

COAST ARTILLERY JOURNAL



MAJOR GENERAL WILLIAM F. HASE

MAY-JUNE, 1934

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Contents

The United States Coast Artillery Association.....	162	History of Gunners' Examinations in the 240th C.A. (TD) .	209
General Hase's Message to the Corps.....	163	By Captain S. R. Dow.	
Chapters of the United States Coast Artillery Association..	164	Coast Artillery School Courses for 1934-35	211
Notes of the Coast Artillery Association.....	165	By Major K. T. Blood, C.A.C.	
Frontispiece	168	Coast Artillery Board Notes	212
Antiaircraft Defenses: Their Development During the World War (Part I).....	169	Coast Artillery Activities	215
By Major A. F. Englehart, C.A.C.		Fort Monroe News Letter—Hawaiian Separate Coast Artillery Brigade News Letter—Fort Mac- Arthur Notes—Panama Canal Department News Letter.	
Automotive Maintenance for Coast Artillery Units.....	174	Coast Artillery Orders	224
Jungle Warfare (Part I)	177	National Guard Notes	226
By Ingram Cary.		The Act of June 15, 1933—National Guard Ap- propriations—Notes of the 197th C.A.—248th C.A. Bn. (HD) Gets Insignia and Colors—Notes from Coast Artillery Brigade, N.Y.N.G.	
Elimination, Promotion, or What Have You.....	187	News and Comment	232
Training for Mobilization	189	Preparation for Efficiency Reports—What Is It? —Activities of the 621st C.A. (HD)—Coast Ar- tillery Target Practice—Let the Journal Handle Your Magazine Subscriptions—Notes from Coast Artillery Brigade, N.Y.N.G.	
By Captain John J. Albright, 29th Infantry.		Reserve Notes	234
How the Disarmament of Germany Came to Pass	196	Second Coast Artillery District—Washington Conferences—Trenton Chapter Meets.	
By Major Alexander L. P. Johnson.		Book Reviews	235
Rifle Antiaircraft Notes of Rebel Forces.....	203		
As told to Lieutenant Burgo D. Gill, C.A.C.			
Changes in Target Practice Instructions	205		
By Captains S. L. McCroskey and C. S. Harris, C.A.C.			

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The United States Coast Artillery Association



"The purpose of the Association shall be to promote the efficiency of the Coast Artillery Corps by maintaining its standards and traditions, by disseminating professional knowledge, by inspiring greater effort towards the improvement of material and methods of training, and by fostering mutual understanding, respect and coöperation among all arms, branches and components of the Regular Army, National Guard, Organized Reserve and Reserve Officers' Training Corps."



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MEMBERSHIP

"The Association shall consist of Active, Associate, and Honorary Members.

"The following shall be eligible for Active membership:

- a. Commissioned officers, active or retired, of the Coast Artillery of the Army of the United States.
- b. Commissioned officers, active or retired, of the Staff Corps and Departments of the Army of the United States who at any time have served in the Coast Artillery.
- c. Commissioned officers, active and retired, of the Philippine Scouts who have served in the Coast Artillery.
- d. Former commissioned officers of Coast Artillery of honorable records in the Army of the United States.
- e. General officers, active or retired, of the Army of the United States.

"The following shall be eligible for Associate membership:

- a. Commissioned officers and former commissioned officers in good standing of the United States Army, Navy, Marine Corps, Coast Guard and Public Health Service.
- b. Warrant officers and noncommissioned officers of the Coast Artillery of the Army of the United States.
- c. Members of the Coast Artillery Units of the Reserve Officers' Training Corps and Citizens' Military Training Camps.

"The following shall be eligible for Honorary membership:

- a. Civilians who have demonstrated their interest in national military preparedness.
- b. Persons who have rendered distinguished services to the Association or to the United States."

WAR DEPARTMENT
OFFICE OF THE CHIEF OF COAST ARTILLERY
WASHINGTON

TO THE COAST ARTILLERY CORPS:

I appreciate deeply the honor which has been conferred upon me in my recent appointment as Chief of Coast Artillery and I also realize full well the great responsibility which has been placed upon me. Having just served as Executive in this office under my most able predecessor, General Gulick, with whose aims and policies I am familiar, I feel that we can further, without interruption and under favorable auspices, necessary steps to insure progress of the Coast Artillery Corps.

