

course of construction at the company's ship yard in Oakland. This steamer, which will be the largest of her class in the world, will be four hundred and twenty-five feet in length, on deck, over all, will have four parallel tracks running the entire length of the boat, and will be capable of transferring at each trip forty-eight freight or twenty-four passenger cars. When completed she will be used for the transportation of overland freight and passengers, who will then go by the way of Suisun and Carquinez Straits, a material shortening of distance being thereby effected. Other additions to road have been three and nine-tenths miles from Shell Mound to Berkeley, and twenty-five and six-tenths miles north from Williams towards Tehama.

THE SOUTHERN PACIFIC RAILROAD Co. is a consolidation (April 12, 1870) of the following companies: Southern Pacific, chartered December 2, 1865; San Francisco and San Jose, chartered April 7, 1870; Santa Clara and Pajaro Valley, chartered January 2, 1868; and California Southern, chartered January 22, 1870.

The Southern Pacific Branch Railroad Co., chartered December 23, 1872, was consolidated in the Southern Pacific August 19, 1873; and the Los Angeles and San Pedro Railroad Co., chartered February 18, 1868, was consolidated therein December 18, 1874. The total length of all these lines forming the Southern Pacific Railroad, as now constructed and in progress, is one thousand two hundred and twenty-three and one-quarter miles.

By the Act of Congress passed March 3, 1871, to incorporate the Texas and Pacific Railroad Co., the Southern Pacific Railroad Co. was authorized to connect with the latter road at Fort Yuma, so as to provide a through line to San Francisco, public lands being granted in aid thereof. At the first session of the last Congress, a bill amending the former, and allowing the Southern Pacific Railroad Co. to continue its line eastward, across Arizona and New Mexico, about five hundred miles, to a point one hundred miles west of El Paso, and fixing that as the point of junction of the two roads, was reported, each company to acquire the lands and franchises for so much as it constructed. The bill also proposed a guarantee by the United States of the interest on the five per cent. bonds of the companies, at the rate of \$35,000 per mile, for the term of fifty years. Final action is yet to be taken upon it. In the meantime, to complete at the earliest practicable day the through connection by the thirty-second parallel, the Southern Pacific Railroad Co. has obtained legislative authority from Arizona to construct its road through that Territory.

The last rail connecting Los Angeles and San Francisco was laid Sept. 5th, 1876. In the construction of this road great engineering difficulties were encountered, and at the Tehachapi Pass, where the Coast Range and the Sierra Nevada form a junction, there are seventeen tunnels in less than twenty miles, the aggregate length thereof being seven thousand six hundred and eighty-three and three-quarters feet; and at San Fernando there is a single tunnel in length six thousand nine hundred and sixty-six and one-half feet. These tunnels, at the bottom, are fourteen feet in the clear, and in height twenty feet ten inches. The work on the San Fernando tunnel was commenced March 27, 1875; the headings met July 14, 1876; and the timbering was completed August 9, 1876. It is built on a grade of thirty-seven feet to the mile.

The road was open to Fort Yuma (seven hundred and twenty miles distant from San Francisco, (via Lathrop and Goshen) on May 23, 1877. The Sierra Nevada range is crossed at Tehachapi, at an elevation of four thousand and twenty-six feet above tide. The Sierra Madre, at the Soledad Pass, near Alpine, at three thousand two hundred and eleven feet, and the San Bernardino range at San Geronio Pass, at two thousand five hundred and ninety-two feet above tide.

The Company also own and run a line of steamers to points on the Colorado River, viz: Castle Dome, thirty-five miles; Ehrenburg, one hundred and twenty-five miles; Aubrey Landing, two hundred and twenty miles; Chimahueris Ranch, two hundred and forty miles; Camp Mohave, three hundred miles; and Hardyville, three hundred and twelve miles from Yuma.

Under the Acts of Congress approved July 27, 1866, and March 3, 1871, the Southern Pacific Railroad Co. acquired the right of way (two hundred feet wide) through the public lands, and twenty alternate sections for each mile of road completed and equipped. These grants cover about nine hundred and thirty-two miles.

The mileage of this Company in operation January 1, 1879, was as follows: From San Francisco to Tres Pinos, one hundred and five-tenths miles; Caruadero Junction to Soledad, sixty and forty one-hundredths miles; Huron to Colorado River, five hundred and twenty-eight and eighty one-hundredths miles; and from Los Angeles to Wilmington, twenty-two and twenty-five one-hundredths miles—making a total of seven hundred and eleven and ninety-five one-hundredths miles.

About the first of December last, the extension of the road into Arizona was commenced, and there are already about eighty miles completed and in operation, it being the intention of the company to prosecute the work vigorously to completion. The delay incident to the commencement of work of this extent having been overcome, the road is rapidly advancing eastward, track at the present time being laid at the rate of a mile and a half a day, not only opening up a speedy route to, and facilitating in the development of the rich mines of Arizona and New and Old Mexico; but, before we are hardly aware of it, we shall find that we have a second railroad across the continent which will furnish a short and direct route to New Orleans and all the southern portions of the United States.