

# THE TECH

Vol. XXVIII. No. 76

BOSTON, MASS., FRIDAY, APRIL 30, 1909

PRICE THREE CENTS

## MINING COURSE IS STRONG AND BROAD

### Graduates Become Chemical-Mechanical-Electrical Engineers

### SUMMER SCHOOL GOOD

#### Thesis Compels Student To Use Own Resources—Many Begin In Assay Offices

Probably in no branch of engineering work are the demands so great and varied as those in mining engineering. Above everything else a mining engineer must be pre-eminently a broad-gauge man, both in knowledge and mind. He must be broad in knowledge because of the many difficult problems he has to solve in which are required thorough understanding and working knowledge of civil, mechanical, and electrical engineering, combined with his own expert training in mining and metallurgy. He must be broad in mind to meet the emergencies which he and his men encounter, and also to keep his men in good health and temper. It is absolutely essential that, before entering on his professional work in mining engineering, a man must be thoroughly trained in mathematics, physics, chemistry, surveying, mechanics, electricity, mineralogy, geology, assaying, metallurgy and mining. He must master several branches of engineering sufficiently to apply them to his own special field.

The mining course at Tech is a broad one covering all of the above subjects. A student on the completion of the course can become useful in mining or metallurgical industries, and in fact in many other engineering lines. This latter point is well proven by the number of graduates of the mining department who have risen to high rank in mechanical, electrical and chemical lines.

Aide from the regular work required in the mining course two other agents broaden the student and teach him how to work out a chemical operation to a successful end. These are the summer schools and the theses. In the summer schools the student has a chance to visit mining camps and smelters in this country and Canada, thereby familiarizing himself in a practical way with his previous studies. His thesis at the end of the course compels him to use the knowledge and engineering skill acquired during his four years' study, and gives him practice in operating the different machines and furnaces such as crushers, rolls, trommels, jigs, classifiers, slime tables, Wilfley tables, blast furnaces and reverberatory furnaces which he will use later in his career. It teaches him to use his own resources to work out some particular commercial operation connected with mining, ore dressing, or metallurgy.

The kind of work which the student does on entering his career depends partly on his desires, and partly on the particular locality where he happens to be placed. Many students begin by getting positions in assay offices connected with mines or smelters. Some begin by surveying. Others prefer to begin by working in the mine with pick and shovel, thereby obtaining an intimate knowledge of all details connected with drilling, timbering, ventilating, hoisting, and dressing of ore taken from the mine. Being one of the laborers for a time, he understands them and sees things from their standpoint, thereby learning how to command men in the future.

If the student happens to begin his professional life in the metallurgical branch he starts out either in the chemical laboratory or as a helper in some of the various departments of a steel mill. Owing to the broad school training he has had he adapts himself to his particular work and uses it as a tool. As he gains experience he is wanted for better things. Surveying and assaying are really laudable sub-

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## INTERCLASS MEET 2.30 TOMORROW

### Alumni Donate Three Cups To Become Property Of Winners

### JUNIORS SHOULD WIN

#### Relay Team Entered in Quarter 157 Entries Are Received Events Crowded

With already a good safe margin of points won in the winter meet, the juniors are expected to clinch enough points in the meet tomorrow to win the championship for the year. Such being the case, they will be entitled to place their numerals on the new cup which has been presented by Major F. H. Briggs 1881, chairman of the athletic advisory council. The freshmen who took second place in the winter meet with 20 1-2 points are expected to take



W. C. Salisbury 1911

second place. The seniors have 17 1-2 points and the sophomores 17.

The gift of three other cups by prominent alumni will stimulate competition. These cups are presented for the winners of the 120-yard high hurdles, the mile run and quarter mile. The hurdle's cup has been donated by Benjamin Hurd 1896, who made records in these events while at the Institute. The mile cup is the gift of T. L. Batchelder 1890, a prominent long distance man. The quarter mile cup comes from Dr. J. A. Rockwell 1896, whose Institute record of 51 1-5 seconds in this event still stands.

In the 200-yard dash, C. W. Gram 1909, and Salisbury 1911, look good, but they will be pushed close by such men as J. S. Grant 1912, and S. Reed 1912. Gram 1909, should win in the 220-yard dash, closely followed by Salisbury 1911, White 1911, and Oettinger 1912. In the

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## GUNCKEL SPEAKS AT CONVOCATION

### Toledo Man President of Newsboy's Association Of America

### OBJECTS TO CIGARETTE

#### Tells of Work Among Street Boys Many Are Saved From The Penitentiary

President Noyes introduced Mr. John Gunckel of Toledo, President of the Newsboys' Association of America, as the speaker of the convocation Wednesday noon.

