Pump lift 2,700 gallons of water in one full stroke.

It was unfortunate for the Summer School that the aluminum works of the Pittsburg Reduction Co. were being removed to Kensington during June; but we saw the remains of the old works, and got some specimens of the metal. Capt. A. E. Hunt is President of this company.

The last iron industry visited was that of the Carbon Iron Company. They use a unique method for the direct reduction of iron from the ore.

The last excursion of the Summer School was made Saturday morning, June 27th, to the Allegheny Observatory, in Allegheny. Up to this time we had been dealing with tons and thousands of heat units;—on that day, Professor Very, who is in charge of the observatory, showed us instruments that dealt with quantities so small as to be beyond our conception. With one instrument, he could measure accurately the infinitesimal quantity of heat, which, if concentrated at a point within a cake of ice weighing one pound so situated as to receive heat from no other source than that in question, it would take a thousand years to melt the ice. We had a good view of the sun spots through the large telescope. We were still more staggered by the minuteness of some things when Professor Very took us to the little shop of Mr. Brashear. This enthusiastic scientist is a maker of lenses, spectroscopes, and various other delicate instruments.

At noon, June 27th, the Summer School broke up and the members scattered, not more than two going off together. In concluding the record of the "Pittsburg trip" it seems but just that the scribe should thank Professors Richards and Hofman, in behalf of the Miners, for the successful planning and carrying out of the Summer School of Mines and Metallurgy in 1891.

R. H. S.

Foot Ball Notes

Dartmouth, 8; Tech., 6.

The Dartmouth eleven won their last championship game from Tech. last Friday afternoon, November 20th, on the Congress Street Baseball Grounds, in a very close and interesting game. Only a small number of Tech. men witnessed the game, but this was greatly on account of the inaccessibility of the grounds. The cheering, although not as good as at the Amherst game, was very fair.

The playing of the Tech. eleven was by far the best they have put up this year, and should have won them the game; but, as usual, our bad luck was with us, and some of our best men were injured and had to retire, their places being filled by substitutes. Besides which, in the first half Tech. lost the ball on Dartmouth 2 ½-yard line by a pitifully poor decision of the referee, who claimed that Tech. had failed to gain their necessary five yards. Clarke disputed, the distance was measured with the use of a foot rule, and it was found that Tech. had gained one foot over the requisite amount. But the referee refused to change the decision and the ball went to Dartmouth.

The teams lined up at 2:45, Tech. having the ball, and making five yards on the V, which Johnson followed with a gain of six yards; then Andrews, Kales and Boyd were sent through the center for five yards apiece. On four downs the ball went to Dartmouth and Fulsom made five yards. The umpire then gave them five yards more for offside