

## ANALYSIS OF THE WAR SITUATION

The Fate of Russia—Riga, Petrograd, and Rumania—Influence of the United States—On the West Front

### EXPECT A LONG CONFLICT

We have at this time to consider, perhaps, the most obscure and enigmatical situation yet met with in the whole course of the war. Briefly, we may say that each of the world-combatants, having played its highest trump, is now marking time to await the expected crippling effect on its adversary; that is, the Germans place their present hopes on the success of the insidious submarine weapon they have loosed, while for the Allies the counter-stroke of America's enlistment, with the stern blockade of European neutrals and the eventful military aid from the United States, gives the greatest expectation of final supremacy. Avoiding, however, this superficial view of events, and leaving out of consideration what we must term the remote danger apprehended from U-boats, there remain to be compared the relative advantages in position and force of the opposing land armies.

There is no doubt that the German forces in the field are outnumbered by those of the Allies opposed to them; this has been the case for a long time. This advantage is balanced by the advantages accruing to the maintenance by the Germans of a tactical defensive on the Western front, where the most important forces of the allies are stationed. The immense strength of the German positions here enables them to stand off the Allies, for the present at least, with only minor losses in territory. On the other hand, the German allies still possess the strategic offensive, which their efficient preparation and interior lines of communication have given them since the beginning of the war—that is, they are still able

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### MEN WANTED IN ORDNANCE

Government Urges Qualified Men to Make Application

The need of the Government in certain positions in the Ordnance Department of the Army is urgent and the U. S. Civil Service Commission in announcing open competitive examinations asks that qualified persons, as a patriotic duty, apply for examination. Positions open in the several Ordnance establishments of the War Department or in or under the office of the Chief of Ordnance, War Department, Washington, D. C., include the following; salaries named are for entrance: Mechanical engineer, Artillery ammunition, \$3,000 to \$3,600 a year; experimental work, \$2,500 to \$3,000. Mechanical draftsman, \$1,000 to \$1,400; apprentice, \$480. Inspectors: Of Artillery ammunition steel, \$1,500 to \$2,400; of Field Artillery ammunition steel, \$1,500 to \$2,400; assistant, ammunition steel, \$3.50 to \$5 per day; of ammunition packing boxes, \$3.52 day to \$1,800 year; of powder and explosives, \$1,400 to \$2,400 year; of ordnance equipment, \$1,500 to \$2,400 year; of cloth equipment, \$80 to \$125 month; of leather, \$100 to \$125 month; of small hardware, \$80 to \$125 month; of textiles, \$80 to \$125 month. Clerk qualified in business administration, \$1,200 to \$1,500 year. Index and catalog clerk, \$1,000 to 1,200 year—open to both men and women; the other examinations are open only to men. Applications for the positions named will be received by the U. S. Civil Service Commission, Washington, D. C. Papers will be rated promptly. Applicants will not be required to appear but will be rated principally upon education, training, and experience, as shown by their application and by corroborative evidence. Full information may be obtained from the secretary of the local board of civil service examiners, or by communicating with the U. S. Civil Service Commission, Washington, D. C.

## PROVOST MARSHAL RULES COMMISSIONS CAN BE ISSUED TO DRAFTED MEN

The Provost Marshal General authorizes the following:

Under paragraph "d" of section 18 of the Rules and Regulations for Local District Boards, no person can be exempted on the ground that he is in the military service of the United States if he has not been enlisted, appointed, or engaged in such service prior to the date on which he was called by a local board.

There is no reason, however, why a drafted man cannot be commissioned as an officer in the military service of the United States, engaged as an Army field clerk or ordered on special assignment other than to a mobilization camp quite as well from his status as a drafted man as from a status as a civilian or volunteer soldier.

### Must Report When Called.

In case a registrant is called by a local board while his appointment as an officer or as a field clerk or other special assignment is pending, he should report to his local board and submit to induction into the service in the regular manner as a drafted man. After having been physically examined he may be appointed, commissioned, or specially assigned from his status as a drafted man and ordered to report to some place other than a

mobilization camp for duty. In such case he will be furnished with three official copies of his order to report. He must present to the military authority to whom he reports (a) a copy of his registration certificate; (b) a copy of Form 103 ordering him to report to a local board for physical examination; (c) the three official copies of his order. The military authority to whom he reports will indorse upon each of the three copies of the order a certificate addressed to the local board to the effect that the man has reported and been accepted for military service, and will forthwith mail the three copies so certified to the local board where designation and address are shown on Form 103.

### Voucher Instead of Man.

Upon receipt of these three copies the local board will retain one copy and send the other two copies to the mobilization camp in lieu of a drafted man, entering the name on Form 164A, and treating the case in all other pertinent respects precisely as though they were sending a man instead of a voucher for a man. Upon receipt of the orders so indorsed and certified, together with Form 164A in respect of the case, the local board will receive credit on its net quota for one drafted man.

## GOVERNMENT RESEARCH

Dr. Noyes Appointed to Nitrate Supply Committee

Announcement is made by the War Department of its preparation for the production of nitrates in accordance with a report filed by the Nitrate Supply Committee. This report is given in part below. It is further stated that for the present the location of the proposed nitrate plant is withheld but information concerning its location will be given as soon as a definite decision is reached. The work of supplying the machinery and materials needed for the plant has begun. The Nitrate Supply Committee, appointed by the Secretary of War, was under authority of a provision in the national defense act for an investigation "to determine the best, cheapest, and most available means for the production of nitrates and other products for munitions of war and useful in the manufacture of fertilizers and other products."

### Membership of Committee.

The Nitrate Supply Committee comprised the following Army and Navy officers, scientists, and engineers: Brig. Gen. William Crozier, Chief of Ordnance, War Department; Rear Admiral Ralph Earle, Chief of the Bureau of Ordnance, Navy Department; Brig. Gen. William M. Black, Chief of Engineers U. S. A.; F. W. Brown, Bureau of Soils, Department of Agriculture; Leo H. Baekeland, Yonkers, N. Y.; Gane Dunn, New York City; Charles F. Herty, New York City; William I. Hillebrand, Bureau of Standards, Department of Commerce; Arthur A. Noyes, Institute of Technology, Boston, Mass.; Charles L. Parsons, Bureau of Mines, Interior Department; and Willis R. Whitney, Schenectady, N. Y.

