

slope of the Sierra Nevada, which was planted in 1859, which has grown straight and almost of a uniform size, and measured thirteen inches in circumference for ten feet from the ground. Its yield of fruit that year was estimated at eight hundred pounds.

The quicksilver mines of California extend from Mendocina county, north of San Francisco, along the Coast Range, all the way to the Colorado river, and on the northeastern slope; consequently this road will run near to them for a distance of over four hundred miles. This is an interest the extent and importance of which it is yet impossible to estimate, as these mines have been but imperfectly developed thus far.

Such is the region through which the line of this road will run from Aubry, on the Colorado, to San Francisco. When this great valley shall be occupied — as it soon would be were this road made through it — no part of the route, not even Kansas, would furnish more local business both in freight and passengers.

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LETTER XVIII. — *Length of the respective Routes. — Latitude and Longitude of the principal Points.*

ALLEGHENY CITY, August 3, 1867.

LENGTH OF THE RESPECTIVE ROUTES.

THE length of any route for a railroad from the Missouri to San Francisco is not yet known. The best that has been done has been to make proximate estimates. To keep down the gradients of a road through an extensive mountain region to what is required on a railroad, necessarily extends the length greatly beyond that of ordinary wagon roads through the same region. Across plains, such as those which stretch between the Missouri and the mountains, on both the Kansas and the Platte routes, the difference is not much between the wagon road and the railroad.

The enterprising gentlemen who are pushing forward the Union Pacific Railroad of the Platte with a rapidity without example, propose to run directly across the mountain region which begins a little beyond where they now are at work, and ends only on the banks of the Sacramento, while those who, with no less spirit and energy, are urging forward the Union Pacific Railway of the Kansas, propose — and I think very wisely — to bear a little southward, and thus avoid all the formidable mountain ranges. It is certain that by so doing they will greatly reduce their gradients. They will avoid the tremendous snow-drifts of the route through the mountains, and find a far