Dr. Carroll and Montrose Succeed in Cultivating Live Tissues

New surgical discoveries of great interest and with great future possibilities have just been announced by Dr. George Miller and Dr. Montrose of the Rockefeller Institute for Medical Research. It seems that these two men have succeeded in cultivating adult tissues and cells of various organs outside of the body. The scientists who have made this start feel that the perfection of it will be of great help in opening up hitherto unexplored fields of human pathology. The first account of these achievements appeared in the American Journal of Medical Research, from which we extract an extract:

"Adult tissues and organs of man may be cultivated outside of the animal body. This can be used for the study of many important problems. For instance, it may render possible the cultivation of certain microorganisms in conjunction with living cells and to determine their effects in man. Then it will be of great value in the study of the problem of cancer. We can now assume that the perfection of this method of cultivating adult tissues outside of the body will be helpful in the exploration of hitherto unknown fields of human pathology."

The largest steamers that have ever been launched was set sail yesterday at the shipyards of the White Star Line in Belfast. The gigantic measurements of this ship are astonishing. Some idea of its enormous length may be got from the fact that it would tower over the Metropolitan Building in New York, and that it is four miles long. The new Hill monument is high. The rudder of this huge vessel weighs 200 tons. The "Olympic," for such is its name, will carry a crew of 860. It is provided with small work, courts, tennis courts, Turkish baths, parlors, Turkish baths, and will even follow them up the wall by means of a ladder to get the web. The spider spins its web on regular frames. Some of the working members of the club were entertained very hospitably by the family who seem to be very much interested in aerostatics.

At the dinner, Dr. Rochell made a very interesting address. Of particular interest was his description of the way winds blow at different altitudes. He said that if Mr. Wellman's balloon had been capable of sustaining itself for three or four days, he might have ascended to a height of two or three miles and would have landed Mr. Wellman in Europe from three to four days.

Mr. Felix also made a speech describing the progress of the work and telling some of the things planned for the future. He said that, apart from the fact that a safe aeroplane should be small, swift, and efficient, these three things go together, and an increase in one tends to an increase in the others. Since the efficiency of an aeroplane is so great as to be able to support itself, it is possible to increase the efficiency by increasing the size, or the size of the plane. Mr. Felix said that work would be done on the glider in testing surfaces, also that the Institute owns a propeller-testing device which will be used to test propellers already built by the club members.

The glider will be returned to Boston next month and flights will probably be resumed in Cambridge.

E. E. SOCIETY EXCURSION.

About eight men have already signed up for the first excursion of the Electrical Engineering Society of the Vesper Country Alumni. The Aero Club at the Technology School will be used, and the glider will go with the party. At Wellman's Point, the first landing was made, a few miles beyond Mexico City. The glider was treated to an aerial view of Old Mexico City, and the journey was made on the strength of the enthusiasm which the Mexican people have manifested for this new invention. The trip is large for a first excursion, but it is expected that the party will have a very pretty flight. At the end of the trip, the party landed at the Technology School and were treated to a birdseye view of Old Mexico City, attracted considerable notice.

The Mining Engineering Society was treated to a birdseye view of Old Mexico last night, led by Prof. Richard C. The mining party landed at Wellman's Point, and the glider was lowered to the ground.

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THE TECH

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FRIDAY, OCTOBER 21, 1910.

By this time you will have discovered how bothersome the two-cent cash sale is for you as well as us. We feel too bad, but we have to help ourselves as well as you by subscribing to the coupon idea. The coupon is good for two cents for The Tech. There are 14 strips of 25 cents, or a total of 35 cents. Three dollars and thirty-six cents for TWO DOLLARS.

For sale by boys and at the Cage NOW.

REUNION OF 1910 AT MERIDEN.

There will be a reunion of those members of the class of 1910 living in the vicinity of Meriden tomorrow. Those present will include John Alfredtes, G. H. Cumplings, R. M. Gillis, and G. S. Mulchreest.

DEATH OF 1878 SECRETARY.

Mr. Linwood O. Towe, 1878, Course III, died Wednesday afternoon in Haverhill, Mass. Death was due to heart failure, an attack of which he had last spring. He had been ill for the past three days and was ascending the stairs to his room about noon when he collapsed and died in an ambulance which had been summoned to take him to the hospital.

Mr. Towe was prominent in Technological affairs, being a member of the Alumni Committee on Student Welfare, and secretary of his class. He had been an instructor in the University of Pennsylvania; and for the past nineteen years had been instructor in chemistry and meteorology of the Haverhill High School.

"ENGINEERING INSTRUMENTS."

By Mr. R. S. Wardell, Representative of Keuffel & Esser, Explains Their Construction.

(Continued from Page 1.)

The V-shaped standard mounted direct on the central axis is rapidly taking the place of the older style of instrument.

Mr. Wardell had with him various types of modern instruments, such as a large type of dump level, a three level-screw instrument on a shifting center, and a V-shaped standard type.

After the lecture the members took the opportunity to inspect some of the latest types of transit, of which there were a large number on exhibition.

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TESTING CONCRETE BEAMS.

At 2 P.M. Wednesday, October 19th, about thirty members of the Boston Society of Civil Engineers met in the laboratory of Civil Engineering to witness the testing of a reinforced concrete beam fourteen days old, and a plain concrete column eleven days old. Among those present were some of the best known engineers of Boston, who took advantage of the opportunity offered to see how tests are made in the laboratory.

The tests were carried out by the laboratory force, assisted enthusiastically by the visiting engineers, who hunted for cracks in the specimens with great zeal. The beam tested was 8 inches by 13 inches, rectangular cross section, and 14 feet long, being reinforced with 31/2-inch square steel rods and suitable transverse ties. The load was applied at the third point, with a space of 15 feet.