### MAY ORGANIZE FURTHER PLATTSBURG SESSIONS

War Department Expects to Provide for More Officer Contingents

The War Department, according to official information, is considering a third series of training camps for officers, and may even decide on a fourth series. Preference at these camps will be given to soldiers of the National Army who may be selected for special training to fit them for commissions. It is considered probable, in fact, that students of this class will entirely fill the next camps, leaving no room for the attendance of any civilians. Future promotions within the National Army, as has been stated before, will be from the lower grades in that force itself, so far as is practicable. For the National Guard Army the same general rule will apply.

## AMERICAN CHEMICAL SOCIETY CONVENES AT THE INSTITUTE

All Branches of Science to Receive Timely Discussion  
by Nation's Experts—Meet For Four Days  
—First Day of Meeting Monday

### INSTITUTE MEN PROMINENT IN PROCEEDINGS

Five hundred chemical engineers and manufacturers from all parts of the country, representing over two billion dollars of capitalized industries, have gathered in Boston for a four day convention. It will be the fifty-fifth convention of the American Chemical Society, the Northeastern Section located in Boston having all of the details in charge. The association membership, numbering more than ten thousand, represents about one-third of the chemical experts and manufacturers in the United States, and probably includes the majority of 10,000 chemists who have been enrolled and classified by the National Council of Defense.

All of the meetings will be held in the Massachusetts Institute of Technology, the buildings of which have been placed at the disposal of the society, and will continue through three days, September 11, 12, 13. The program which has been arranged by the Northeastern Section will be of a simple nature, principally dealing with the scientific and technical features of the many branches of the industry, which includes such a wide range of products as baking powders, drugs, explosives, fertilizers, gas, greases, inks, oils, soap and various pure and recovered chemicals and acids.

The headquarters of the society will be at the Hotel Lenox, at the corner of Boylston and Exeter streets, and the use of the home of the Engineers' Club at the corner of Arlington street and Commonwealth avenue has been extended to all members. The Northeastern Section has appointed the following committees: Executive, Dr. Henry P. Talbot, head of the chemical department at the Institute; finance, Arthur D. Little; registration, K. L. Mark, of Simmons College; entertainment, R. S. Williams, of "Tech"; press and publicity, Robert W. Nee, 22 India square; ladies' entertainment, Mrs. Arthur D. Little. The president of the national society is Professor Julius Stieglitz of the University of Chicago, and the secretary is Dr. Charles L. Parsons, chief chemist of the Bureau of Mines in Washington.

Those who are to attend the meetings and the convention in general will gather for the purpose of exchanging views upon the present situation in the chemical world, and for discussion upon the discoveries and formulas which have been made under the stress of war time investigation an experiment. Many of the scarce chemicals and dyes, of which the supply from Germany was the main source of our stocks, have become regular manufacturers and products of our American laboratories, so that the country has a decided debt of gratitude to express to those industrial chemists whose science has come to the rescue of American manufacturing industries.

On Monday, Sept. 10, there was a council meeting at the Engineers' Club in the afternoon, and in the evening there was a dinner to the council tendered by the Northeastern Section, at the same club.

Today there will be the first general meeting at the Institute when President Maclaurin will give the address of welcome, with a response by the president of the American Chemical Society, Julius Stieglitz of the University of Chicago. This will take place at 10 a. m. At 2 p. m. the general conference on chemistry and chemistry in warfare will be opened by William H. Nicholas, chairman of the committee on chemicals of the Council of National Defense, and by Dr. Marston Taylor Bogert, chairman of the chemistry committee of the National Research Council.

### Members of Institute Faculty on Executive Committees

General Committee—H. P. Talbot, chairman; J. F. Norris, A. A. Noyes, F. B. Spear, W. H. Walker. Registration—Henry Fay.

Registration and Information. All members of the Society and their guests, including ladies, should register immediately on arrival. The registration office will be open at the Institution Room 2-110, except on Monday afternoon, when it will be located at the Hotel Lenox, Boylston street and Exeter street. Badges will be furnished members on registration. An alphabetic list of registrations will be posted from time to time during the meetings.

### Inspection of Buildings

During the meeting days guides will be available for inspection of the Institute buildings from 12.30 until 2.00 o'clock each day.

### General Program

Tuesday, September 11.

10 a. m.

Room 10-250

General meeting of the Society in the Massachusetts Institute of Technology. Address of Welcome—Dr. R. C. Maclaurin, President Massachusetts Institute of Technology.

Response—Julius Stieglitz, President American Chemical Society.

### General Papers

Arthur L. Day, Director Geophysical Laboratory, Washington, D. C., "American-Made Optical Glass."

E. C. Kendall, Mayo Clinic, Rochester, Minn., "The Isolation and Identification of the Iodin-Containing Compound which Occurs in the Thyroid." (Lantern slides.)

2 p. m.

General Conference on Chemists and Chemistry in Warfare, opened by William H. Nichols, Chairman Committee on Chemicals, Council of National Defense.

Marston T. Bogert, Chairman Chemistry Committee, National Research Council.

5.15 p. m.

Boat leaves Rowe's Wharf for Shore Dinner and Smoker. Dinner 6.30.

Wednesday, September 12

Divisional Conferences and Meetings

9.30 a. m.

Physical and Inorganic, Joint Session, Room 10-275.

Biological, Room 10-411.

Industrial and Engineering, Room 10-250.

Pharmaceutical, Room 4-142.

Rubber, Room 8-205.

Fertilizer, Room 8-303.

2 p. m.

Continuation of morning sessions and Organic Division, Room 4-270.

8.30 p. m.

President's Address: Huntingdon Hall, 491 Boylston street, Boston. (Rogers' Building, M. I. T.)

"The Outlook for Chemistry in the United States," Professor Julius Stieglitz, University of Chicago, President American Chemical Society.

Thursday, Sept. 13

9.30 a. m.

