

THE TECH

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PRICE ONE CENT

MINE CATASTROPHES TO BE INVESTIGATED

Experiments To Determine Conditions Leading To An Explosion

Some interesting experiments to determine the conditions necessary for explosions in coal mines are soon to be commenced in the Mining Laboratories by Mr. J. A. Grant, a graduate of the University of Minnesota. Mr. Grant comes from the mines at Sand Coulee, Mont., where he has been located for the past two years.

In spite of the frequency with which disastrous explosions occur in coal mines, very little is known in regard to actual conditions leading up to such catastrophes. Mr. Grant has been forcibly impressed by the need of such knowledge, and feels that a year or so can be very profitably spent in investigation. Carelessness of the more or less ignorant foreign labor employed in the mines has, no doubt, much to do with causing explosions, but effective prevention necessitates knowledge of conditions which are dangerous in themselves.

The first step taken by Mr. Grant will be the analysis of numerous samples of the dust present in coal mines in various parts of Montana, but principally from the Sand Coulee mines. These samples include dust (1) from the actual working faces of the mines, where the coal is now being extracted, (2) from the trackways, where more or less accumulates due to the grinding up of larger pieces of coal, (3) from the main airways, which would contain other impurities from the outside, and (4) from the old workings which have been abandoned. The analysis will be for the purpose of ascertaining the amount of moisture, volatile matter, and fixed carbon contained in the samples from the various parts of the mines. Volatile matter in coal consists of gaseous matter and some of the carbon which is capable of being driven off on increase of temperature.

Using mixtures of air and gas which conform as nearly as possible with actual ordinary conditions in mines, Mr. Grant will next endeavor to determine the percentage of dust of the various compositions shown by the analyses necessary to produce an explosive or inflammable mixture. This will be accomplished by means of actual experiments carried on in the laboratory.

This much accomplished, Mr. Grant can then compute from the data obtained, the percentages of volatile matter and fixed carbon, as well as several gases, such as carbon monoxide, methane, etc., which are present when explosion or firing takes place. Finally, the percentage of moisture and slate dust, which is not inflammable, necessary to render the above determined dangerous mixture "dead" or harmless, may be ascertained.

As a result of his investigations, Mr. Grant hopes to obtain sufficient data to enable him to institute methods for the prevention of disastrous explosions in the coal mines of the country.

CALENDAR.

Tuesday, November 23.

8:00 P. M.—Chemical Society in Union. Talk.

8:00 P. M.—Meeting Mining Eng. Society Harvard Union.

Wednesday, November 24.

4:00 P. M.—Basket ball practice.

Friday, November 26.

4:00 P. M.—Basket ball practice.

8:00 P. M.—Joint concert and dance at Mechanics Building.

GRAND POP. CONCERT AT UNION FRIDAY

Orchestra To Render Music All Evening--A Sleight-of-Hand Performance

This coming Friday night the entertainment in the Union will be slightly different than during the past weeks. This week the committee have decided to have a Pops concert. This concert will be conducted along the same lines as the big Pops concert in Symphony Hall.

The large room in the Union will be filled with small tables, and refreshments will be served at moderate prices. Throughout the evening an orchestra will render popular music. The seating capacity, which is necessarily small, will have to be lived up to, so the committee have been forced to restrict the number of tickets to 200. These tickets will be on sale in the Union at noontime until the supply is exhausted. The admission fee will be only 15 cents.

The entertainment part of the evening will be furnished by Mr. Sherwood Blodgett. Mr. Blodgett is a prestidigitator of prominence. He will render card tricks and sleight of hand work that will undoubtedly prove to be most mystifying.

The committee wish to emphasize the fact that the number of tickets is limited. Therefore all who wish to attend should get their tickets right away, or perhaps they might get left.

CHEMICAL SOCIETY

H. S. Marks Will Address Members Tonight On "Cellulose"

There will be a meeting of the Chemical Society tonight at 8 o'clock in the Union. The speaker of the evening will be Mr. H. S. Marks of the firm of A. D. Little & Co. The subject of the talk is "Cellulose, its Chemical and Commercial Aspects." The talk should prove to be most interesting.

After the lecture, light refreshments will be served. Although this meeting is unfortunately near the Thanksgiving vacation, a large attendance is expected. Admission will be twenty-five cents.

CLASS BASKET-BALL

Manager Albee Working On His Schedule--Practice This Week

Manager C. H. Albee of the 1912 basket-ball team, is fast completing his schedule. In all probability, he will get games with Rockridge Hall, Chicopee High, and Durfee.

The team will be minus the services of M. C. Cherry, last year's captain, and also W. A. Canada, neither man being in school this year. A. F. Kendrick, a substitute on last year's varsity, is showing up well. Other men who should prove strong are J. I. Harlnett, W. M. Ruby, R. Stone, R. A. Chandler, and A. J. Freedman. Members are to report for practice this week, and a large squad is desired.

