

The Knowledge Bank at The Ohio State University
Ohio State Engineer

Title: Notes of the Campus

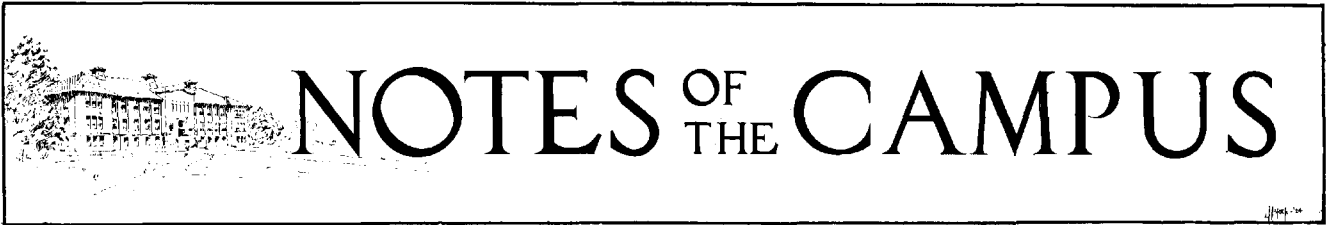
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President Thompson, in his closing address of last year congratulated the rising Engineers on their choice of such a time honored and constructive profession. He admonished them to ever bear in mind that "Engineering is an exact science—the foundation of which cannot be built on falsehood and error." "Getting by won't stand in an engineering profession." The President dwelt upon the obligations of an Engineer as a public servant, and in closing stressed the importance of developing that necessary quality of "individual and personal character."

The first lecture of ten to be given under the auspices of the Lecture Committee of the Engineering College was delivered by Mr. Willard Beahan, assistant engineer of the New York Central Lines. For a little less than an hour Mr. Beahan entertained his audience with tales of his experiences in building railroads through Indian country. He showed how the old surveying instruments were used, how the old-time Cow Boy handled a revolver, and not the least interesting was the picture of the beloved "red roan with white stockings" which carried Mr. Beahan in his field surveys for upwards of twenty years. Mr. Beahan was in Texas ten years and in the west working for Mr. Gould, and it was his experience while there that formed the basis for his talk. Mr. Beahan is a recognized engineer and a well known lecturer.

This lecture, like the coming ones under auspices of the Lecture Committee, was open to all engineers. It is hoped that they will be well attended by the students from all departments of the engineering college.

STUDENT CONGRESS

Friday, October 20th, was a day replete with excellent addresses before the Student Congress in management. Col. Edward Orton, Jr., in the opening address dwelt upon the evidence of mismanagement of our stored natural power, principally the coal fields. "Apply the principles of good management to the priceless heritage of stored energy as the future salvation of the human race" was his closing commendation to future engineers and managers.

The human element in industry was stressed in his morning address by Mr. John Younger, General Manager of the Standard Welding Company, Cleveland, and National Chairman of Management Week. He cited the fact that as mechanical discoveries have increased in the past, we have grown apart in human relations. "The next one hundred years will see as great an advance in human relations as the last one hundred years has seen in mechanical develop-

ment," predicted Mr. Younger. Touching briefly on the technical education of the student, the speaker suggested that in specializing too early the young man may narrow his viewpoint and in so doing, throttle the prime requisite for a good executive and manager.

The morning session closed with a short address by H. L. Kirker, ex '89, an engineer with the Westinghouse Electric and Manufacturing Company, Pittsburgh, Pa.

The afternoon session opened with an address by L. W. Wallace, executive secretary of Federated American Engineering Societies and Vice Chairman of the Hoover Committee on the Elimination of Waste in Industry, on "Managerial Responsibility for the Elimination of Waste in Industry." There was nothing theoretical about the speaker's address. Rather did he impress the audience as being a thoroughly practical man. Scarcely a statement was made that he did not back up with statistical proof. Mr. Wallace also shared the idea that students should not specialize too closely while in school, but should go in for as many activities as possible in order to broaden their knowledge of people, and thus better fit themselves for executive positions. Returning to the question of waste, the speaker gave four causes as outlined in the report of the Hoover Committee, to-wit:

- (1) Faulty management,
- (2) Idleness of men, materials and machinery,
- (3) Ill health and accident,
- (4) Intermittency of plant activity.