Meetings of Divisions

Agricultural and Food, Room 4-131. Biological Chemistry, Room 10-411.

Physical and inorganic, Room 10-275. Industrial and Engineering, Room 10-250.

Organic Chemistry Conference, Room 4-270.

Water, Sewage and Sanitation, Room 8-419.

2 p. m.

Meetings of Divisions, Concluded.

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### BULLETIN NO. 3.

August 20, 1917.

### The Tech.

Copies of Tech for July 6, 10 and 13 have been received and distributed to all the Tech men at the front. If you didn't receive yours write to the Club, as the Tech is something worth reading now-a-days. These numbers are full of the glad tidings of the great work being done by the Institute and her instructors, students and alumni. One of our boys writes: "Say! It was good to get that Tech. I read every work of it forward and backward. I also learned about a lot of my friends and what they were doing." The Tech is supplied free to all men at the front, thanks to the courtesy of the Tech.

### PHOTOGRAPHS.

If you need new films or want old ones developed and printed, just write to the Club. Prices for printing, developing and enlarging are much less than regular store prices and the time is about one-half the Kodak time. Films are kept at the Club and, as each print is numbered, you can get duplicates or enlargements at any time by simply giving the number. An album of all the most interesting prints is being made to be kept at the Club for inspection and will be presented to Mrs. Cunningham when the Club is no more.

### BEAUX-ARTS.

Course IV men will be pleased to know that arrangements have been made to enable them to visit the Beaux-Arts. In case of the absence of the Director when you come to Paris, consult Madame Garnier in charge of the Office.

### ERRANDS.

We are glad to note that the men are making use of our service bureau. Order anything you want and we will charge it to your account, to be paid for when you next come to Paris. Sometimes there may be a little delay if the Director is out of town, but urgent cases will be handled by Madame Garnier. If your fountain pen is in bad shape send it here.

The American University Union. The Club for college men, first announced in Bulletin No. 1, is to be an established fact. Prof. George H. Nettleton of Yale, Prof. Paul Van Dyke of Princeton and Mr. Ewart J. Wendell of Harvard have just arrived in Paris.

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# The Tech

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TUESDAY, SEPTEMBER 11, 1917

## WASHINGTON MOVES

IT has at last been officially announced from Washington that the government war courses are to be given at the Institute without fail, taking in not only the new freshman class but also those men in the higher years who wish to become officers in the technical branches of the service. This definite statement should serve to allay the fears of students who have found their confidence in the earlier announcements by President Maclaurin wavering amid the storm of vague contemporary rumors. The details of the new courses have not as yet been fully worked out, but The Tech is assured that they are being prepared as rapidly as possible and a full account will be furnished to our readers when available.

In the meanwhile the undergraduates who are planning to return to Technology this fall may cease worrying for fear the courses will not be given.

## AN EVENT IN SCIENCE

THE convention of the American Chemical Society, which is now in progress at Technology, will show important progress in relation to the overseas fighting. Chemistry has undoubtedly played a great part to date in the world war, furnishing some new and awful weapons. It is to the men of science that America is looking for newer and more formidable means of attack than those possessed by her enemies, and it is not inconceivable that some chemical genius may discover the means by which the great conflict may be brought to a speedier end.

Knowing the efforts which these distinguished faculty and professional men are exerting in the field of war chemistry, we look forward to the results of their deliberations with hopeful expectancy.

## KEYNOTE SPEECH BY DR. NICHOLS

(Continued from page 1)  
"The chemical industry of the United States is mobilized," said Dr. William H. Nichols, chairman of the Committee on Chemicals of the Council of National Defense, at the opening of the general conference on chemistry and chemistry in warfare at the convention of the American Chemical Society today. "We are in fine shape to take care of any problems that arise regarding war needs and the supply of the nation. We have been getting ready for this war and its demands for several years, for we saw the way that affairs were tending. We feel confident that we can do much toward winning this war, and with all our science and ability to use it, we are going to win it."

In those confident words, Dr. Nichols struck the keynote of his address and thrilled the audience with his words, which were full of patriotic spirit. Then he followed the applause with statements of the constructive good which had already been accomplished for the country's benefit by the chemical engineers and industrial chemists who had been developing new products and substitutes for the many acids and chemicals and dyestuffs which had come in great bulk from Germany and the supply of which has been cut off by the cessation of imports from that country.

"Potash is one of the most important subjects to which the chemical committee has given much attention, and already many evidences of practical results are seen," he said; "for there is every belief in our minds that the output of potash from various forms of recovery, will mean that we can not only supply the needs of the country;

next year, but that we can hold the manufacture here after the war is done. The greatest known deposit of potash in the world is awaiting development and the chemical committee wants it made available for war supplies at once."

That potash deposit is located in Searles Lake, in southern California, a lake 60 to 80 feet deep, containing potash, soda, and borax. It contains over 23,000 acres of the richest known deposit, which is estimated to be worth over one billion dollars. The immediate use of that deposit depends on Congress to whom the committee has appealed for the rights to use the lake.

"Other sources of potash are its derivation or recovery from various by-products among them being the dust from cement mills, where any thousand tons are reputed to be lost at the present time. Potash is not alone used in the making of war supplies, for it is highly important in the preparation of fertilizers, and the farmers of the country need all that they can get for the enrichment of their lands, in fact, many crops are small and apparently impoverished this year because the newly turned lands are deficient in potash, the foliage, however being strong and luxuriant. "So," added Dr. Nichols, "the farmer will also receive our assistance, and the improvement in next year's fertilizers will also help win the war, for the problem will be solved in time for spring planting."

The country is interested in so many lines of conservation that gas consumers will hardly be astonished to learn that they too must be willing to lend their mutual helpfulness by a certain

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amount of self-denial for the benefit of the national welfare. Toluol is one of the ingredients used in the making of gas, and it is also one of the most valuable ingredients used in the manufacture of tri-nitro-toluol, the basis of most of the shells stored at the naval bases. The public service commissioners of various states require certain quality of illuminating gas, and even their tests have been changed in order to allow for the manufacture of gas to go on with lesser quantities of toluol. The consumers will have to be satisfied with a slightly poorer quality of gas, at least until substitutes are found for that ingredient in making gas.

