THE CONCORDIENSIS

PUBLISHED BY THE STUDENTS OF UNION COLLEGE

VOLUME XLI | SCHENECTADY, N. Y., FRIDAY, MARCH 15, 1918 | NO. 60

AEROPLANE STRICTLY AMERICAN PRODUCT

M. I. T. Professor Outlines Aerial History in U. S.

MORE STUDENTS NEEDED

Fewer Aeronautical Scientists in This Country Than in England.

(From The Tech.)

"Credit for the invention and development of the dirigible balloon must be assigned elsewhere, but the aeroplane is strictly an American product," said Professor Edwin B. Wilson of Technology in closing his lecture a the Lowell Institue last night, the third in his course on "The Principles of Aeronautics." "Ever since the first successful work of the Wrights, aero planing has not lacked popular and commercial interest here," he continued, "but the scientific study of aeronautics has been greatly neglected. Technology has been fortunate in the possession of an aero-dynamical laboratory, but as a matter of fact we have very few aeronautical scientists, whereas a country like England has many.

"If in the face of this lack we succeeded in establishing that supremacy of the air on the western front, which is now so greatly desired by us and by our Allies, we may count ourselves very fortunate. For we shall be in large part forced to depend upon what others have found out, and upon the assistance they are still able to give us."

The body of Professor Wilson's lecture was devoted to a review of the history of aeroplaning, from the first hesitating experiments with gliders in 1893 to the manufacture and management today of machines which the American makers claimed had developed a record of 138.4 miles per hour. sustained as an average for a flight of 1357 miles, more than double the most optimistic anticipation entertained of the aeroplane even so late as 1914.

(Continued on page 4)

CALENDAR.

Saturday.

8:00 P. M.—The Upper Hudson Association of Phi Beta Kappa invites the public to a war meeting to hear Prof. Albert Bushnell Hart of Harvard on "Obstacles to Peace," at the auditorium of the State College for Teachers, Albany.

Monday.

8:00 P. M.—Prof. Hoernle lectures in chapel on "Self Knowledge—Body and Soul Theories of the Self."

Tuesday.

8:00 P. M.—Prof. Hoernle lectures in chapel on "Self Knowledge (continued). The Me and the Mine Personal Identity."

SIDE-TRACKED CAR CONTAINING CHEM. LAB. EQUIPMENT DELAYS OPENING

In spite of the fact that workmen are putting the finishing touches upon the interior of the Butterfield Memorial Chemistry Building, the opening of the building appears to be as far off as ever. A ray of hope lies in the fact that President Richmond has promised to use his influence to induce government officials to allow the car of furniture to proceed, the side-tracking of which is the chief cause of delay. Meanwhile the building committee is unable to forecast any definite time for the throwing open of Union's new edifice to the public.

Even at its present state of completion, the Butterfield Memorial is a distinct addition to the landmarks of the Union campus. Within it is light well heated and well ventilated. The plastering has, of course, been fully completed, while woodwork is nearly finished. Lighting fixtures are yet to be installed, although work can be done during the whole day at nearly every part of the building, on account of the abundance of windows and skylights. The largest room is the huge lecture room, which will accommodate, when fitted out, more than two hundred students. To date, however the room is bare, the 212 stone-topped desks being, presumably, "somewhere on a siding." As yet, no chemical equipment has been installed. Conduits have been laid for gas, water and electricity, although none of the elaborate set of fixtures are yet to be seen.

BATTALION HAS A NEW ASSIGNMENT OF OFFICERS

Non-Coms. Chiefly Affected by Change Made at Drill Wednesday.

A reassignment of officers of the battalion was made at drill last Wednesday. The three captains retain command of their companies as before the rearrangement and few changes have been made in the assignment of lieutenants, but there are many shifts in the non-commissioned personnel of the units. The roll of officers of the battalion is now as follows:

A Company.

Captain—Pierre Hoag.
Lieut.—W. L. Kennedy, Jr.
Lieut.—F. W. Reynolds.
First Sergeant—E. J. Macfarlan.
Sergeants—Beekman, Blackburn, W. P. Dougall, E. O. Kennedy, Ripley.
Corporals—Barhydt, Gregory, Hodgkiss, E. McCleary, McGee, Stevens.
Lance Corporals—Bostock, Carpenter, Dillon, MacMillan, Schatzel.

B Company.