To continue progress, the support and coöperation of all members of the Coast Artillery Corps are essential to the Chief. I bespeak the same loyal support and the same efficient coöperation which you have accorded my predecessor in all of his undertakings. There is much to be accomplished, but by working together I am confident that we can overcome all obstacles that may confront us, however formidable they appear. The excellent results of the past four years, attained in spite of the limited funds available, prove the possibility of real accomplishment despite unfavorable conditions. So let us carefully determine our essential needs, "hew to the line" in all our endeavors, and although progress may seem slow, accomplish as much as we can.

We must take full advantage of every opportunity to train every officer, even every recruit, to fit in his proper niche, so that when an emergency arises the Coast Artillery will fulfill its proper mission. This we can do by utilizing to the maximum the facilities of our limited number of training centers in the continental United States and our foreign service stations. Our overseas garrisons offer golden opportunities for the exercise of initiative and force, and service there should be sought eagerly by all looking forward to their future. Here opportunities abound for potential leaders to demonstrate their capabilities and capacities.

The mission of our Corps under mobilization plans is a stupendous one and requires the best endeavors of all officers of all components. The enthusiastic interest displayed by the civilian components,—the National Guard, the Organized Reserves, and the R.O.T.C. units of the Coast Artillery—has been outstanding, and I look forward to its continuance. We need this interest and your support and coöperation in all Coast Artillery matters. For my part, it shall be my purpose and endeavor to do everything possible to provide you with the best modern artillery equipment available and to remove the handicap which now exists for many of you in training with antiquated matériel. For the benefit of both Regular Army personnel and personnel of the civilian components, I shall exert every effort to equip our training centers also with the latest armament and accessories.

With every confidence in the future, I am
Sincerely yours,

W. F. HASE,
*Major General,
Chief of Coast Artillery.*

Chapters of the United States Coast Artillery Association

The following list of the active chapters of the United States Coast Artillery Association shows the name and address of the Chapter, and the name of the President, Secretary, and Treasurer of each. Undoubtedly there have been changes in personnel of which the national headquarters has no record.

<i>Chapter</i>	<i>Address</i>	<i>Officers</i>
Dallas,	538 Federal Building, Dallas, Texas.	President, Capt. G. R. Prout, CA-Res. Secretary, Capt. C. T. Baer, CA-Res.
Seattle Sector,	209 First Avenue, S., Seattle, Washington.	President, Col. W. S. Pollitz, CA-Res. Secretary, 1st Lt. A. E. Swift, CA-Res.
Cincinnati,	607 Chamber of Commerce Building, Cincinnati, Ohio.	President, Lt. Col. W. W. Merrill, CAC. Secretary, 1st Lt. K. C. Smith, CA-Res.
Indiana,	Hq. Ind. Mil. Area, Indianapolis, Indiana.	President, Col. Bowman Elder, CA-Res. Secretary, Major C. W. Ardery, CA-Res.
Philadelphia,	Room 1009, Gimbel Building, Philadelphia, Pennsylvania.	President, Capt. H. S. Dimmick, CA-Res. Secretary, 1st Lt. S. M. Lovenstein, CA-Res. Treasurer, Maj. A. G. Frick, CAC.
Richmond,	1500 First National Bank Building, Richmond, Virginia.	President, Capt. J. A. C. Conrace, CA-Res. Secretary, Major R. M. Carswell, CAC.
242d C.A. Connecticut,	The Armory, Bridgeport, Connecticut.	President, Major A. C. Smith. Secretary, 2d Lt. J. W. Mudge. Treasurer, Capt. I. R. Peterson.
522d Western New York,	The Armory, Buffalo, New York.	President, Lt. Col. F. W. Gilchrist, CA-Res. Secretary, Capt. J. P. Toler, Jr., CA-Res.
Houston Antiaircraft,	Houston, Texas.	President, Lt. Jeff Barnette. Secretary, Lt. James A. Smith.
Illinois,	Rms. 416-433, 160 N. LaSalle Street, Chicago, Illinois.	President, Col. C. C. Dawes. Secretary, Major C. J. Herzer, CAC.
Washington Branch,	National Guard Armory, Washington, D. C.	President, Major W. W. Burns. Secretary, Major E. B. Gray.
San Francisco,	State Armory, 14th and Mission Sts. San Francisco, California.	President, Col. H. G. Mathewson. Secretary, Major W. R. Miller.
Western Pennsylvania,	1200 Jones Law Building, Pittsburgh, Pennsylvania.	President, Lt. Kenneth D. Wing. Secretary, Lt. F. R. Sack.
West Point,	West Point, New York.	President, Secretary, Capt. W. H. Donaldson, CAC.
The First Defenders,	The Armory, Allentown, Pennsylvania.	President, Col. C. J. Smith. Secretary, Capt. H. C. Blank. Treasurer, Major J. D. Eisenbrown.
Metropolitan New York,	641 Washington Street, New York, N. Y.	President, Gen. J. J. Bryne. Secretary, Lt. Col. W. M. Colvin.
Duluth,	Duluth, Minnesota.	President, Lt. Col. F. C. Tenney. Secretary, 2d Lt. H. S. Peyton.
Delaware,	The Armory, Wilmington, Delaware.	President, Col. A. E. Tanner. Secretary, 1st Lt. C. M. Meyers.
Schenectady,	243 State Street, Schenectady, New York.	President, Major N. E. Devereux, Jr., CA-Res. Secretary, 1st Lt. F. A. Droms, CA-Res.