"So many are the products that are used in making valuable war materials and fertilizers which have become scarce in the open market," said Dr. Nichols, "that our chemical engineers have been working night and day to discover processes whereby the materials themselves or substitutes for them may be supplied quickly. Lack of pyrites has caused complications and shortage of both war materials and fertilizers. Sulphuric acid shortage also has been one of the baffling problems, and important steps have been taken to hunt out and develop every possible source of supply so that there shall be no waiting. There are good deposits in the South, and the assistance of Secretary Franklin K. Lane of the Interior Department has been enlisted in the effort to develop the pyrites beds in Georgia."

Dr. Nichols stated that the consumption of sulphuric acid in 1915 was over 6,250,000 short tons, an increase over 1914 of 30 per cent. The amount used in the manufacture of fertilizers has remained about the same, but the increase has come from the abnormal manufacture of explosives.

In the morning a general meeting of the society was held at the Institute of Technology in Cambridge, at which an address of welcome was given by Dr. Richard C. Maclaurin, President of "Tech," to the many members of the society who had gathered from all parts of the country. His greetings to the chemical engineers who had so willingly and promptly come to the assistance of the nation with all of their science and inventive ability, was heartily applauded, and the warm praise which he bestowed upon those who were endeavoring to solve the many important problems of recovery and manufacture in the lines of materials and substitute, impressed the audience with the value of the chemists' work in these days of wartime stress.

To that address of welcome the president of the American Chemical Society, Professor Julius Stieglitz, responded, assuring the members present that the entire capacity of the society's experts was promptly offered to the government, and that the 10,000 names which had been enrolled by the national Council in Washington, and which had been classified according to their expertness and their special lines of study and manufacture, included those which were best known in the society itself. Dr. Stieglitz spoke of the great advance which the industry had received because of the war, and the fine manner in which the members of the society had arisen to the occasion, so that the United States would be amply equipped to meet all of the demands upon the industry for supplies after the war.

The delivery of the papers on the scientific and industrial developments of portions of the chemistry dealt in by the experts and engineers since the last meeting of the society will begin on Wednesday in the several rooms devoted by Tech to the sections and divisions.

The only entertainment of the convention will be held that evening when the party will take the harbor trip to Hotel Pemberton, where an informal shore dinner and smoker will be held.

On Wednesday, Sept. 12, the morning will be occupied by conferences of divisions and the afternoon by divisional meetings. In the evening there will be the president's address at Rogers Building on Boylston street, Thursday, Sept. 13, will be occupied by divisional meetings.

The program which has been prepared  
(Continued on page 8)

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### THE WAR SITUATION.

(Continued from page 1.)

to dictate the next move, a fact which must not be lost sight of. What that move is likely to be will be taken into immediate consideration.

Let us first analyze, as well as may be, the present disposition of Germany's forces. Fully mobilized, and with accessions of young men since 1914 which probably have been nearly sufficient to maintain her war strength in spite of losses, Germany's armies may be estimated to number 5,000,000. Now, recent German strategy on all fronts has tended to enforce a thinning out policy, hailed on all sides as a sign of German weakness. Some 500 battalion of reserves and shock troops, probably, have taken part in recent fighting at Verdun, in the Argonne, and in Flanders; while the rest of the Western line has enjoyed comparative inactivity. Probably the entire German force on this front has not exceeded 2,500,000, and very likely is less. Recent reports from the Russian front picture a Teutonic line attenuated almost to the point of being a mere border patrol. This we may credit, since the crumbling of the Russian offensive in Galicia and the subsequent weaken-

ing of the army through intrigue and disaffection. 500,000 is an outside estimate of the number of German troops engaged here. If there are 500,000 more troops facing the Allied forces at Monastir, this leaves 1,500,000 men not accounted for on any of these fronts. What are the Germans doing, or about to do, with a million or a million and a half men which evidently are being withheld for an impending blow? Apparently we have the answer in the German occupation of Riga, the emancipation of Russian military power, and other events political and military which have troubled the Eastern horizon.

Comment on the occupation of Riga has been much concerned in speculating whether this is the prelude to a drive on Petrograd. In our opinion, this is not its chief significance. Warned by the ruinous experience of Napoleon I, the German Staff has no intention of losing its armies in the vast wastes of Russian territory. Its problem in Russia is now the same as in 1915: to destroy or dissolve the Russian armies in the field. No time so opportune for this achievement has arisen up to the present. Weakened by great losses through desertion, indignant at the needless sacrifices and privations suffered at the hands of Germanophile officers and plotters, the Russian peasant armies are ready to disperse almost at a touch. It is impossible to believe that they can withstand another offensive, or effect such another strategic retreat as carried them to safety two years ago. Whichever way their commanders attempt to move them, inextricable confusion and ruin will surely result. At this juncture, we find that the Germans have busied themselves in preparing a vast threat against Rumania, by a concentration of arms upon this southern front, up to now the stiffest part of the Eastern line. Unless Rumania succumbs to the political and diplomatic pressure being brought to bear upon her, and accepts some peace with the Teutonic allies, the blow will fall upon her first. In her ruin (we cannot apprehend anything else) will be involved the left flank of the Russian formation, assailed in rear. If this is combined with a blow at the Russian right flank from Riga, it is questionable whether more than a remnant of the Russian forces will escape capture or destruction. To the extent wherewith this undertaking succeeds, will Russia be eliminated from the war; that is, without armies in the field Russia willy-nilly must choose between a separate peace and German occupation and domination.

We must, then, be prepared for the loss in morale which will be occasioned by the exist of Russia from the world conflict; since the event appears not merely likely, but rather inevitable. Evidently, the United States has not entered the war merely as a moral figurehead. On the contrary, a swift, energetic and full mobilization of her military resources upon French soil is just as necessary to save the war to the Allies as was that of England in 1914. Even at the utmost which America can do—and that is more than either ally or enemy dreamed a few months ago—it can be won only by a slow, grueling campaign against the phalanx of German breastworks in France and Belgium. A victorious outcome is perhaps deferred for years.