Captain—John H. N. Potter.
Lieut.—B. T. Taylor.
First Sergeant—G. Hughes.
Sergeants—Bleecker, Brockway, Densham, Kathan, McGauley.
Corporals—Wemple, M. G. Potter, Poeppel, Donan.
Lance Corporals—Mott-Smith, H H. Closson, Jones, James, Howland.

Officers and non-commissioned officers' roster of Company C:

Captain—E. R. Slade.
Lieutenants—A. B. Dougall, C Brignall.
First Sergeant—J. W. Hoag.
Sergeants—Carvey, Stein, Preston Speer, Mosher.
Corporals — Posson, Edgerton Brucker, J., Hendrickson, H. A., Forsythe.
Lance Corporals—Bennett, Allerton, Brucker, G., Closson, S. S. Dewey.

PROF. HART TO LECTURE AT ALBANY TOMORROW EVE.

Union students will be given an opportunity to listen to an excellent lecture tomorrow evening, when Professor Albert Bushnell Hart will speak in the auditorium of the State College for Teachers in Albany at 8:00 o'clock. The subject of the talk will be "Obstacles to Peace." Being one of America's greatest living historians and a close student of modern political conditions, Prof. Hart will be able to speak with authority on his topic Local members of Phi Beta Kappa. under the auspices of which the lecture is being conducted, and the public, are invited to attend.

ENGLISH CLUB WILL HEAR PAPER BY DR. STEWART

Dr. Morton C. Stwart, of the modern language department, will read the paper to be presented at tonight's meeting of the English Club in the Graduate Council office. Dr. Stewart's subject will be "Nietzsche and the War."

INTERFRATERNITY COM. HOLDS MEETING MONDAY

Secretary of the Faculty Barnes has announced that the postponed meeting of the interfraternity committee on information regarding prospective Union students will be held on Monday, at 4:30, in Room 2, Washburn Hall.

TWO '16 MEN NON-COMS.

Howard A. Glenn '16, who enlisted in the U. S. Engineers as a private and is now stationed at Laurel, Maryland, has been made a corporal.

C. H. Hummer, Jr., '16, who is now at Waco, Texas, with the 28th Balloon Co. Aviation Camp, has been made a sergeant.

UNION OFFICERS WORK IS GETTING HARD

Special Classes to Require More Study.

TAYLOR ENDS LECTURES

Map Reading Sessions to Be Followed by Sketching in Field.

The work of the officers and non-commissioned officers of the battalion is becoming more difficult as their instruction in the special classes held Tuesdays and Thursdays advances. Professor Taylor has now finished his lecture course on camp sanitation and has assigned for the next meeting of the class the first lesson in map reading, which is to be studied from a special text-book on the subject. There will be five lessons on map reading and five more on map sketching, the latter subject being pursued largely by actual work in the field.

The concluding lecture on camp sanitation, which was delivered before a large class yesterday afternoon, dealt with various kinds of pollutions in foods and air, with especial attention to types of impurities which the soldier in the field must guard against. The subject of pure food for soldiers could be discussed only briefly and without reference to food from a nutritive standpoint. Milk, meats and raw foods were characterized by Professor Taylor as being fruitful causes of disease on account of the disease bacteria which they often carry into the system of the soldier. Milk is regarded as especially dangerous, inasmuch as it affords an excellent habitat for germs and because its temperature is almost always favorable to their growth. As a consequence, declared the speaker, milk must be carefully watched, from its ultimate source—the cow—to the consumer. Sanitary measures which now help to render milk safe for drinking include inspection of cows for tuberculosis, enforced cleanliness of stables, and special methods of handling, both in cans and bottles Pasteurization and condensation are the best methods of sterilizing milk, the latter being the means used in safeguarding milk used by the soldier in camp. Careful inspection of meats such as beef and pork are also necessary in order to remove the menace of the disease germ. Federal inspectors examine beef for the lurking tubercular bacillus, while pork is tested for the bacteria of the disease called trichina. Cooking, if thorough, often serves to render food safe if precautions are duly taken to safeguard the food after being cooked. Uncooked foods, such as shell-fish, candy, vegetables, etc., should come from clean sources.

Since most of the diseases now found in our military camps are dis-

(Continued on Page 2)

The Concordiensis

Published Mondays, Wednesdays and Fridays by the students of Union College.

Entered at Schenectady Post Office as Second Class Mail Matter.
Subscription price: Five cents a copy, $2.50 a year; delivered anywhere in the United States.
Telephone 4233.

