mile drive in springless wagons over the roughest roads in the country took the party to Shady Valley, Tenn. Here the night was passed in two log-cabins, one room each, without windows. The people entertained us as best they could, but sauerkraut and lettuce, with a dressing of buttermilk and onions, were too much for us. Families, visitors and all slept in same room. At "Shady" we saw in operation one of the few remaining Catalan forges. On a charcoal fire two feet square, driven by a water blast, iron was reduced directly from the ore, and by means of a rude trip-hammer made directly into bars. Two men make two hundred pounds per day, worth three cents per pound. Have to pay for use of forge, charcoal, ore, and time. Not much wealth in Shady.

From Abingdon next went to Johnson City, Tenn., whence a ride of thirty-four miles over a new narrow-gauge road, through magnificent scenery, brought us to the Cranberry mine, North Carolina. Here some of the finest magnetic ore in the country is obtained. The cuttings made by the road expose all the rocks from the Laurentian to the Calciferous. Weathering is shown on a tremendous scale, gneisses and diorites being decomposed often to a depth of two hundred feet, still showing all the plications of the strata and even the texture of the original rock, but crumbling at the touch.

Saltville was the next point of interest. Here salt-wells and evaporating furnaces, together with some gypsum quarries, took up our attention. We saw, also, palpable evidences of the war in the shape of old fortifications and dismantled cannon.

From Wytheville as a starting point we made a two-days' wagon journey to Wythe, visiting on the way the Ivanhoe furnace at Van Lien, and the remarkable limonite ore beds, which supply it with material to turn out twenty-five tons per day of first class pig-iron. This furnace has hot blast and all modern improvements. At Wythe the famous lead-mine was visited. This mine supplied bullets to the soldiers of the Revolution, and more recently to those of the Confederacy. A shaft two hundred and forty feet deep is used as a shot tower. Col. Raper, the superintendent, and his wife, entertained us splendidly. At Wytheville a day was spent resting under the hospitable roof of Col. Boyd, who made it one of our pleasantest stops.

The Bertha zinc works at Martins were the next inspected. Mr. Jones, the superintendent, seemed never tired of answering our questions, and gave us many points about zinc manufacture. We spent a very pleasant evening at his house.

The next day, June 16, the Natural Bridge was visited, and Clifton Forge, the headquarters of the Chesapeake and Ohio Railroad, was reached.

The objects of note here are the miserable hotel and the Iron Gate, a magnificent broken anticlinal fold. What remains beyond the gate is best told in another article. D. W., '83.

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**The Broad Street Station.**

The new Broad Street station of the Pennsylvania Railroad is one of the most complete structures of its kind in this country. It is the terminus of the elevated viaduct of the Pennsylvania road, and is situated almost in the heart of the city. Eight tracks for passenger service are laid into this structure. About two hundred and fifty passenger trains arrive and depart from the station daily during the week, and fifty-one trains arrive and fifty-five depart each Sunday.

It is obvious that the handling of this immense traffic, where human life is involved, must require a system of administration little short of perfection in order to insure safety. As regards the management of its passenger traffic this road has no peer on this continent.

The Philadelphia station has two stories for the accommodation of the public, and a third for its offices.

The ground floor contains two baggage rooms, a carriage court, and a large vestibule containing the ticket offices and entrance to the passenger elevator.

Passengers arriving in carriages or omnibuses are driven into the court, and alight under cover without the least inconvenience from rain or