#### The Western Front.

The strategy of the Allies on the Western line is (1) to obtain positions of tactical superiority, from which they can dominate the enemy's line; (2) gradually to envelop the northern wing of the German line—from Verdun to the Ypres salient—thus eventually forcing further retirement of the enemy from the occupied portion of France. The points of envelopment, at which Allied attacks have taken place, are the powerful Allied positions at Ypres and before Verdun. At both these places there has been progress, and it seems likely that the next English-French offensive will pivot about one of them.

The most brilliant of the successes on this front was that of the British on July 7, when they followed up a series of terrific mine explosions with the occupation of Messines Ridge. The German works on this dominating position extended about 14 kilometres and were as nearly impregnable as defenses can be. Complete British success was the reward of two and a half years spent in mining the ridge, followed by an attack in which infantry, artillery and aircraft participated in overwhelming strength, according to an accurate time schedule. The heights were occupied less than eight hours after opening the attack. (See accompanying map.) The chief point worthy of remark is the great length of time required to prepare the offensive against these positions, high only by comparison with the tidewater plain of Flanders. The artillery positions thus won give the British domination over the line beyond the Yser canal, east of which is another somewhat lower line of hills now occupied by the Germans.

## OFFICIAL FROM THE M. I. T. Committee for National Service

JAMES P. MUNROE, Chairman

WASHINGTON BUREAU  
908 Union Trust Building  
JOHN M. DeBELL '17 in Charge

A direct means of communication between the Technology and the National Government. If there is anything you wish to know in Washington, write to the Technology Bureau.

#### Personals

Among the callers the past few days have been J. Campbell '91, B. E. Fields '15 and H. S. Mork, '99.

J. H. Flynn, '05, Capt. J. T. Lawton, '06, and R. J. Lyons, '06, have been in Washington during the past week.

Capt. George Wadsworth, '98 is at Langley Field, the new aviation station near Hampton, Va.

E. B. Moore, '12, has been commissioned 1st Lieutenant, O. O. R. C.

#### Camouflage Corps

At the request of General Pershing, a Camouflage Corps, is being organized by the Corps of Engineers, U. S. A., for service in France. There are openings for commissioned and non-commissioned officers, and men already drafted can be transferred, if eligible, to the Corps. Names of those wishing to enter this service should be sent to D. Putnam Brinley, New Canaan, Conn. (acting under Major Tracy, U. S. Engs.) or to the Chief of Engineers, Washington.

#### Call for Signal Corps Officers

The following notice was taken from the Army and Navy Journal:  
Brig.-Gen. Geo. O. Squier, Chief Signal Officer, U. S. A., issued on Aug. 24, a call for officers, or candidate for officers' commissions, in the Aviation Section of the Signal Officers' Reserve Corps. It is desired to obtain applications from all Reserve Corps officers who have finished the special course of instruction at Fort Monroe, Va., or at Fort Sill, Okla., and from enlisted men or civilians who are expert photographers, radio operators or machine gun operators for service in the Aviation Section, as observers from airplanes. The preferable age is from twenty-five to thirty-five. A good education, fine physical condition, keen eyesight and ability to judge distances accurately are essential. Previous military experience is very desirable. It is the intention to assign successful candidates to a school for a period of instruction for two months. This course will cover study of fire from airplanes, reconnaissance, photography, radio and bomb dropping.

Candidates who desire to make application should write to the Area Personnel Division, Chief Signal Officer of the Army, War Department, Washington, who will furnish them the necessary information and blanks for making application to take the examination. Candidates who complete the course successfully will be commissioned in the Signal Corps and will be eligible to promotion. Twenty-five per cent. additional pay is authorized for all officers who are on duty requiring frequent and regular aerial flights.

#### Provisional Second Lieutenants

Announcements of the results of the July examinations for provisional lieutenancies in the Regular Army are now being mailed to the candidates, being sent out alphabetically. From the list of qualified candidates, the Adjutant General's Office will nominate a number sufficient to fill all vacancies in the Army at the time of nomination. This list has to be approved by the Senate. If that body is in session it is customary to place the men at once in service, to receive the Senate's approval later.

Present indications are that, although candidates will learn whether they qualified within a few days, they will not receive assignments until the middle of October, at the earliest.

#### TECH CLUB OF EASTERN NEW YORK

The Washington Office is in receipt of a splendid letter from the Club of Eastern New York, telling the present activities of the men in the Club. This report says in part:

"The following men attended the first series of military training camps: H. E. Dexter '12, S. P. Kimball '11, H. W. Dun, Jr., '09, Russell Suter '00, Harold Worthington '15, and E. H. Sargent '07. All these men received their commissions except Kimball, who failed to qualify physically. Since then, Duncan Dana '16, has joined the Signal Corps, and C. M. Currier '14, and F. C. Lincoln '17, have been conscripted in the National Army.

"In another line of service, the Research Laboratory of the General Electric Company, under the direction of Dr. W. H. Whitney, '90, which is one

of the largest institutions of its kind in the country, having a force of 280 trained scientists, has about 90 per cent of its new men now devoting all their energies to scientific investigations tending to the solution of many of the government problems. Dr. Whitney is assisted in his directory capacity by Dr. H. W. Coolidge '96, and L. A. Hawkins '99. Dr. Whitney, as a member of the Naval Consulting Board, with Dr. Coolidge, is carrying on extensive investigations upon various devices in connection with the work of this Board. Mr. R. C. Robinson '01, and Dr. Coolidge are developing the Coolidge X-Ray tube in a portable form for the use of base hospitals of the Red Cross. W. C. Arsem '01, and Stuart Thomson '09, are engaged in the study of smoke bombs for use as screens and signals. H. B. C. Allison '11, is carrying on research work upon special tool steels for ordnance and other purposes, and Gm. M. J. Mackay '08, is working on special applications of portable wireless outfits for various arms of the service.

"The other departments of the Company are actively engaged in government work such as the development of special searchlights for the Engineering Corps, and apparatus for the electrical propulsion of ships.

"In the local plant of the General Electric Company, in Schenectady, there are sixty-two Technology men serving in various capacities, but all doing their 'bit' at their present work."