Plans are being formulated for the formation of new chapters. It is hoped that the official family will be materially increased during the coming year. There should be a chapter in all metropolitan centers where a number of Coast Artillerymen reside.

Notes of the Coast Artillery Association

Information Concerning the Meeting and General Assembly of the United States Coast Artillery Association, to be Held in New York City, on June 8-10, 1934

THE following general information and program of events for the meeting and general assembly of the United States Coast Artillery Association will be of interest to all members.

In the early part of 1934 the New York Chapter of the Association extended an invitation to the Executive Council to hold a general assembly in the metropolitan area of New York City. The invitation was immediately accepted and the President of the New York Chapter, Brigadier General J. J. Byrne, appointed a committee to formulate plans and make arrangements for the meeting. This committee has labored long and faithfully in order that visiting members may receive the maximum amount of benefit in the way of instruction, inspiration, professional advancement, promotion of "relations cordial" among the various components of the Coast Artillery and to promote the efficiency of the Coast Artillery Corps by maintaining its standards and traditions. The social and recreational side has not been overlooked. Provision has been made for the entertainment of wives and sweethearts; they will play a prominent part in the picture and their presence will contribute greatly to the success of the meeting. It is believed that a most interesting and instructive program has been arranged. All those who can attend will be amply repaid for the expense, time and effort involved.

Special consideration has been given to the necessity of keeping the cost to the minimum. The committee in charge of arrangements believes that it has reached a solution that will meet with the approval of all, regardless of the status of the pocketbook. Realizing that the great City of New York is, in itself, always a strong attraction, a little time has been left available for shopping, sight-seeing and other recreational activities. Perhaps more detailed information will better illuminate the picture and explain the arrangements made for the entertainment of visiting members.

RAILROAD RATES

Arrangements have been made through the Central Passenger Association whereby members of the Association attending the convention will be given the advantage of special reduced fares.

Round trip fares will be made available at the rate of $1\frac{1}{3}$ regular fare, provided certain requirements are fulfilled; briefly these are summarized as follows:

Tickets at the regular one way tariff fare for the going journey must be obtained between June 5th and 9th, in-

clusive. When purchasing a going ticket be sure to request a "certificate plan" certificate from the ticket agent. Do not make the mistake of asking for a receipt. These certificates are not available at all stations. Members should inquire in advance at the ticket office of their home station to ascertain whether or not agents can issue through tickets and "certificates" to the place of meeting. If not, members should purchase a local ticket to a station that can issue a certificate and from there purchase a through ticket to New York City.

