Colorado, which will be published sometime during the month of June 1880" (Figure 4). True to his word, later that year he published *Nell's New Topographical and Township Map of the State of Colorado*, which received a glowing review by the great authority Henry Gannett (Figure 5). Stated boldly, under the map's title, is Nell's attribution "Compiled from U.S. Government Surveys & other authentic sources," presumably the surveys of Wheeler (whom he personally knew so well), Hayden, King, and the General Land Office. All had been working diligently to map Colorado because of the nation's great interest in its mineral wealth. Needing to map a much larger area on a modestly larger sheet of paper, Nell reduced the scale to 10.5 miles to the inch (1:680,000). The same style of presentation used on the first map extends to the rest of the state. Nell claims fully 6,395 barometric observations of elevation and another 7,801 observations by spirit level. No other map compared in accuracy. Nell indicates railroads, proposed railroads, wagon roads, proposed wagon roads, trails, county seats, post offices, villages, townships subdivided and surveyed, military reservations, private grants, areas of each county in square miles and its population, astronomical positions, arable lands, and a host of other details. And yet, this dizzying amount of information is clearly presented with very

fine engraving and printing. In the 1880 map, several bold colors are used to outline each of Colorado's 31 counties. In later maps, a soft wash of the same color throughout each county was added. The hand coloring process must have been time consuming, but it produces a very pleasing result. Such coloring was typically done by women or children during this period. (Perhaps Nell's family was put to work.) The map is folded into a book-like hardcover measuring 6.5 by 4.5 inches and was known by the common name of "pocket map" (Figure 6).

Nell never produced another map of southwestern Colorado but updated his 1880 statewide map eighteen times, almost every year beginning in 1881 until 1907, except for nine years (1886, 1888, 1890, 1891, 1893, 1894, 1897, 1898, 1900). In 1892, the map was printed on a larger sheet, with this and all later editions printed to a scale of 10 miles to 1 inch and the slightly larger map now folds into a hard cover of 7.5 by 4.75 inches.

One special business relationship that enhanced the success of Nell's Colorado map was its inclusion in a popular travel guide. The 1880s would see the explosion of tourism to the west as railway track was laid to remote areas in the Rockies allowing comfortable access to scenic wonders. In 1881, Nell's Colorado map was included in *Croft's Grip-Sack Guide to Tourists' Resorts of Colorado, Reached via the Union Pacific Railway*. This popular hard cover guide of 185 pages was printed five times during 1881, each with a hand colored reduced version (45 by 62 cm) of Nell's map.⁷