FREDERICK G. BASCOM, '18,
Editor-in-Chief
WILLIAM L. KENNEDY, JR., '18,
Business Manager

A. B. Dougall, '19 ----------Advertising Mgr.
J. R. Hartman, '19 -------- Circulation Mgr.

Associate Editors.
W. R. Barnett, '19 K. H. Gorham, '19
C. A. Brind, Jr., '19 E. J. Griswold, '19
B. T. Taylor, '19

Reporters.
J. M. Cline, '20 R. W. Jones, '20
W. S. Gale, '20 John W. Hoag, '20
A. W. Hendrickson, '20

IN THE SERVICE.

W. GIBSON CAREY, JR., '18
Managing Editor.
SIDNEY W. TALBOT, '18
News Editor.
HAROLD L. COOK, '18
Contributing Editor.
H. R. Baird, '19 ---------- Circulation Mgr.
V. H. Scales, '20 ---------- Associate Editor
E. B. Augur, '20 ---------- Reporter
C. U. Young, '19 ---------- Ass't Art Editor

Publication Office, Schenectady Art Press, 206 S. Center Street.

B. T. Taylor '19, News Editor.

FRIDAY, MARCH 15, 1918.

Conversation.

James Boswell has told us that Dr. Johnson's supreme delight was to "stretch his legs and have his talk out;" and in all accounts we run across of university life before our time, there is invariable mention of long and profitable discourses on books, on contemporary events, on some of the deeper problems of existence. Why is it, we wonder in sifting and in weighing the influences for good our college years have had, that we can recollect so few occasions, if any at all, when in company with fellow-students we sought to find the reasons for things, to get at their very bottom?

Some say in explanation that to converse intelligently has long since ceased to be an aim of youth. It cannot be that, for conversation is so rare an art that the most indifferent have not the effrontery to scorn it. We know that insight into personality and the balancing of differences of opinion are benefits which sensible talk can give us and which we can ill afford to lose. Others maintain that college men have a superficiality which precludes serious thought, but the worst of us in that respect at one time or another feel the need of taking stock and coming to logical decisions.

When we prod our memory more we realize that again and again thoughtful discussion is begun, but totters on uncertain supports and has to give way to a practice which has become not the least considerable of frailties in college men—criticism of others. Doubtless we do no wrong in condemning in other men faults we ourselves admit. For pardoning them is snobbishness; and affectionate forgiveness is too saintly a quality to dwell in mortal men. But the prime trouble is this: too often spite and ill-will creep in; undergraduates too often derive amusement from another's foibles, and even hope to magnify their own virtues by harping upon the corresponding weaknesses. This makes life a sorry spectacle. Must tolerance ever be put aside until bitterness has had its fling?—From the Daily Princetonian.

UNION OFFICERS' WORK IS GETTING HARDER

(Continued from Page 1)

eases of the respiratory tract, the matter of ventilation and air is worthy of a close study. Nowadays, regard is taken not so much to the chemical makeup of the air the soldier has to breathe in his barracks, as to its physical condition. Such factors as temperature, humidity, odors, dust and stagnation, or "dead air," are highly important, and the ventilation of the modern barracks building should provide that they receive proper consideration. Lastly, the speaker discussed the difficult problems of the disposal of camp wastes, which are burned or buried, according to the conditions and to the apparatus available.

The discussion of Colonel Goodman's advanced class yesterday was chiefly concerned with various means used in the service of security, with especial reference to the composition of and methods used by patrols and advance and rear guards. Emphasis was laid upon the necessity for the use, by the commander of a body of troops in danger, of all the resources at his command. Col. Godman made frequent use of specific instances in past military history to emphasize his point. The next session of the class will probably be spent in the consideration of concrete problems in the service of security, for which the student members of the class will prepare by a thorough study of sections of the "Manual for Non-Commissioned Officers and Privates."

A total of 239 students withdrew from Corsell University this year between the opening of the first semester and the beginning of the final examinations of the same period. Of this number, 60 per cent withdrew for military service.

Technology held its annual Senior dance recently, about one hundred couples attending. The hours of dancing were unique, from 6:00 to 11:10 o'clock, to comply with the request of the fuel administrator.

At Wesleyan two members of the R. O. T. C. have been dismissed from the corps and suspended from college until after the Easter vacation for absenting themselves from drill.

The Princeton Board of Control, consisting of representatives of the faculty, alumni, and undergraduates, recently voted not to renew the contracts with its athletic coaches. This action, made necessary by lack of funds, means that Princeton will not play football next fall unless financial assistance is forthcoming from the alumni in whose hands the matter has been placed.