Following up these statements with several interesting examples, Mr. Wallace made the assertion that seventy-five per cent of this waste can be eliminated by:

- (1) Standardization of products,
- (2) Stabilization of plant activity,
- (3) Betterment of human relations.

Richard A. Feiss, President of the Taylor Society, gave the closing address of the day. As an answer to the critics of scientific management, the speaker gave results which showed that although the indirect expenses increase, the direct expenses decrease in greater proportion, with scientific management. "The best possible service in times of stress with the least change in routine is the object of scientific management." In the discussion which followed, Mr. Feiss was asked for an opinion concerning the effect of scientific management upon the "fads and fancies" in men's clothing. This he answered by stating that the great number of different varieties of men's clothing caused a great waste in the clothing industry, and that

his company, in the future, hopes to gradually narrow down to a single line, distinctive of the company.

ARCHITECTS

With the completion of the addition to Brown Hall, the Department of Architecture will have quite an increase in floor space, the entire first floor of the west end of the building being occupied by the department and by the University Architect. This will include three large drafting rooms for design, two lecture rooms, each with a projection lantern, an architectural museum for the display of materials used in the construction of buildings, and two offices. The University Architect will have adequate office space and a large drafting room.

The addition is of fireproof construction, and has an artificial lighting system which will be nearly equal to daylight in quality, permitting the rendering of architectural drawings at night.

The ground floor story of the addition will be occupied by the department of photography, and the second and third stories will be occupied by the department of engineering drawing.

Last July, Mr. Herbert Baumer, a graduate of Ecole des Beaux Arts, Paris, was added to the staff of the department with the title Professor of Architecture. Professor Baumer will give part time to instruction in Architectural Design classes, and part time in the University Architect's office, assisting in the design of new buildings and campus improvements for the University.

In addition to his academic studies here and in Paris, Prof. Baumer has traveled extensively in Europe, studying the architecture of different countries, and has had valuable professional experience both in the United States and in Europe.

On Nov. 1 at a regular meeting of the Architects' Club, Prof. Ralph Fanning gave an outline of his travels in Europe last summer, and displayed sketches he had made on his trip which were of special interest to the architects. After the lecture a Hallowe'en party was held in the basement.

Among those who visited the department home-coming week were John Wells, Glenn Knorr, '20; George Wegner, '21; Walter Taylor, '21; Marion Proctor Phillips, '21; Calvin Cool, '22; William Breidenbach, '22; Milton Osborn, '22; Larry Russell, ex '24; Jos. Black, ex '24, and Marion Bracy, ex '24.

Preliminary arrangements have been made for the conferring of new smocks, and for the annual Smock Dance, which will be held some time in December.

The indoor baseball team is thus far undefeated. After vanquishing the Electricals 19-1, they took the games from the Ceramics and Civils by forfeit.

The editors of "The Acropolis" are working to make the new publication of more universal interest. The first issue will probably appear about Thanksgiving time.

Ernest Burke, who has been in the office of Miller and Reeves, is recovering from an attack of appendicitis.

Max Worthly, '24, has been appointed to represent the Architects on Engineers' Council.

CERAMICS

The Student Branch of the American Ceramic Society held its annual election on Oct. 17. The officers elected for the present year are: President, C. A. Smith; Vice President, Edward Burkhalter; Secretary-Treasurer, A. B. DeVol.

The society will hold its customary monthly meeting on the first Tuesday of each month. In addition to the main technical paper of each program, a preliminary talk will be given by an upper classman on the experiences acquired in ceramic plants during the summers. The program given on Nov. 7 consisted of a talk on "The Value of the American Ceramic Society to the Student and the Engineer" by Mr. Ross C. Purdy, general secretary of the American Ceramic Society, and a preliminary talk on "Dry Pressed Ladle Brick" by Mr. R. T. Fesler, a senior.

Considerable endeavor is being made to enroll every ceramic student in the Student Ceramic Society. Last year, the membership was approximately 95 per cent of the men in the college, but it is hoped to increase this to 100 per cent very shortly.

MINERS AND METALLURGISTS

The first meeting of the A. I. M. M. E. was held in Lord Hall on Oct. 5. At this time officers for the coming year were elected. Plans were made for the annual A. I. M. M. E. banquet, which is to be held some time before Christmas.