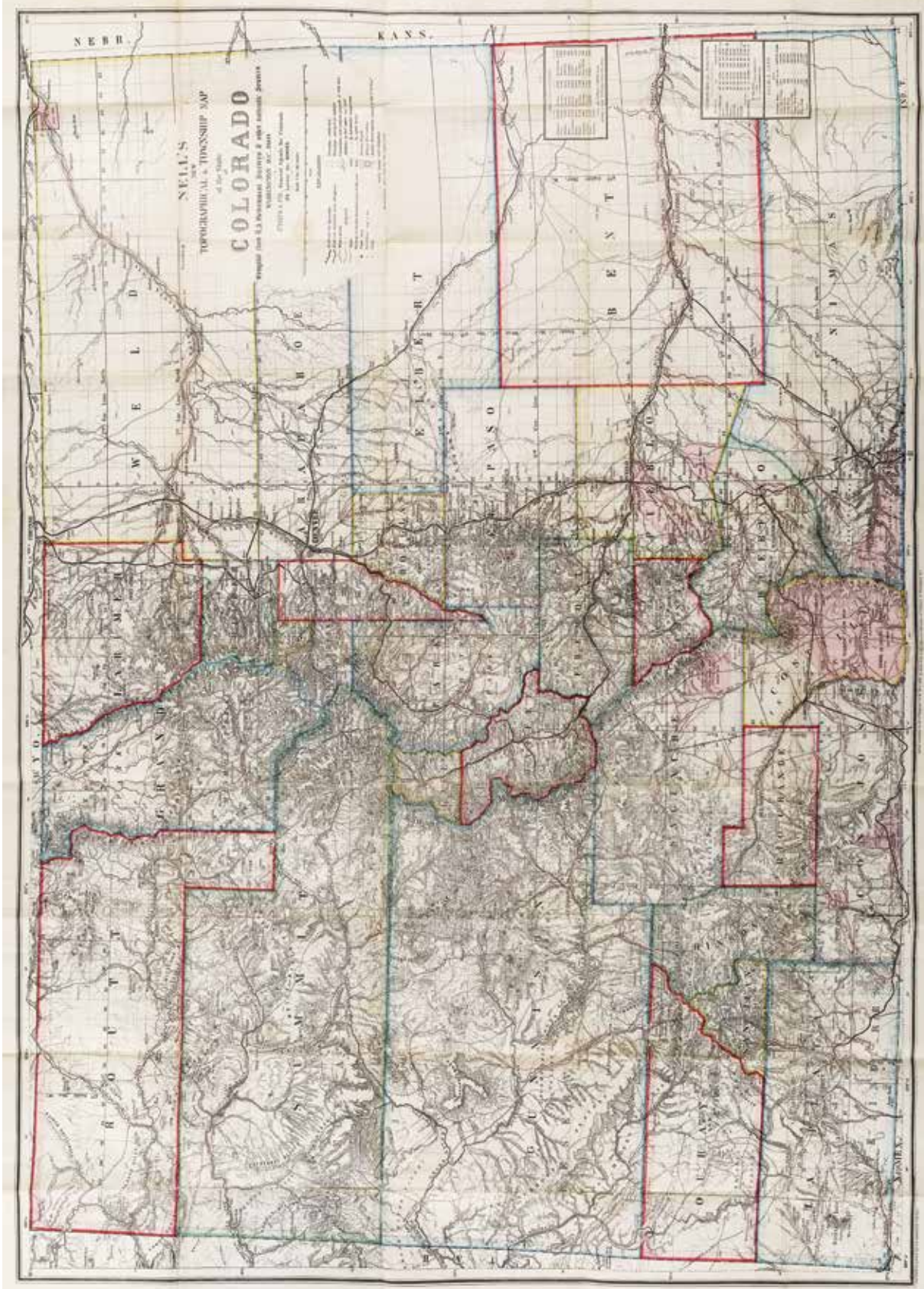


Figure 5. *Nell's New Topographical and Township Map of the State of Colorado* (published in 1880). Printed area 68 by 96 cm.

