

had a pleasant and interesting conversation, and partook of a bottle of Missouri champagne—very good. Mr. Fisher gave me several specimens of stones and clay; one of the latter I think is valuable, being more purely white than chalk, and so soft that it had to be handled carefully to avoid pulverizing it.

As many readers may wish to know what kind of a habitation a ranch is, I shall attempt a description of this one. First, an excavation is made in the side of a bank or bluff, the back part of which is left nearly as perpendicular as a wall. A stone wall, one hundred and twenty feet long and some ten feet high, with a number of glass windows in it, runs along the front of this excavation, leaving a clear space of sixteen feet by one hundred and twenty. From the top of the wall to the bank, small rough logs are laid thickly, and upon these what I took to be a large mass of prairie grass. The whole is overlaid with a heavy coating of earth, sufficient to keep out the heaviest rain; for notwithstanding the deluge of the night before, this ranch was as dry as if not a drop had fallen. It was a rough but really comfortable habitation, and must be very warm in winter. The bank here was composed of strong particolored clay, of a light stone color, streaked with vermilion. I picked up a small specimen. There are many ranches in that region, some of them rude enough. I saw a few which were mere burrows.

So solid is the earth out here, that wells are dug twenty-five or thirty feet deep, and used without walling. I examined one to-day at the railroad station at this place, which is not yet finished. It is about fifteen feet in diameter, and is now dug to the depth of twenty-five feet. It is round, and the sides, which are perfectly perpendicular, have more the appearance of rough plastered walls than earth. From top to bottom there seems to be no difference in the soil or earth. It is a fine grayish sand, similar to the sand or mud bars of the Missouri. The water of the wells here is pure and pleasant to the taste, and if wells are dug to the proper depth they never fail. The streams are narrow in their channels, and have high banks, fringed with trees of various kinds, principally cottonwood. These remarks, with regard to the compactness of the earth, wells, water and streams, apply to all the State of Kansas as far as I have seen it—about 225 miles. In many sections there are very fine springs.

The Smoky Hill, which has its sources not far this side of Pike's Peak, and has a course of not less than four hundred miles above this place, is still rising, and has overflowed some extensive flats above. The rain must have been tremendous up towards the mountains.