The Freshman squad is as yet an unknown quantity, but every indication points to a team well capable of taking care of itself.

BASKET-BALL STARTS MANY OLD MEN BACK

During Mid-Year's Team Will Go To Rochester--Schedule Later

Varsity basket-ball practise began yesterday at the gym. About twenty men reported, and were put to work. Not much was done except light work and shooting at the baskets.

There are quite a number of last year's men in school and they serve as a good nucleus. These men are Wentworth 1910, who was captain last year and played guard; Parker 1911, the present captain, and last year's center; A. T. Bemis 1912, a snappy guard, and Lord 1910 and Hargraves 1910, two forwards, and Tate 1910, a guard. There are a number of new men out who look very promising, and there is reason to expect a good squad.

During the mid-year's vacation the basket-ball team will make the longest trip that any team from here has ever made. The schedule is not yet complete, but a trip will be made to Rochester, New York. Arrangements have been made for games with Rochester University, Conesus College, and with Niagara University. This should prove a very interesting vacation to the men. Besides these there will of course be the customary games with local colleges, as Dartmouth, Williams, Brown, Tufts, etc.

In addition to the varsity team there will be a second team which will play a regular schedule. There are plenty of men in the Institute capable of making this team if they will only come out and try.

Practise is being held three times a week, Mondays, Wednesdays and Fridays, from four to five. It is hoped a large number of good men will report. The schedule will be announced later, when it is definitely determined. The management, while not optimistic, feel that this year the Institute will be represented by a good team. They think that with such a nucleus of good men to start with, together with the new men, there have every reason to believe that the Technology basket-ball team will again come into its own.

TECHNOLOGY NIGHT

E. L. Orvington 1904 To Speak At Electrical Show Tonight

To-night is to be Technology night at the Electrical Exposition in Mechanics Building. A limited number of seats have been sent to Professor Merrill to be distributed to advanced Course VI men. As a special feature of the regular programme, Mr. Earle L. Orvington, M. I. T. 1904, will speak on high frequency electric waves. Mr. Orvington was a prominent Course VI man while at the Institute, and his remarks will be well worth hearing.

Among the many amateur wireless equipments entered in the amateur competition, a set constructed by E. H. Guilford 1912, is exciting no little attention. The wireless telephone is also the center of interest to many.

As this special night for Tech men has been set aside by the management of the Exposition mainly through the efforts of Mr. Orvington, it is safe to presume that a good number of men will take advantage of it. Course VI men should especially try to go for practically everything new in the electrical world is on exhibition.

WIRELESS SOCIETY PROGRESSING RAPIDLY

Enthusiastic Meeting Held Yesterday--Reports All Favorable

A meeting of the Wireless Society was held in Room 11, Eng. B at 4 o'clock yesterday afternoon. About twenty-five members were present. After the secretary read the minutes of the previous meeting the reports of several committees were given.

The first report was that of the committee which studied the problem of erecting a pole for the transmission of the messages. Chairman Guilford said that a suitable pole could be erected on the Pierce Building at a small cost, provided the matter was looked upon favorably by the Executive Committee of the Institute. The roof of the building at the desired spot was found to be amply strong and other conditions were favorable. Chairman Guilford estimated the expense of erecting the pole at about \$30.

Chairman Mason, of the room committee, reported that in all probability the room now used by the track team and musical clubs could be secured for the Society, with permission to erect a five-foot bench. This space would permit of the installment of three receiving outfits.

Pres. Moore reported that the Board of Directors had held a meeting during the past week, and the matter of dues had been taken up. It was decided to fix the dues at \$1.00 per year, including initiation fees, dues and shingle. It was later decided that the dues would be raised to \$1.00 initiation fee and \$100 for dues next year; also that members who fail to pay dues within two weeks should be dropped.

Samples of the shingle were distributed by Chairman MacKellar of the shingle committee. He said that the design had been submitted to members of the drawing department for criticism. They recommended that the border and lettering be entirely of black and gold on white paper.

H. S. Woehling, secretary, reported the application of about thirty men for admission to the society. This would make the total about seventy-five members. The names of the applicants were read, and it was voted that they could become members upon payment of dues.

Pres. Moore pointed out the fact that the application of the Society to install the receiving and sending outfits was now before the Executive Committee of the Institute. No trouble is expected about getting permission to put up the receiving outfit. The matter of a sending station is the one under consideration by the Executive Committee. The possibility of interference with government messages was the only reason that permission was not immediately given for the sending apparatus. This matter has been thoroughly investigated, and the result is thought to be favorable to the Society.

Assistance in setting up and operating the station will probably be given by several members of the faculty. Prof. Cross has already signified his intention to help the members. The fact that members of the faculty are becoming interested in the welfare of the Society, assures it a brilliant future.

One of the new campus regulations at the University of Utah says that special students who do not affiliate themselves with classes shall be governed by the freshman rules.