At the time of registration present your certificate to the Secretary-Treasurer of the Association. The reduced fare for the return journey will not apply unless the certificate is properly endorsed by the Secretary and validated by a railroad special agent. Tickets cannot be validated after 5:00 p.m., June 9.

In order to take advantage of the special reduced rate it is necessary that not less than 100 "certificate plan" certificates or special round trip excursion tickets be turned in for validation. If less than this number are presented no reduced fares can be made available to any member. A little coöperation on the part of all visiting members will react to the financial advantage of those making the journey by train.

Round trip excursion tickets of all classes sold prior to, or on, the dates of sale authorized for the convention (i.e. June 5th to 9th inclusive) from points from which one way adult fare to place of meeting is \$2.00 or more, may be counted. These will help to provide the 100 tickets required before members will be given the $\frac{1}{3}$ fare rate for the return trip; therefore, holders of round trip excursion tickets should turn them in for validation. This will react to the benefit of others although no reduction will accrue to the holders of round trip excursion tickets.

Failure to obtain a proper certificate when purchasing the going ticket will debar members from taking advantage of the two-thirds reduction on the return ticket. If the necessary minimum of 100 certificates, or a combination of "certificates" and round trip excursion tickets, are presented and the certificate is duly validated by the Secretary of the Association and the special agent of the railroads the holders thereof will be entitled—up to and including June 13, 1934—to purchase a return ticket via the same route over which the going journey was made at *one-third of the regular one way tariff fare from New York City to the initial point at which the certificate was issued.*

The return tickets purchased under this plan will be good for return passage to starting point within 30 days from date of sale of going ticket. The special railway

agent for validating certificates can be found at the temporary headquarters, Hotel Astor, from noon to 5:00 p.m., on June 9th. Certificates should be called for during this period. The "certificate plan" will apply for members, and dependent members of their families. Members should be careful to comply with the requirements of the Central Passenger Association in order that they (and other members) may profit by the reduced fare.

TO REACH FORT TOTTEN FROM NEW YORK

Fort Totten can be reached by the Long Island Railway from Pennsylvania Station. Detrain at Bayside. One-way fare, 40 cents. Time required for journey, about 40 minutes; or take the subway to Flushing, time required, about 45 minutes. Fare by subway, 10 cents. Busses will meet trains at above detaining points. Those who are planning to reach Fort Totten by either of the above routes should indicate, by suitable replies on the questionnaire, whether they desire bus transportation from station to Fort Totten.

TRAVEL BY AUTOMOBILE

The following information may be helpful to those who contemplate making the journey by privately owned transportation.

If approaching New York from the north, take the College Point Ferry, thence to Whitestone and Fort Totten. The Long Island end of the Ferry is quite close to Fort Totten, and members using this route will avoid the traffic congestion of New York City and effect a great saving in time and mileage.

Those who approach New York from the south or west should take the Holland Tunnel, at the end of the Tunnel turn north on the elevated highway to the end of same, thence west side of City to 57th Street, turn right (east) to 3d Avenue, turn left (north) to 59th Street and cross the East River via Queensboro Bridge. Follow Northern Boulevard to Bayside, then turn left on Bell Boulevard; the end of this boulevard is quite near the entrance to Fort Totten.

TRAVEL BY MOTOR BUS

No effort will be made to induce bus lines to grant special reduced fares, however, if a sufficient number can arrange to assemble at a designated time and place it is believed that a considerable reduction in transportation rates can be obtained by chartering a bus for the trip. Unit instructors of Reserve and National Guard regiments can work out this detail.

HOTELS

Several of the leading hotels of New York City have granted special concessions to members of the Association. The Hotel Astor will be the official headquarters. The rates at this hotel are very reasonable. A single room without bath, \$2.00 per day; single room with bath, \$3.00 per day. Other rates in proportion. The Hotel Roosevelt has agreed to grant special rates to members of the con-

vention. Your membership card will be sufficient identification for obtaining concessions. The Military and Naval Club of New York, 4 West 43d Street, has very kindly offered its facilities, on a cash basis, to visiting members; single rooms, \$2.00 per day and up; gentlemen only.

REGISTRATION FEE

In order to provide revenue for printing, postage, publicity and other incidental expenses a registration fee of 50 cents per member will be charged.

