ENGINEERING AND SCIENTIFIC NOTES

As an incidental feature of its topographic mapping in the State of Colorado, the United States Geological Survey has established bench marks that have been found to be of sufficient importance by engineers and others who are required to have knowledge of the exact elevation of the locality at which their starting points are located. From 1898 to 1910, inclusive, the United States Geological Survey has marked more than 1,500 exact elevations in Colorado. These datum points have been marked by means of tablets, caps, or iron posts embedded in the ground, or in trees, posts, etc., the number stamped with steel dies on the bench marks the nearest foot as determined by the leveling.

Bulletin 486, which has been issued by the Survey, describes these datum points and gives their exact elevations to the thousandth of a foot. For instance, the datum points on the Colorado and Southern Railway between Denver and Canon City, Colorado, are described as follows:

"Pikes Peak, in monument of rocks on summit of Pikes Peak: aluminum tablet stamped '1407 1905-5-7, 10-13.'"

A copy of Bulletin 486 may be obtained upon application to the Chief of the Division of Topographic Engineering and Survey of the United States Geological Survey, Washington, D. C.

In line with the demands of the Interstate Commerce Commission that the railroads of the country must develop a signal system automatically controlling trains, and prevent collisions on the Queen and Crescent Railroad at Cincinnati the other day gave an official demonstration of a new signal and automatic train stop system over a railroad division under actual service conditions. The invention has been developing its system to answer the signal requirements for daily service over 114 miles of track on the Queen and Crescent for more than a year past and has succeeded, it is said, to the point of practical efficiency that is required in the daily operation of trains. Signals by the system are produced inside the engine cab, operated through track circuits, the necessity of compelling an engineer to crane his neck outside the cab in his efforts to read and follow signals. The system has the further advantage of applying the brakes and automatically stopping the train under danger conditions if the engineer should for any reason fail in his duty. The official test of the system covered 160 miles under the severest signal conditions obtainable, running from Ludlow, Ky., to Lexington, Ky., and return, and over a water-locked track. The system is, it said, thoroughly performed its functions as perfectly as the present wayside signal system operates, just as it has done in a service test the past twelve months.

The addition of the new signal to the freight department has been at last definitely accomplished, and is expected to prove a big help.

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FIELD DAY EVENTS

Two-Thirds Of Seats Reserved For Faculty Applied For Already

In a recent letter to THE TECH on athletic, and particularly, Field Day topics, Major Briggs states that the faculty is short of students, but expects to fill this gap in Field Day than ever before. The members of the Corporation arc accordingly greatly interested. Already more than two-thirds of the seats reserved for these bodies have been applied for.

As an example of this enthusiasm the Mazer writes that only last Sunday Mr. Desmond Fitzgerald brought him out to learn the date, time and other details of Field Day.

In referring to the student exercise being suspended on November 7th, Major Briggs comments on the Faculty rule last spring by which the Freshman and Sophomore Laboratories and Drawing rooms will absolutely be closed after twelve noon. No one will be allowed to work there after that time.

The Cross-County team, he says, may be sent to the I. C. A. A. A. Championship Meet at New York on the 22nd of November. A great deal depends on the way in which the men run this year. Considering the probable that Dartmouth will round out into such shape as to be able to win the New England meet on their own course, although several of the other New England colleges will not be out of it as "threateners."