CHEMICALS

The Student Chemical Society in its first meeting of the year elected the following officers: President, F. H. McLaren; Vice President, R. H. Foster; Secretary, E. J. Fisher; Treasurer, Miss Maxwell; Sergeant at Arms, C. T. Harman; Master of Programs, R. E. Stoddard.

The society this year has a membership of 70, which is much larger than ever before. Credit for the great success of the society this year must be given to the officers, who have worked hard and faithfully to make the meetings interesting.

Regular meetings will be held the second and fourth Wednesdays of each month. Programs have been arranged in advance, and it will be to the advantage of all chemists and chemical engineers to be present.

The Chemical Engineers' representatives on the Engineers' Council are John Harrison and R. E. Stoddard. Stoddard is the new member, this being Harrison's second year.

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NOTES OF THE CAMPUS

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The Society of Sigma Xi has a tentative program arranged for the winter months which should be of interest to Chemists.

Dr. A. L. Day of the Geophysics Laboratory in Washington will be here, probably in December.

Dr. J. J. R. McCleoud of the University of Toronto will give a lecture on some phases of his Research on Diabetes.

Prof. Bancroft of Cornell will speak on Protective Coverings of Animals.

Mr. E. E. Bain, a graduate in Chemical Engineering of Ohio State, will talk upon X-Ray Spectroscopy.

Dr. Levenhart of the University of Wisconsin will also be here, some time in January.

Part of the Department of Organic Chemistry will move into the new chemistry laboratory in January.

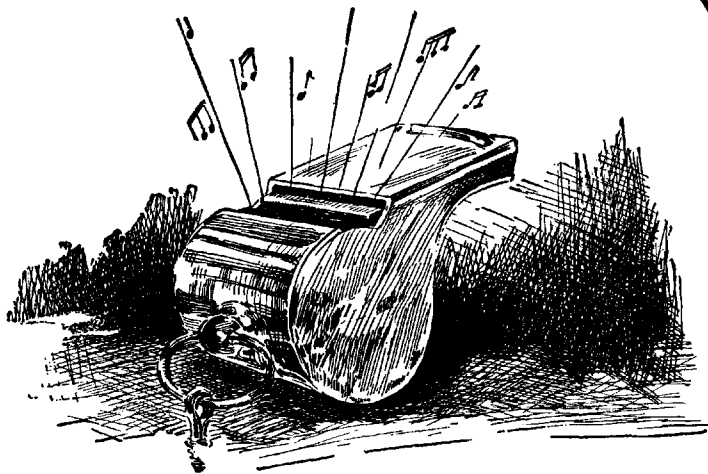
Why can't the Chemical Engineers have a student branch of their national organization, the American Society of Chemical Engineers? This is the only branch of Engineering on the campus which is unorganized, although it is one of the largest in the Engineering College. It certainly should be to our advantage to have such an organization. Think it over and talk it over with your representative on the Engineers' Council.

CIVILS

In taking a rough canvass of the work done by the students in Civil Engineering this summer it seems that the majority were employed in highway work. Quite a number attended summer camp, some of which later took up highway work. Among the other lines of work were construction, surveys for high tension lines, and running of pipe lines for the Ohio Fuel Supply Co.

There have been two meetings of the A. S. C. E. since the beginning of school, at both of which John Jefferson, president of the chapter, presided. At the first meeting O. B. Stout was elected to the Engineers' Council, and Professor C. E. Sherman gave a talk upon the opportunities for the Civil Engineer. Professor Sherman believes there are big fields being opened for the Civil Engineer of the future. The second meeting of the Chapter consisted of five short talks by students on their experiences during the summer months along engineering lines. It is hoped that this plan of student talks will be beneficial both to the students giving the talk and to the listeners in getting the experiences of others.

(Continued on page 26)



It will pay you to listen to this music

ALL over the country the whistle is blowing for the kick-off, the start of that great game—another college year.

Be on your toes when the whistle blows. A good start will carry you well on toward your goal.

Let the football candidate start by working away till his muscles ache from bucking the line.

Let the aspirant for manager put in careful study of his team's needs, always eager to help—arranging a trip or carrying a pail of water.

Let the publications man be alert for news and tireless in learning the details of editorial work.

Whatever activity you come out for, crowd a lot of energy into these early Fall days.

And if a good start helps win campus honors, it helps win class room honors, too. The sure way to be up in your work is to aim now for regularity at lectures, up-to-date note-books and particular attention to the early chapters of text-books, thus getting a grip on the basics.