This letter is a splendid example of what an alumni club can do in keeping track of its members, and informing the other alumni what it is doing. The Office will welcome similar accounts from all te clubs.

#### ASSIGNMENTS OF PROVISIONAL LIEUTENANTS

Among the assignments of provisional lieutenants appointed as a result of the April examinations are the following:

N. R. Hamilton '18, 11th Cavalry; F. S. Conaty '17, 3rd Field Art.; J. E. Wallis, Jr., L. E. Schoonmaker '17, JJ R. Ramsbottom '17, A. F. Benson '17, T. E. Hannah '17, H. M. Blank '18, E. C. Bomar '19, C. E. Atkinson '17, G. T. Kittredge '17, J. G. Babbitt '19, E. H. Raymond '17, S. R. Stribling '16, N. E. Tourtelotte '17, H. E. Wellcome '17, E. M. Woodward '17, K. Roper '18, and P. E. Hulburd '18, to C. A. C.

The Coast Artillery men reported to Fort Monroe, and the others to Fort Leavenworth.

H. C. Wasgatt '19, has the unique experience of being assigned both in the Regular Army (59th Inf.) and in the National Army, Depot Brigade, 75th Div., on account of his having taken both the April exams and the Reserve Officers' Training.

#### AMERICAN UNIVERSITY TRAINING CAMP

The list of Institute men at American University in the Engineers' Training Camp includes the following, in addition to those noted in the last issue:

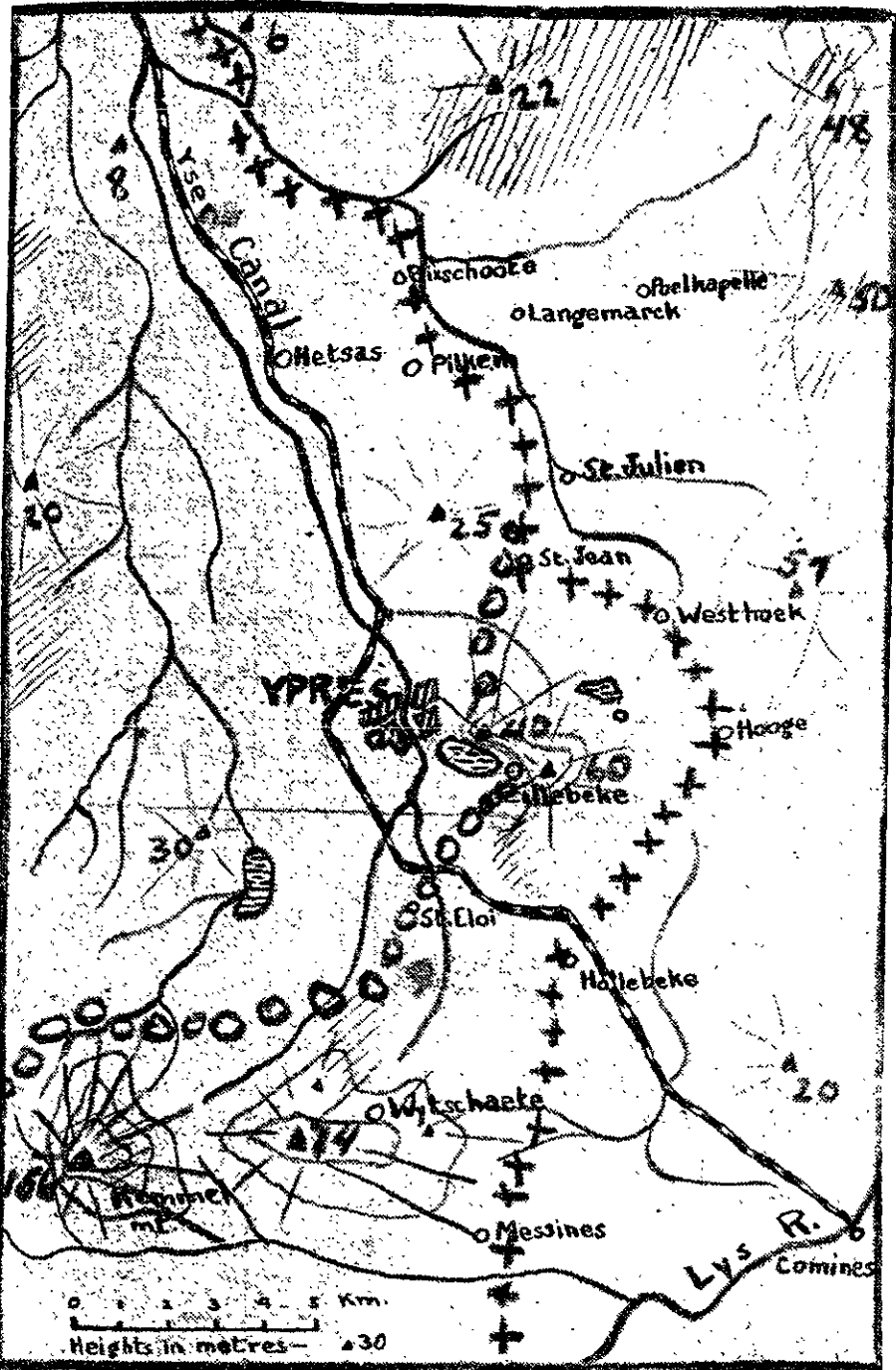
Capt. L. P. Wood '01, Capt. E. H. Sargent '07, 2nd Lieut. A. S. Milliken '14, and Lieut. H. R. King, '15, on the instructing staff.

Captain A. G. Bruce '06.  
First Lieutenants F. H. Achard '13, P. H. Heimer '08, R. Eksergian '14, E. C. Holbrook '12, and G. C. George '11.

Second Lieutenants C. J. Davis, Jr., '16, A. C. Lieber, Jr., '16, A. R. Williams '17 and W. M. B. Lord '18.

#### WASHINGTON MEETING

A full report of the proceedings of the Washington meeting will be published in the next issue.