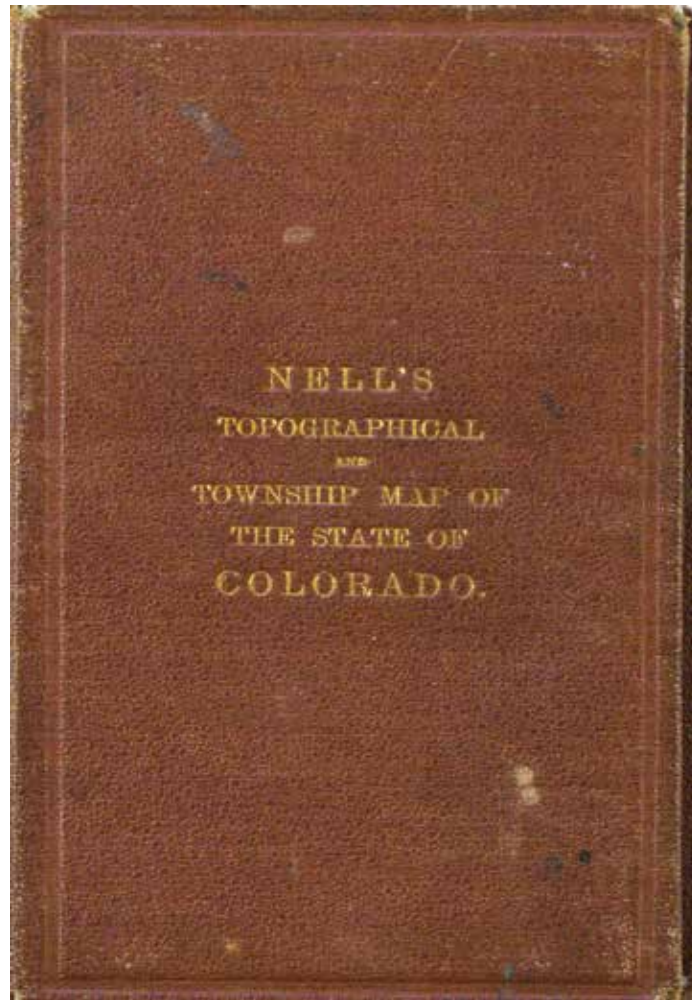


Figure 6. Cover of Nell's first map of Colorado (published in 1880).

Presumably, after taking a year or two off to start his map publishing venture in 1880, he had time to resume employment. Records indicate that by 1884 (if not before), he worked for the U.S. Geological Survey leading topographical parties in the field until 1892. Citing health problems, the 50-year-old Louis moved his family to his beloved Colorado. Because the U.S.G.S. had a large field office in Denver, he was able to transfer to a desk job with the agency where he remained as a draftsman until 1907. The family lived in several houses in northwest Denver before finally settling down at 2558 West 32nd Avenue where he resided until his death on January 2, 1908, a day short of age 66. Of interest, Nell's record reports one arrest in 1894, in which he was accused of "maliciously destroying young trees"; one would love to learn Louis' side of the story.

During all these years, Louis did not publish another map, content with his full-time service to the government

while moonlighting with updates to his well-known pocket map. Only his death would bring this parade of outstanding maps to a close (**Figure 7**). Just as Louis Nell took the mantle as Colorado's leading map-maker in 1880 from H.L. Thayer (who had been the leading publisher in the 1870s), likewise George Clason began publishing large maps of Colorado in 1905, focusing less on railroads and more on the new "road" of travel—auto roads—and would soon become Colorado's dominant map-maker through the 1930s. But during the interim, Nell reigned supreme in Colorado, even outselling national powerhouses such as Rand McNally. His obituary states that with his death "the United States government lost one of its ablest and oldest employees." His death was not only a loss to the nation, but a loss to the citizens of Colorado, who had grown accustomed to top-quality and up-to-date pocket maps of their state.



Figure 7. Nell's final map (published in 1907). Printed area 79 by 100 cm.

ABOUT THE AUTHOR

Wes Brown, a member of the Society, co-founded the Rocky Mountain Map Society in 1981. He has been an avid map collector for 40 years specializing in early world maps and maps of the exploration and development of Colorado and the west. He resides in Denver, Colorado and uses topo maps weekly as a Field Active member of Alpine Rescue Team.

ENDNOTES

- 1 *The American Naturalist-An Illustrated Magazine of Natural History*, Volume XIV (Philadelphia: McCalla & Stavelly, 1880). pages 728–729.
- 2 Taken from Press Biographies, March 1906, page 60, as reported by Erl Ellis, *Colorado Mapology* (Frederick, Colorado: Jende-Hagan Book Corporation), page 86.

- 3 In 1868, A.C. Frey & Co., 204 Fulton Street, New York, published *Topographical Railroad & County Map of the States of California and Nevada Compiled from the latest explorations and other official information by L. Nell, N.Y.*
- 4 Data derived from city directories and census records.
- 5 Nell also published *White River Indian Reservation, Colorado*, as a supplement to his map of Central and Southwestern Colorado in order to represent the whole area of the Ute Indian Reservation, 30x35 cm, scale 1:570,000, 1880. The only known original is located at the U.S.G.S. Reston Library.
- 6 The map covers longitude from 105° west to 109° and latitude from 37° north to 39° 30'.
- 7 Thanks to Dirk dePagter for insights about Crofutt's Guide.