This is best in the long run, and—selfishly—it is easiest in the long run. That is, if life after college is made easier by the things a bigger income can buy.

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NOTES OF THE CAMPUS

(Continued from page 24)

C. E. Pettis and Paul Fitzer are working under the direction of J. M. Montz on a series of county maps. These will be used to illustrate the forthcoming Engineering Experiment Station bulletin, "Climatological Data for Engineers," which is being prepared for press by W. A. Alexander of the U. S. Weather Bureau.

Professor Turnbull has practically completed the manuscript maps for a four-color land map of Ohio for volume three of the final report of the Ohio Topographic Survey. Bids are being received for engraving this map.

ELECTRICALS

On October 26th a smoker was held for the purpose of obtaining new members to the local student branch of the A. I. E. E. William Kellogg presided. Prof. F. C. Caldwell told of the advantages of the A. I. E. E. and Dean Hitchcock emphasized the importance of attending such meetings to obtain a broader view of that which is going on outside of the University.

Mr. R. C. Muir of the General Electric Company spoke about electrical developments in other countries. The local A. I. E. E. branch is not compulsory. It now has sixty members and hopes to greatly increase this number.

A Freshman party was held on November 23d in the Electrical Engineering Laboratory. All Freshmen were invited to hear the radio concert, see the equipment in operation, and enjoy a smoker.

On Friday, November 10th, Mr. E. F. Collins of the General Electric Company gave a talk on Electric Heating in Industries at a joint meeting of the A. I. E. E. and A. I. M. M. E.

The Columbus section of the A. I. E. E. will hold their next meeting on November 24th in the University Chapel. Prof. R. A. Brown will be the speaker of the evening, telling of the radio broadcasting station here and of the rapid development and future of radio.

Prof. F. C. Caldwell is now developing a plan to illuminate the Stadium for evening entertainments. With an expenditure of only \$2500 and by using the University power supply at a small cost this immense structure can be very well illuminated with a permanent flood lighting system.

Prof. Caldwell also is chairman of the A. I. E. E. section for the central part of Ohio, and Prof. C. A. Wright has lately been put on a committee for investigating telephone work for the A. I. E. E. Prof. Wright has just published a pamphlet explaining the radio telephone service and its functions, its necessity, and some of the fundamental principles. This book may be obtained at his office in the E. E. Department.

There are two new instructors in the E. E. Department this year. L. W. Gauschaw, formerly of Columbus, has just come from the electrical department in Detroit of the Michigan Central Railway. He was in service for a

(Continued on page 29)



The Ancient Quarries of Ptolemais

Like a gigantic staircase, the mountain of Gebel-Toukh slopes back from the waters of the Nile. Here, in the 4th century, B.C., Egyptians quarried stone for the streets and buildings of Ptolemais. One can still distinguish the grooves made by the tools of the workmen, and the instructions inscribed on the rock by the foremen.

When it became too costly to remove the overburden, subterranean quarries were started. The workman, on his raised platform, wielding a pointed tool, had no easy task in making the first cut for the roof in his system of "right-stepping".

Production at these quarries was insignificant compared with the enormous daily tonnages made possible by modern machinery and explosives. But conditions today which demand such large production also necessitate the prevention of waste in time,

labor and materials. Now, even dynamite, one of man's greatest labor savers, must be scientifically selected.

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HERCULES

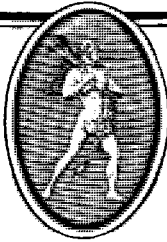
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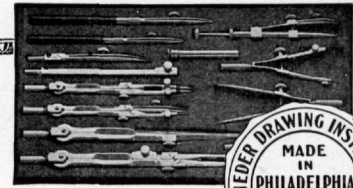
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HAYES HALL -- BASEMENT

NOTES OF THE CAMPUS

(Continued from page 26)

year during the war and previously was connected with the Central Union and Western Union Telegraph Company.

Mr. H. J. Linxweiler, who graduated here in E. E. last June, is the other assistant. He is devoting his time, chiefly, to the radio broadcasting station.

Student assistants in the department this year are W. M. Kellog, A. J. Smith, V. M. Lucas, W. A. Brown and N. Tuura, all seniors.