Due to efforts of the Harvard fencing squad, a bayonet team will be formed to represent the university in outside matches with other schools.

The War Department has ruled that men in the college R. O. T. Co's cannot be considered as having enlisted in the army as they are not obliged to accept commissions.

The Senior men of the Ohio State University have voted unanimously to work from 8 to 6 o'clock six days in the week for the rest of the semester, in order that they may graduate early. This decision came after the refusal of the faculty to grant a degree to any man drafted into the service before the semester is over, unless he had completed all of the required work.

A branch of the Department of the Interior was recently institutued in Princeton University Department of Chemistry.

AMERICAN STUDENT TELLS EXPERIENCES

Notices Deadly Earnestness, Quietness and Courtesy of English People.

An American college student overseas writes the following letter:

* * * I have had my first joy-rides this week and they have more than come up to my expectations. The second time up, we went through a lot of stunts and I enjoyed the sensation immensely. We did four "Immelmans," several "stalls" and came down in a spiral nose dive which ended in a side-slip. All the machines here are of the pusher type and in these the observer is stuck out in the very nose of the machine and consequently all the sensation of flying are accentuated quite a little. ou are perched out with nothing in front of you but the thin wall of the navelle or body. I am glad to say that I haven't been bothered in the least by dizziness or any other unpleasant sensations and some of the stunts, especially the "Immelman" are considered pretty good tests of one's "air legs." This particular trick consists of going right up vertically until you have almost stalled and then instead of looping over (it is impossible to loop a "pusher") to throw the machine over on one wing-tip, diving backwards and under as you go down. It is named after the man who first used it, a famous German aviator, who was killed some time ago. This morning I went on a cross-country flight of about 65 miles and despite the fact that we encountered pretty strong head winds most of tehtime, it took us only about an hour to make the trip.

The English people an dthe English officers with whom we have come in contact have all been exceptionally cordial to us nd have done everything in their power to make our stay here in England as pleasant as possible. There is one thing that one cannot help noticing after having been in England for a short time, and that is the deadly earnestness with which almost everybody is doing whatever seems necessary to make teh war a success. It is done in a quiet way without much show and in a more or less matter of fact way, but men and women alike are all working and sacrificing toward the great end, which we hope, will ultimately mean a better world for folks to live in, a world in which "right" will count for more than mere brute force. I am glad that America is committed to the struggle for I believe it is one in which every man, wh ois able to do so, can give proof, in a definite, tangible form of his devotion to the principles of liberty not only as they affect himself and his own county, but in a bigger, broader way as they offect other people and other countries. It is a great thing to fight for one's own liberty but to fight for the liberty of others is still greater. I only hope we will be able to finish the job soon so that England and France wil lnot have to make any greater sacrifices than they have already made. We cannot begin to count the price to ourselves yet, for no matter what price we be called upon to pay, it cannot compare proportionately to the price which England and France have paid. One cant' quite realize what they have been called upon to give up until one sees by living with them what they are doing No doubt in France it will be brought home to us even more forcibly than it is here in England. * * *

* * * * Since my last letter to you I have done a good deal of flying and have been progressing fairly rapidly in the "gentle art." The place at which I am now stationed and where I have done all my flying (except for the few joy rides I told you of in my last letter) is said to be the finest school in England. The instruction here is excellent, the instructors are as fine flyers as there are in the world and the machines we have to train in are the best. They are supposed to be hard machines to fly, but have lots of power, are very strong and good to "stunt" in. You spoke in your last letter not liking the idea of my "stunting" around in the air. As a matter of fact it is absolutely necessary when flying over the battle lines This is one of the very few places where they allow pupils to stunt when going through their elementary instruction It's a good idea to "grow up" on stunts, as it were, for then the more advanced training is easy. I managed to loop several times in my "solo" (the first flight alone) and since then have been doing practically all the stunts that are done. It is perfectly safe, if you know your machine and is the best form of insurance when fighting in the air. * * *

The second highest number of men dropped during the first term at Cornell were dropped this last term. The College of Arts and Sciences lost 50, College of Mechanical Engineering 44, Agriculture 43, Law 14, Veterinary 6, Architecture 1, Civil Engineering and Medicine none.

AEROPLANE STRICTLY AMERICAN PRODUCT

(Continued from page 1)

Mr. Wilson first discussed the experimentation carried on with gliders, the light machines, either biplane or monoplane in type, which have no engines and employ the force of gravity as prime mover. The men whose work he noted in this connection were Lillienthal of Berlin (1893), Herring and Chanute in America (1896), and the Wrights (1900-1902). The flights of the gliders were very short, seldom covering more than two or three hundred feet. They attracted no great attention and the feeble American interest in aeronautics was chiefly kept alive by the Aeronautical Almanac painstakingly published by James Means of Boston during a series of years.