#### THE COMBATANTS AT YPRES

The above map shows the field of British operations at Messines. The broken line of circles is approximately the old position of the British lines. The line of crosses is the present position, after the British exploded mines under the works on Messines Ridge to Hill 60, capturing the positions. These positions form an admirable base for directing operations north of the Lys river, where the country is easily dominated owing to the few natural obstacles.

#### CHEMISTS CONVOKE

(Continued from page 2)

announces the delivery of over 150 important papers by the experts and experimenters who will attend. Many of the papers will comprise technical and scientific discussions, and will be followed with great interest by the many delegates who will come to the Hub to participate. Important discussions of the production of fertilizers, potash, leather substitutes, food conservation, paper-making, etc., will interest the whole country. Among the important papers which are announced are the following:

"A New Fertilizer," by Alfred H. Cowles; "Potash Production in the United States," by H. A. Huston; "Effect of Fertilizers on the Composition of Strawberries," by H. A. Huston; "A Comparison of Calcium Silicate, Carbonate, and Hydrate as Fertilizer Materials with Experimental Data," by Alfred W. Scheidt; "The Recovery of Potash as a By-Product in the Cement Industry," by W. H. Ross and Albert R. Merz; "A New Illuminator for Mi-

croscopes," by Alexander Silverman; "An Experiment in Scrubbing Carburetted Water Gas for Recovering Aromatics," by Robert Moore and Gustav Egloff; "Two New Laboratory Instruments, a Buret-Micrometer and a Balance for first year students," by Arthur John Hopkins of Amherst College; "The Bactericidal Efficiency of Soap Solution in Power Laundering," by H. G. Elledge, and many others, which will have bearing upon present day conditions both in business and domestic life.

#### Visitors Today

H. P. Talbot, Chairman Northeastern Department, in charge.  
R. F. Bacon, Director, Mellon Institute, University of Pittsburgh.  
C. Baskerville, Head of Chemical Dept. College City of New York.  
Dr. Leo H. Backeland, Member Nitrate Supply Committee.  
W. D. Bigelow, Chief Chemist, Cannery's Association.  
T. W. Richards, Head Chemical Dept. Harvard University.  
William F. Hillebrand, Bureau of Standards, Department of Commerce and on the Nitrate Supply Committee.



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## U. S. NEEDS TECHNICAL MEN FOR SERVICE DURING WAR

For further information concerning these positions, communicate with the nearest Secretary of the Civil Service Commission or the M. I. T. Committee for National Service, 908 Union Trust Bldg., Washington, D. C.

Position	Service	Salary	Date of Exam	Cir. No.
Laboratory Aid in Foreign Seed and Plant Introduction	Bureau Plant Industry, Dept. Agriculture	\$500-\$9,000	Sept. 19	1808
Asst. Inspector Cloth Equipment	Bureau Ordnance, War Dept.	\$80-\$125 per m.	—	1370
Asst. Inspector of Leather	Bureau Ordnance, War Dept.	\$100-\$125 per m.	—	1370
Asst. Inspector Small Hardware	Bureau Ordnance, War Dept.	\$80-\$125 per m.	—	1370
Asst. Inspector of Textiles	Bureau Ordnance, War Dept.	\$80-\$125 per m.	—	1370
Asst. Inspector Leather Equipment	Bureau Ordnance, War Dept.	\$100-\$125 per m.	—	1370
Asst. Testing Engineer	Public Rds., Dept. Agr.	\$1,800-\$2,500	Sept. 11	1803
Printer	Government Printing Office	50c.-60c. per hr.	Sept. 19-20	1806
Fireman, Bureau Standards	Bureau Standards	\$660-\$720	Sept. 19	1807
Statistician	Ordnance Dept., War Dept.	\$1,800	Sept. 11	1804
Timber Inspector	Industrial Dept., Navy Yard	\$4.24 per diem \$4.72 per mills	—	—
Inspector, Child Labor Division	Children's Bureau, Dept. of Labor	\$1,800-\$2,400	Sept. 18	1875
Bookkeeper	Departmental Service	\$1,000	Sept. 19	1865
Civil Engineer	Philippine Service	\$1,560-\$3,000	Sept. 18	1866
Law Clerk, Stenographer and Typewriter	Bureau Naturalization, Dept. Labor	\$1,000-\$1,400	Sept. 19-20	1897
Assistant in Crop Physiology	Bureau Plant Industry, Dept. Labor	\$1,200-\$1,500	Sept. 19	1896
Construction Engineer	Philippine Service	\$1,560-\$3,000	Sept. 18	1868
Mechanical and Electrical Engineer	Philippine Service	\$1,560-\$3,000	Sept. 18	1867
Assistant in Marketing Dairy Products	Bureau Markets, Dept. Agriculture	\$1,800-\$2,400	Sept. 25	1902
Junior Assistant in Marketing Dairy Products	Bureau Markets, Dept. Agriculture	\$1,200-\$1,800	Sept. 19	1901
Special Agents and Research Assistants	Children's Bureau, Dept. Labor	\$1,200-\$1,680	Sept. 19-20	1869
Asst. Inspectors, Child Labor Division	Children's Bureau, Dept. Labor	\$1,200-\$1,680	Sept. 19	1870
Copyist Draftsman	Children's Bureau, Dept. Labor	\$2,400-\$3,600	Sept. 18	1871
Infant Mortality	Children's Bureau, Dept. Labor	\$1,800-\$2,400	Sept. 18	1872
Assistants in the Prevention of Infant Mortality	Children's Bureau, Dept. Labor	\$1,800-\$2,400	Sept. 18	1873
Experts in Child Welfare	Children's Bureau, Dept. Labor	\$2,400-\$3,600	Sept. 18	1874
Asst. Director, Child Labor Division	Children's Bureau, Dept. Labor	\$2,400-\$3,600	Sept. 18	1874
Land Classifier	Geological Survey	\$1,800-\$2,400	—	1798
Inspectors of Ordnance Equipment	Ordnance Dept.	\$2,000-\$2,400	—	1770
Senior Expert Electrical and Mechanical Aid	Bureau Steam Engr., Navy Dept.	\$12 per diem	Sept. 18	1904
Designing Engineer, Armor Plant and Steel Mill	Bureau Y & D, Navy Dept.	\$10-\$16 per diem	Sept. 11	1934
Designing Engineering, Heavy Steel Mill Construction	Bureau Y & D, Navy Dept.	\$10-\$16 per diem	Sept. 11	1934
Designing and Construction Engineer, Furnace Plant	Bureau Y & D, Navy Dept.	\$10-\$16 per diem	Sept. 11	1934
Hydraulic and Sanitary Engineer	Bureau Y & D, Navy Dept.	\$10-\$16 per diem	Sept. 11	1934
Investigator in Accounting and Office Management	Bureau Efficiency	\$2,000-\$3,000	Sept. 18	1669
Inspector of Cloth	Ordnance Dept.	\$2,500-\$3,000	—	1937
Trained Nurse	Indian Service	\$720	—	1952
Experts in the Prevention of	Naval Torpedo Station	\$2.56 per diem	Oct. 3	1950
Assistant in Marketing Live Stock and Meats, Grade 1	Bureau Markets, Dept. Agriculture	\$1,800-\$2,400	Sept. 25	1941
Assistant in Marketing Live Stock and Meats, Grade 2	Bureau Markets, Dept. Agriculture	\$1,200-\$1,800	Sept. 19	1939
Dynamo Tender	Bureau Engraving and Printing	\$3.68 per diem	Sept. 19	1936
Field Assistant in Forest Pathology	Bureau Plant Industry, Dept. Agriculture	\$1,200-\$1,620	Sept. 19	1935
Clerk Qualified as Typewriter Repairer	Bureau Pensions	\$1,200	Oct. 3	1917
Cook	Indian Service	\$480-\$660	—	1955
Forest Assistant	Philippine Service	\$1,600	Oct. 3-4	1951

