Department Notes.

The American Engineer for Feb. 22 contains a very interesting account of the inclined railway at Glion, Switzerland. It was built by M. Riggenbach, who was also the designer of the railroad up Mt. Rhigi. The incline is six hundred and seventy-four metres long, with a rise of three hundred and twelve. At the upper end the grade is fifty-seven per cent, while at the lower end it is not more than thirty. The connection is made by a couple of vertical curves, the line being straight throughout.

The system consists of two cars, attached to the ends of a cable, one of which ascends as the other descends. The motive force is supplied by the excess of weight of the descending car over the ascending one. The weight is secured by the alternate filling and emptying of a cistern placed under the car, which contains 7,000 litres of water. A rack is constructed in the centre of the track, but is used only to regulate the speed of the descent.

It is a somewhat curious fact that the Institute buildings stand nearly midway between the two tallest edifices in Boston, namely, the Central Church, corner of Berkeley and Newbury Streets, which has a spire two hundred and thirty-six feet above the street, and is the tallest in Boston, and the tower of the new Old South, on Dartmouth Street, which is two hundred and thirty-five feet high. The height of some of the other spires are as follows: Park Street Church, two hundred and seventeen feet nine inches; Hollis Street Church, one hundred and ninety-six feet; Old South Church, one hundred and eighty feet; and Christ Church, Salem Street, one hundred and seventy-five feet.

Experiments have been made within the past weeks with the telephone apparatus of a Michigan inventor, which he thinks may be utilized for talking across the ocean. He claims to have solved the problem of adding a battery, to a line almost without limit, by using simultaneously a number of independent local batteries of induction coils and deviating points, and says he can avert the danger of burning batteries by increasing the number of cells. The experiment was tried over three hundred and twenty miles of wire between New York and Washington. Morse instruments were working close to the telephone, and the induced current was so strong that a message going over the instrument could be read through a telephone receiver. The inventor expects to try twenty Paine transmitters on the new Bennett-Mackey ocean cable, and thinks the current generated will be sufficiently strong to overcome resistance.

Isaac Todhunter, M.A., F.R.S., the great English mathematician, is dead at the age of sixty-four. His text-books have a world-wide reputation, those on Analytic Geometry and the Calculus being familiar, by name at least, to most of our students.

The total production of pig iron and Bessemer steel in the United States, in 1883, was 5,145,972 net tons, against a total production of 5,178,122 net tons in 1882, showing a decrease of 31,150 tons.

Uranium has lately been discovered in Colorado. The ore also contains cobalt, nickel, and bismuth, with minute quantities of gold and silver.

The proportion of uranium is only about two and a half per cent; but since this metal is worth $800 a pound, the discovery is a valuable one.

An '84 Miner recently analyzed one of the counterfeit silver dollars which are more or less prevalent at the present time, and found it to contain lead and antimony. It had a clear ring, but when broken the fracture had a brittle, crystalline appearance.

According to the American Machinist, the principal industrial schools in this country which have iron-working shops connected with them are the Massachusetts Institute of Technology; the Worcester Free Institute of Industrial Science; the Stevens Institute of Technology, Hoboken, N. J; Cornell University, Ithaca, N. Y.; and Washington University, St. Louis, Mo.