While other men were risking their lives in full-sized gliders, Samuel P. Langley of the Smithsonian Institution, a man who spent much of his life in Boston, turned to careful experimentation with small models, having about 13feet of wing length, for example, which he could launch into the air and then observe closely. Being a thorough scientist and competent physicist, Langley achieved a good deal in this way. In the end he equipped one of his gliders with a steam engine, developing one and a half horse-power. So propelled, it mounted to a height of eighty feet. He became convinced of the practicability of controlled and sustained flight with the air plane.

With the help of an appropriation of $50,000 from the Bureau of Ordnance he continued work on his types, most of them tandem monoplanes, and finally scaled one up to a size that could carry a man. To his assistance in the construction of the engine for his plane came Manley, of the engineering school at Cornell, whose work, said Professor Wilson, was of very high order, producing an engine of weight and power really wonderful for its day. The machine had a wing area of 1,040 square feet and was capable of carrying 500 pounds of fuel and lubrication. All in all it should have been capable of making flights a day long.

Through a pure accident in launching, however, the machine fell into the Potomac River upon the occasion of its first test. It had been mounted on a large houseboat in the stream and equipped with a catpulting device, designed to give it the launching force which at first represented such a serious difficulty in all early experiments with aeroplanes. In the original test a forward stay caught, and in the second a rear stay—both times preventing the machine from getting away.

The public, which had been consistently skeptical of the experiments, received these failures with much outcry of mirth and dubbed the machine "Langley's Folly." The government also withdrew its support. As a matter of fact, Langley was no hit-or-miss empiricist, Professor Wilson affirmed but a thorough physicist, and his machine was really capable of the performance he expected of it. In proof there can be cited the fact that in September, 1914, Curtiss took the machine and flew it over Lake Cayuga.

By 1903 the Wright brothers, satisfied with the stability and dirigibility of their gliders, were ready for their first efforts with engine-driven planes In that year they made four such flights, three of about twelve seconds and one of about a minute. They then retired to Dayton and went on with their experiments. In 1904 they flew about three miles. In 1905, from September 26 to October 15, they accomplished flights of seven, twelve, fifteen twenty-one and even twenty-four miles, at a speed of about thirty miles an hour. Thereafter they retired again to Dayton, perfecting their patent claims and working with as little publicity as possible. In 1908 Orville Wright went to Fort Myer to make an exhibition flight for the United States Army. Unhappily his machine met with an accident in the aid and fell, Lieutenant Selfridge, a passenger being killed, and Orville being seriously injured. During this time Wilbur Wright was busy making flights in France.

There Santos Dumont had turned his attention to aeroplaning in 1906 and with his already great popularity as a balloonist, was the first to fire French interest in the new type of aviation. Henri Farman and Bleriot were, of course, among the men who then became noted for their work, together with Grahame White and Curtiss.

Of the machines which Professor Wilson had thus far shown on the stereopticon, he had remarked their lack of trimness and the unsubstantial character of their construction and of their landing gear. Some were of the tractor type with motive power in front, and others of the propeller type with motive power behind.

Today, he said, there are three characteristics worth noting in respect of the general form of prevailing types of aeroplanes, all having to do with the shape of their wings. There is first the type with 'swept-back wings,' exceedingly stable; second, the "staggered" wings; and third, the dihedral

Professor Wilson described the advance acheived through the abandonment of sheerly empirical methods and the adoption of more closely scientific procedure in the study of aerodynamics as carried on by Great Britain's national commission for aeronautics. These led to the determination of the actual factors in stability, speed and controllability, and showed how planes should be constructed to meet them It was discovered, for instance, that there was such a thing as too much stability. The Dunn machine, still on exhibition in the Burgess plant at Marblehead, proved this fact. It was so stable that it wallowed in the wind

Also scientists and builders came to appreciate that there must be several types of machine for as many purposes—heavy planes for bomb dropping, very fast and light machines for scout purposes, another type for the fighting planes, and of course also suitable forms of the hydroplane.

Harvard will play only four intelcollegiate baseball games this spring, it is announced. Two of these contests will be at Cambridge, one at Princeton, and the other at Yale. Games with service teams, however, will be welcomed. The season will last six weeks closing with the Yale game at Cambridge June 1.