Mr. Gunckel from the moment he began had the whole audience with him. He began by saying that he was a varied and bashful man, little used to speaking, and with no respect for commas, semicolons, or other matters pertaining to correct English. All through his life, he said, he had been accustomed never to do things for himself, if by any possible means he could get some one else to do them for him. He considered that he had accomplished something worth while if he could get some brother to carry up the wood in his place, or if he could persuade some other boy to dig the bait while he fished. He also told of a former teacher who weighed somewhere in the vicinity of two of three hundred pounds who, as an extreme punishment for unruly conduct, would take the boys up on the platform and sit on them.

This same teacher, he said, was still living, and had been been watching his career each year in detail. The teacher never complimented him on his wealth or on his high position, but rather on the successful efforts he made for the betterment of the conditions of neglected children. Of this he was justly proud, for he claimed that the greater part of the material for our peni-

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## DR. WOOD SPEAKS

Before the Biological Society last evening, at the Technology Club, Dr. Frederick Wood 1895, gave an interesting lecture on "Biometrical Methods and the Interpretation of History." The lecturer was particularly interesting because of the close association which he has had in connection with the subject.

The principal speaker of the evening, Dr. Woods, was preceded by Prof. Sedgwick, who gave an interesting account of his trip in the west, through the different colleges and universities of Illinois and Wisconsin.

The bacteriologists and their friends spent the remainder of the evening in the enjoyment of a short entertainment and in the participation in the enjoyments of a "good feed."

The officers of the club elected for the coming year are: President, E. C. Howe 1909; secretary, H. O. Jenkins 1909; treasurer, P. K. Brown 1910.

## TECH SHOW DINNER

Tomorrow evening at the Union, the "Oh-Be-Joyful" crowd gather once more, or in other words, the Show men will make their final appearance before the public, at the "Show Dinner."

The toastmaster of the evening will be General Manager Joslin and those who will attempt to enliven the occasion will be: Bursar, F. A. Rand, Prof. Dugal, C. Jackson, L. M. Emerson of the Show Advisory Committee, R. H. Allen 1909, C. Belden 1909, S. A. Malcom 1909, J. I. Finnie 1909, Carl Sittinger 1910, and Dudley Clapp 1910.

Besides the dinner different show stunts will be given, and all Show men are invited to be present. Those not having received invitations as yet are requested to see D. Clapp before Saturday.

## F. S. GREEN SPEAKS ON WATERPROOFING

### Hydrolithic Cement Better Than Tar and Felt Protection

### PROGRAM COMMITTEE

#### Picked at the Meeting Thursday Elections Postponed—Plans For Banquet

If the statement of Mr. F. S. Green of the Hydrolithic Waterproof Cement Co., is to be believed, the day of pitch and felt waterproofing is about over, at least as far as deep basements and tunnels are concerned, where the hydrostatic head is large and liability of fracture is great.

Mr. Green compared the old method with the new one of his company. With tar and felt the waterproofing must be done on the outside, for it needs a great backing to resist the water head while the hydraulic waterproofing cement can be applied on the inside where it merely forms a 5-8 inch coat on the wall, leaving all possible fractures open to repair.

Another advantage of the new waterproofing material is that it is resistant to acids. Thus for instance in the New York Subway Power House, water seeped through the walls containing 7 per cent. sulphuric acid completely destroying the tar-felt waterproofing. Since hydraulic waterproof cement was applied no leaks have been found.

Mr. Green gave numerous examples of similar nature well illustrated by lantern slides, showing the "before and after treatment" conditions of many deep basements in New York skyscraper buildings and several of the River tunnel where the waterproof cement has had to be applied after the failure of tar and felt.

There are many kinds of hydraulic cement for sale, but few perfect. This particular kind is not for sale, however, and is only used on the company's contracts. In cost it is many times higher per square foot than tar and felt, but when the economy in space and the easiness with which leaks can be discovered is considered the two methods balance well in economy in most cases where absolute waterproofing is necessary.

At the annual meeting Thursday, the following program committee for next year was elected: J. B. Babcock 1910, W. C. Arkell 1910, H. N. Cummings 1910, C. J. Lovejoy 1910, P. Fleming 1911 and H. L. Manley 1911. Owing to the small number present, the election of the regular officers was postponed until May 14.

At the annual banquet May 6th, Prof. C. M. Spofford and T. E. Byrnes, Vice-president of the New York, New Haven and Hartford R. R. will be the chief speakers. Most of the professors of the department expect to be present and a great time is expected.

The next meeting comes May 14, when Professor Swain will talk on the failure of the Quebec Bridge.

## CALENDAR

FRIDAY, APRIL 30.

4:00 P. M.—Wireless Club meeting—Union.

4:4 P. M.—Tech Board meeting—30C.  
8:00 P. M.—Union Night. Dist. Attorney Hill at the Union.

SATURDAY, MAY 1.

12:00 M.—Senior Portfolio meeting—Union.

3:00 P. M.—1912 vs. Nat'k High.

2:30 P. M.—Spring Meet at Field.

3:00 P. M.—1911 vs. Brewster Academy.

6:30 P. M.—Show Dinner at Union.

MONDAY, MAY 3.

4:30 P. M.—Class Day Committee—Union.