that there are equally satisfactory methods of joining two pieces together.

The employment of sheet aluminum in place of lithographic stones is spreading and becoming more popular. During the past autumn an exhibition was held by the proprietors of the English patent for preparing the metal in such a way as to enable it to take the ink kindly; and the experts appear to have been highly pleased with the specimens and results. The "al-graphic" plates are used in America on rotary presses at a speed of 1,500 or 1,800 impressions per hour; at the end of a job they can be cleaned ready for fresh service without the expense of re-grinding; the same plates can be employed 200 or 300 times, and if they have to be preserved, 150 can be stored in the space occupied by one stone. Aluminum is at present being drawn on to steel tubes in the States for cycle work, etc., and reports say that it is drawn over wood in this country. Some years ago it was thought that powdered aluminum should be a useful substance for producing the "flash light" required in many photographic operations; recent exhaustive experiments, however, go to prove that the advantages lie with magnesium as of yore.—The Engineer.

A VISIT TO THE QUARRIES AT BEDFORD, N. Y.

By ALICE DINSMORE.

THE station Bedford, on the New York and Harlem Railway, with its little group of buildings near, gives no hint of what lies beyond the hill that rises abruptly from the track. A mile or more away is the village, with its old court house, its two or three churches, its comfortable homes, some with pillared fronts, others of modern fashion—all set in spacious lawns, beautified with trees.

The town straggles along one or two streets for a little distance, and then a succession of rolling fields to the hills that in every direction fill the horizon. Here and there an outcrop of ragged gneiss appears among the trees that crown most of these foothills of the Berkshires. With these beautiful surroundings, a rather sandy road winds up and down to the quarries worked by Mr. Kinkel. Here a party of members of the New York Mineralogical Club and the Mineralogy Department of the Brooklyn Institute were most kindly entertained on Memorial Day. Quartz and feldspar—chiefly orthoclase—lie close together on the hillsides which have been worked for about thirty years. The variety rose quartz, of very rich color, is taken out in large pieces, some beautifully translucent, and great masses of it lie in situ. Much of the quartz is penetrated with black tourmaline. The president of the club identified one large black garnet that a workman had found, and small specimens of columbite were also among the same man's collection.

We saw fragments of beryl crystals that had fallen under the blow of pick or powder, and were shown where an immense crystal of beryl, weighing several hundred pounds, was taken out very near the surface. Manganese is represented by dendrites on feldspar.

The specimens which we brought away of most interest were autunite, its yellow-green surface at once suggestive of the uranium ores, and the very beautiful masses of graphic granite.

The feldspar in which the cuneiform-like bits of quartz lie is a rich flesh color. The cleavage is so easy that we obtained large pieces in which it requires no very vivid imagination to read an inscription older than any found on Assyrian monument or Egyptian sarcophagus.

While the party was not fortunate enough, I believe, to find any fine, perfect crystals, some were found of great interest to the student. Among these were small, curved quartz crystals, and others showing well the arrest in crystallization, three or four sides of the hexagon lying flattened on a mass of feldspar, instead of having succeeded in attaining its individuality, as a hexagon.

Just below one of the quarries and very near the others is Mr. Kinkel's mill, where he grinds the spar for market to crockery makers. A "chasing mill" is used, and nothing inanimate could seem more human in movement than do these two ponderous stones that chase each other around a central pivot, bending a little toward each other and crunching each new shovelful of spar thrown between them, as some monster might crush the bones of a hapless victim. The spar all passes under two pairs of stones revolved by steam, and is thus reduced to a very fine powder. From these it passes into an iron cylinder, about four feet in diameter, on the floor below. The cylinder is half filled with very smooth, dark-blue quartz, pebbles, nearly as large as hen's eggs, imported from the coast of Norway. By the friction of the spar against these pebbles in the revolving cylinder, the complete pulverization is accomplished, and the powder is as fine as the finest flour. The process is so simple that we wonder it was ever thought of.

Close to this mill is a kiln, where Mr. Kinkel calcines quartz when he has an order for it. He has arranged a very simple and convenient device for fuel. A barrel of oil stands on the rocks a few feet above the furnace. The oil falls through a pipe into the mouth, where a fire of wood is first kindled; the oil is then lighted and the flame plays among the small pieces of quartz, calcining it about as fast as it can be fed into the opening above.

The woods about the quarries are very beautiful; the tall oaks and chestnuts bend above most luxuriant ferns of many varieties. At the foot of the hill, across the meadow, the Mianus flows gently along, carrying what Whittier has called its "small tribute" to the Sound. Its water is stayed here to turn the wheels for two mills, one where corn, grain, and spar are ground, the other a sawmill.

Sitting in the shade of an old orchard, beside the little river, far enough from the mills to find them rather picturesque features in the landscape, was by no means the least of the pleasures experienced by some members of the party of mineralogists.

A party of Mexicans and a diamond expert of Chicago have gone to the Balsas River region of the state of Guerrero, Mexico, where they expect to engage in diamond mining on an extensive scale.

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