MECHANICALS

Although the four quarter plan has made no great change in the work for the Mechanicals, there is one subject which has caused no little comment since its institution the first of the school year. This is the fact that the A. S. M. E. has been injected into the schedules of the Junior and Senior Mechanicals, thereby becoming a part of the required work. There is, of course, the disgruntled minority which thinks it is being imposed upon; but on the whole, the men are agreed that great good can come of it.

At the first meeting of the Society on Friday, October 13th, the nature of the work to be covered was outlined by Professor Magruder. He made it clear that it is to be an organization of the students themselves, to be controlled by the Students, who also would derive the greater benefits. Among those benefits are:

- (1) A broadened outlook,
- (2) A chance to preside as an officer and to serve on committees,
- (3) The opportunity to take part in debates,
- (4) The privilege of hearing addresses by prominent engineers and speakers,
- (5) Visits to Columbus Industrial Plants,
- (6) The opportunity to read individual papers on topics of interest to engineers.

Meetings will be held weekly and before very long, membership cards and pins will be available. The meeting closed with the election of A. A. Anderson as Senior Engineering representative on the Student Council.

The results of the election of A. S. M. E. officers for the fall quarter was announced at the meeting in the Chapel on Friday, October 27.

President, Nelson M. Rieger; Vice President, Samuel P. Moyer; Secretary, John H. Nodes; Treasurer, John R. Kirkpatrick; Senior Councilor, John C. Sharp; Cheer Leader, John R. Slemmons; Junior Councilor, Harry La Viers; Junior Athletic Representative, Conrad W. Trant.

C. E. Luke of the Westinghouse Electric & Manufacturing Co. followed with an illustrated lecture, "Mechanical Problems in an Electrical Industry."

"Mechanical problems in electrical design are chiefly those of vibration," said Mr. Luke. One of the most interesting of the slides shown was that of a giant 230,000 pound gyroscope built by Westinghouse. So sensitive was this machine that the heat of friction caused by six men placing their hands on the rotor was sufficient to throw it out of balance.

GOOD LIGHTING OF INDUSTRIAL PLANTS SECURES SAFETY AND EFFICIENCY.

The Code of Lighting for factories, mills and other work places of the State of New Jersey makes excellent recommendations of daylight for the proper lighting of industrial buildings.

Adequate daylight facilities through large window areas, together with light, cheerful surroundings, are highly desirable and necessary features in every work place, and they should be supplied through the necessary channels, not only from the humane standpoint, but also from the viewpoint of maximum plant efficiency.

Importance of Daylight.

The unusual attention to gas and electric lighting in factories, mills and other work places during the past few years; the perfection of various lamps and auxiliaries, by means of which an improved quality and quantity of lighting effects are obtained; and the care which has been devoted to increasing the efficiency in various industrial apparatus—all go to emphasize the many advantages and economies that result from vital and adequate window space, as a means for daylight in the proper quantities, and in the right direction during those portions of the day when it is available.

Three Considerations.

Three important considerations of any lighting method are sufficiency, continuity and diffusion, with respect to the daylight illumination of interiors. Sufficiency demands adequate window area; continuity requires (a) large enough window area for use on reasonably dark days, (b) means for reducing the illumination when excessive, due to direct sunshine, and supplementing lighting equipment for use on particularly dark days, and especially towards the close of winter days, (c) diffusion demands interior decorations that are as light in color as practicable for ceilings and upper portions of walls, and of a dull or matt finish, in order that the light which enters the windows or that which is produced by lamps may not be absorbed and lost on the first object that it strikes; but that it may be returned by reflection and thus be used over and over again.

Diffusion also requires that the various sources of light, whether windows, skylights or lamps, be well distributed about the space to be lighted. Light colored surroundings as here suggested result in marked economy, but their main object is perhaps not so much economy as to obtain results that will be satisfactory to the human eye.

Requirements for natural lighting:

1. The light should be adequate for each employe.
2. The windows should be so spaced and located that daylight is fairly uniform over the working area.
3. The intensities of daylight should be such that artificial light will be required only during those portions of the day when it would naturally be considered necessary.
4. The windows should provide a quality of daylight which will avoid a glare, due to the sun's rays, and light from the sky shining directly into the eye, or where this does not prove to be the case at all parts of the day, window shades or other means should be available to make this end possible.

As will be noticed in the above recommendations, large windows and proper diffusion of daylight are urged, in order to meet the demands of daylight lighting.

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