### OFFICIAL FROM PARIS

(Continued from page 1.)

as officially representing the American University Union. Profs. Nettleton and Van Dyke are at present living at the Technology Club, which is to be the nucleus around which the larger idea will grow. They are greatly pleased with the ideas incorporated in our Club and will include them as far as possible in the new one. The American University Union in Europe was organized July 6th, the following colleges being represented: College of the City of New York, Columbia, Dartmouth, Harvard, Johns Hopkins, New York University, Northwestern, Princeton, Tulane, Michigan, Pennsylvania, Washington, Vanderbilt, Yale.

The general object of the Union shall be to meet the needs of American University and College men who are in Europe for military or other service in the cause of the Allies. Among its specific objects shall be the following:

1. To provide at moderate cost a home with the privileges of a simple Club for American college men and their friends passing through Paris or furlough; the privileges to include information bureau, writing and newspaper room, library, dining-room, bedrooms, baths, social features, opportunities for physical recreation, entertainments, medical advice, etc.

2. To provide a headquarters for the various bureaus already established or to be established in France by representative American universities, colleges and technical schools.

3. To co-operate with these bureaus when established, and in their absence to aid institutions, parents, or friends, in securing information about college men in all forms of war service, reporting on casualties, visiting the sick and wounded, giving advice, serving as a

means of communication with them etc.

#### Organization.

The administration of the affairs of the Union shall be in the hands of three Boards, known respectively as the Board of Trustees, the Executive Committee, and the Advisory Council.

Of the Board of Trustees consisting of nine men, six are appointed by the Universities represented and one each by the University Club of New York, the Red Cross War Council and the Y. M. C. A.

The Executive Committee of from five to seven members is to be located in Paris. Four men have already been appointed: Prof. Nettleton of Yale, Prof. Van Dyke of Princeton, Mr. Wendell of Harvard and Mr. Lansing of M. I. T.

The Advisory Council will consist of representatives in Paris of the leading American colleges acting in an advisory capacity to the Executive Committee.

The Honorary Patrons are the President of the United States, the Secretaries of War and the Navy and the American Ambassadors to France and Great Britain.

The funds for the support of the Union will be largely forthcoming from dues from each college. The amount from each depending on the number of graduates.

More information will be given later.

The Club has had a number of visitors this week, including Professor S. M. Gunn '05, Associate Professor of Sanitary Biology and Public Health, M. I. T. who is here as a member of the Tuberculosis Commission of the Rockefeller foundation. Professor Gunn will give special attention to the education of the French people in regard to sanitation and the prevention of tuberculosis. Among other means adopted, will be that of several traveling motor cars completely equipped

with motor-generator sets to furnish light for the moving picture apparatus and with all other necessary appurtenances.

M. P. Johnson, Harvard '19 and Newell Vaughan of Harvard Sub-Freshmen Class, both of Boston, are living at the Club this week. They are attached to the Transport service of the French Army and having returned from Paris on leave, after three months' service, are enjoying home life at the Club. V. R. Lansing '98, Director of the Club, spent all of last week behind the British lines in the North of France, on a special investigation for the Council of National Defense and General Pershing's Staff.

Prof. Nettleton of Yale and Prof. Van Dyke of Princeton are living at the Club and together with Johnson, Vaughan, Smith, Lansing make full house. However, in a day or two there will be two extra beds available and more when needed.

#### Club Hours.

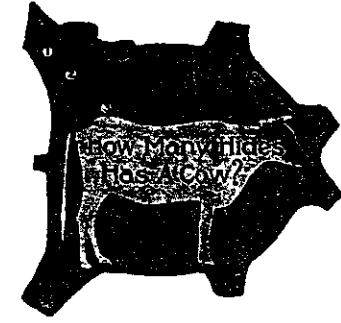
The Club is open at all reasonable hours to those not living here, and at all unreasonable hours to those who are. If the Director is not at home to welcome you, introduce yourself anyway and see what it feels like to be at home.

#### AMERICANS IN FOREIGN LEGION ARE WOUNDED.

PARIS, Sept. 10—In the last great battle on the western front, when the roll of the foreign legion was called, only 12 Americans answered to their names, says the Paris edition of the New York Herald.

Several Americans were wounded in the recent fighting, the Herald adds, among them Parringfield of San Francisco, shot below the knee; Rockwell, "Philippi" of California and Knocke. The wounds of the last two are serious.

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