

ommended are in operation or until further need arises.

9. While the preceding recommendations include all the measures that can now judiciously be taken for the fixation of nitrogen and the oxidation of ammonia, it is the opinion of the committee that the immediate accumulation and the permanent maintenance of an ample reserve, not less than 500,000 tons of Chile saltpeter, is the measure most urgently necessary.

The Nitrate Supply Committee comprised the following Army and Navy officers, scientific men 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.; Gano Dunn, New York City; Charles H. Herty, New York City; William F. 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.

THE ARMY AVIATION SCHOOL AT THE UNIVERSITY OF CALIFORNIA

IN the United States Army School of Military Aeronautics at the University of California the following appointments have been made:

Major Arnold N. Krogstad, J.M.A., Signal Corps, commandant, quartermaster, ordnance officer, summary court, president of examining board.

Dr. B. M. Woods, president of academic board.

First Lieutenant Bruno F. Sandow, Medical Reserve Corps, post surgeon, member of examining board.

First Lieutenant Gerald F. Stoodly, Dental Reserve Corps, dental surgeon.

M. S. E. Herman H. Walker, Signal Corps, retired, clerk, commandant's office.

M. S. E. Milton N. Williams, Signal Corps, retired, acting quartermaster sergeant.

Private Joseph L. Walker, A.S., Signal Corps, assistant instructor in rigging.

Professor B. F. Raber, associate professor of

mechanical engineering and professor of aeronautical engines.

D. J. Conant, professor of aeronautical engines.

Donald B. McFarlane, instructor in gas-engine practise.

F. H. Bachman, instructor in internal-combustion engines.

Collier Raber, mechanic and tool-room keeper.

J. A. Polhemus, instructor in theoretical mechanics.

H. M. Jeffers, instructor in astronomy and meteorology.

W. D. Waterman, instructor in rigging, structure and care of aeroplane.

R. J. Heffner, instructor in maps and reconnaissance.

E. N. D'Oyly, instructor in artillery observation and use of miniature artillery range.

Dr. L. T. Jones, instructor in physics and professor of machine guns.

F. S. Stockton, G. R. McDonald and Herbert G. Russell, instructors in machine guns.

R. B. McPherson, instructor in wireless and signaling.

Harold Fielder, instructor in wireless.

E. S. Pillsbury and E. F. Steen, instructors in military tactics and lecturers.

Clifton R. Gordon, J. C. Moses and G. G. Mitchell, instructors in military tactics.

F. W. Cozens, instructor in physical education.

Grandison Gardner, instructor.

APPOINTMENTS IN THE ORDNANCE DEPARTMENT OF THE ARMY

THE United States Civil Service Commission announces the following open competitive examinations for positions 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. The salaries named are for entrance.

Mechanical engineer, artillery ammunition, \$3,000 to \$3,600 a year.

Mechanical engineer, experimental work, \$2,500 to \$3,000 a year.

Mechanical draftsman, \$1,000 to \$1,400 a year.

Apprentice draftsman, \$480 a year.

Inspector of artillery ammunition, \$1,500 to \$2,400 a year.

Inspector of field artillery ammunition steel, \$1,500 to \$2,400 a year.

Assistant inspector of field artillery ammunition steel, \$3.50 to \$5 a day.

Inspector of ammunition packing boxes \$3.52 a day to \$1,800 a year.

Inspector and assistant inspector of powder and explosives, \$1,400 to \$2,400 a year.

Inspector of ordnance equipment, \$1,500 to \$2,400 a year.

Assistant inspector of cloth equipment, \$80 to \$125 a month.

Assistant inspector of leather, \$100 to \$125 a month.

Assistant inspector of small hardware, \$80 to \$125 a month.

Assistant inspector of textiles, \$80 to \$125 a month.

Assistant inspector of leather equipment, \$100 to \$125 a month.

Clerk qualified in business administration, \$1,200 to \$1,500 a year.

Index and catalogue clerk, \$1,000 to \$1,200 a year.

The examination for index and catalogue clerk is open to both men and women; the other examinations are open only to men.

The president of the commission writes that the government urgently needs men for the work above indicated, and qualified persons are urged, as a patriotic duty, to apply for examination. Until further notice applications for the positions named will be received at any time by the United States Civil Service Commission, Washington, D. C. Papers will be rated promptly. Applicants will not be required to appear at any place for examination, but will be rated principally upon the elements of education, training and experience, as shown by their applications and by corroborative evidence.

Full information concerning examinations, application blanks, etc., may be obtained by calling in person upon the secretary of the local board of civil service examiners at the post office in any city in which city delivery of mail has been established, or by communicating with the United States Civil Service Commission, Washington, D. C.

SCIENTIFIC NOTES AND NEWS

SIR CLIFFORD ALLBUTT has been continued in the office of president of the British Medical Association for the coming year. It is

hoped that a meeting will be held at Cambridge next year.

PROFESSORS GOLGI, NOVARO AND ROSTER, having reached the age of seventy-five years, automatically retired from their chairs in Italian universities. Professors Golgi and Novaro are both senators of the realm. The former is professor of general pathology at Pavia, and Novaro of surgery at Genoa. Roster is professor of hygiene at Florence.

THE Secretary of War announces the appointment of the following to investigate the matter of defective ammunition sent to the American expeditionary force in France: Dr. H. P. Talbot, professor of chemistry at the Massachusetts Institute of Technology; Dr. C. L. Parsons, chief chemist of the Bureau of Mines; an army officer to be named by Major General Hugh L. Scott, Chief of Staff.

THE United States Food Administration announces that Professor H. A. Morgan, of Knoxville, Tenn., has been appointed federal food administrator for Tennessee.

DR. ARTHUR M. SHIPLEY, of Baltimore, professor of surgery at the University of Maryland, who had received his commission as chief of the surgical staff of the University of Maryland Base Hospital Unit, has been detached from the unit by order of the War Department, and ordered to report immediately to Camp Meade as chief surgeon and surgical instructor at the camp.

E. N. WENTWORTH, professor of animal breeding at the Kansas State Agricultural College, has received a commission of captain in field artillery. For the present he will be stationed at Fort Riley.

ROBERT A. PATTERSON, Ph.D., instructor in physics in Yale College, has been commissioned captain in the field artillery section of the Reserve Officers' Corps, and assigned to the camp at Ayer, Mass.

DR. LEON I. SHAW, of the department of chemistry of Northwestern University, has been advanced to the position of assistant professor of chemistry on leave of absence for one year for service with the government. He