The beam was tested in the 100,000 pound beam machine, load being applied in 3000 pound increments, reading for compression being taken at each interval. A few cracks on the under side of the beam were noted at about 14,000 pound load, and their development was followed up to the maximum load of 22,200 pounds, where the elasticity will be computed. The load being applied in 3000 pound increments, reading for compression being taken at each interval.

The plain column, 8 feet long and 7 1/2 inches square, tested in the Emery machine, load being applied in 36,000 pound load, and their development was followed up to the maximum of 138,300 pounds, at which pressure the column broke suddenly. The maximum load of 138,300 pounds, at which pressure the column broke suddenly. The maximum load of 138,300 pounds was followed up to the maximum of 138,300 pounds, at which pressure the column broke suddenly.

ARCHITECTS' FIRST MEETING.

Mr. Ern. Scott of New York to Speak on Public Buildings. Tomorrow evening, at 8 o'clock, at the Pierce building, the Architectural Society held their first "smoker" of the year. Mr. Ernest Scott, of New York City, one of the most eminent architects of the country, will speak on "Public Buildings." Mr. Scott, who is a graduate of the Ecole des Beaux Arts, Paris, is the designer of the Brooklyn Bridge, the Singer building and the Golders Hill and Bishops' measurement of New York. He also designed the buildings of the United States Naval Academy at Annapolis, and has been considered the most eminent authority on architecture that this nation has ever produced. The talk will be in the form of a question and answer session to all men taking the course in architecture, and it is hoped that every member of the society will be present. A very short business meeting will be held before the talk, and the second year men who are taking Course IV will be elected to membership.

At the next regular meeting, which will probably be held the first week of next month, Mr. P. A. Burton, the son of Dean Burton, will make his summer trip to Europe. Later on in the year the society expects that talks will be given by Mr. J. Randolph Coolidge, Jr., of the firm of Coolidge & Carlston, of Boston; Mr. R. A. Oram, noted in politics and church architecture, and by Mr. F. E. Olmsted.

MUSICAL CLUB TRYOUTS.

The musical clubs' season has started again and all signs point to a great flourishing year. The Glee Club, as usual, was the most successful, about fifty fellows in all turning out for the first trial. The names of twenty-two new men who were to report for the first rehearsal, which was held yesterday, were posted, and almost every man was present. Three new men were chosen for first, and six for second tenors, and ten for first and three for second basses. In addition to the new members, many of last year's members are expected back. The Mandolin Club selected twelve new men to report to the first rehearsal yesterday, and a fairly large membership is expected this year. The first orchestra rehearsal will be held today at 4 o'clock in the Union, and a large number will probably attend. The orchestra needs many violins and cellos, and any men playing these are requested to come out. The Radio Club trials take place today at the Union at 4 o'clock, and a large number of freshmen are expected to try for membership. All new men who have not yet reported or who intend to report, should do so at the next meeting of the club if they intend to try for membership.

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THE DAWN OF A TOMORROW

PROBLEMS IN SECOND YEAR PHYSICS.
Sections X, and X1
Due Monday, October 31st, 1910.
Nos. 89a, 90, 92, 93, and 100 in last year's problem sheet.
1. If a train running 60 miles an hour is brought to rest in 20 seconds by the application of the brakes, what is the acceleration? How far does it go after putting on the brakes?
2. The Riving Tower is 310 meters high. How many seconds will elapse before an arrow, shot upward from the tower with a velocity of 60 meters per second, reaches the earth?
3. How far will a body fall in vacuo during the time in which its velocity increases from 10.85 feet per second to 136.85 feet per second? How long is this interval?
4. A stone is dropped over the edge of a cliff and 4.16 seconds thereafter the sound of its striking is heard. Find the height of the cliff if the velocity of sound is 330 meters per second.
5. An electric car starts from rest and in 8 seconds is traveling at a rate of 25 miles an hour: this speed is maintained constantly until within 60 feet of the next stop. Find the acceleration (a) at starting, (b) at stopping, and also the time between stations if the distance is 1 mile.
6. How much of the distance is traversed at uniform speed?

MINING ENGINEERING SOCIETY MEETING Thursday, October 21, in the Union at 7:30 P. M. Professor Richards will give a talk on Mexico, and important business will be transacted.
All Course I men are urged to be present.

BASKETBALL—Owing to the non-return of A. T. Dennis, the position of basketball manager is now open. Any man wishing to try for the position will please communicate with T. E. Parker 1911, Captains.

ART MUSEUM.
Free tickets of admission to the Museum of Arts for the year 1910-1911 will be issued to students upon application at the ticket office at the entrance to the Museum.
H. R. STORY,
Curator.

BRITISH EMPIRE.
All new students from any part of the British Empire are requested to leave their names at the Cage for THE CHAIRMAN,
British Empire Association.

The Whitney Opera Co. in
A HUMAN HOMELY PLAY

Luncheons, 25c.; Dinners, 40c.

FOREIGN STUDENTS.
All foreign students at the Institute who desire to become members of the Cosmopolitan Club should leave their names at the Cage for Isaac Hausman, secretary, at once. American desiring to join should do likewise, but election to membership is not guaranteed.

1914.

All Freshmen who have failed to meet at their appointments for preliminary examination must report to the office of the Chairman for re-examination. All examinations, including those of upper classmen, must be finished by October 23, 1910.
F. KANALY.

Uniforms will be issued to the men at the branch on Saturday, October 23, 1910. Those drawing Blouses, Trouser, and Cap should have $14.60 for payment; House and Trousers, $12.60; House, Trousers, Cap, and Shoulder Strap, $17.00.
11-12 CAPT. BOOKMILLER.

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