DETAILED SCHEDULE

Friday, June 8 — 1:00 p.m. (Daylight-saving Time). Registration Headquarters, Fort Totten, New York. At this time members will give information as to name, rank, organization, home address, hotel address in New York City, and whether or not accompanied by members of their family. Information will be furnished giving any change in schedules, hotels, etc.

2:00 P.M.—Display of equipment of the 62d C.A. (AA), exhibition of matériel in position and communication hookup. Short explanations of antiaircraft matériel and equipment will be given by officers of the 62d C.A. (AA).

3:30 P.M.—Visit to points of interest in Fort Totten, inspection of barracks and other activities. Note: Officers will be arranged in groups of reasonable size and under the guidance of an officer will be conducted on a tour of inspection of the post and installations.

4:00 P.M.—Aërial review and demonstration by Air Corps units.

4:30 P.M.—Review of troops at Fort Totten terminating with retreat parade.

5:30 P.M.—Supper served at Fort Totten. The expense of this will not exceed 75 cents per person. Band concert.

6:30 P.M.—Business meeting of the Association. The President of the Association, Major General Wm. F. Hase, will preside. He will review the accomplishments of the Association and outline plans for its future development. The Secretary-Treasurer will present a report and briefly review the financial condition of the Association. Addresses will be made by prominent Coast Artillery officers. Representatives of the several chapters will be called upon to give reports of their chapter activities. The order of business will include the appointment of a committee on resolutions and such other committees as may be deemed necessary; also, opportunity will be afforded for a general discussion of ways and means to improve the effectiveness and usefulness of the Association.

8:30 P.M.—Dancing. Note: Arrangements will be made for the comfort and convenience of visiting ladies.

9:30 P.M.—A searchlight display and demonstration in picking up and illuminating aërial targets.

Saturday Morning, June 9 — Visits to units of the Atlantic Fleet which will be anchored in New York Harbor. Special attention to the aircraft carriers and to the latest antiaircraft matériel. The time and place from which

small boats will depart to convey members to the various ships will be announced on Friday afternoon. It is anticipated that this inspection will require all of Saturday forenoon. Visiting officers will be divided into groups of reasonable size and arrangements will be made for the groups to be escorted over the several ships by officers of the Navy. Ladies are invited to visit the Fleet.

Saturday, 4:00 p.m.—A review and parade of the New York National Guard Brigade of Coast Artillery comprising the 211th C.A. (AA), the 244th C.A. (TD), and the 245th C.A. (HD) will be held in Central Park. The officer receiving the parade has not (at this writing) been selected but he will be a prominent official. Note: The interval between the return from the inspection of the Fleet to the time for the review will be left open for shopping or sight-seeing.

7:30 P.M. — Banquet at the Employers Association Club, 2 Park Avenue. The cost of this will not exceed \$2.50 per plate, including liquid refreshments. The guest speaker of the occasion has not (at this writing) been selected but he will be a public official of national importance. Invitations will be extended to the Governor of New York, the Mayor of New York City, the Commanding General of the Second Corps Area, the Commanding General of the 2d C.A. District, the Commanding General of the New York National Guard, the Commanding General of the Coast Artillery Brigade, New York National Guard, and others. At the conclusion of the banquet there will be a short business session of the Association for the completion of any unfinished business, report of standing committee and committee on resolutions. This business meeting will be made as short as possible. Following the business meeting there will be dancing.

Sunday, June 10—After discussing many proposals the committee on arrangements decided that Sunday would be left open for sight-seeing. Suggested trips which will prove of special interest to out-of-town members are:

a. A trip up the Hudson River by boat to the U. S. Military Academy. The special features of that day at West Point will be a concert in the afternoon and the evening parade of the Corps of Cadets. Note: Graduation exercises take place on Tuesday, June 12. Sunday, June 10, will present an unusual opportunity for a visit to West Point, and will prove most interesting to those who have not previously visited this historic place. It is recommended that the trip be made by train or by boat. Those who contemplate the trip by automobile undoubtedly will find traffic congested and parking difficult.

b. A trip by boat around Manhattan Island. The view of Manhattan Island and greater New York will prove to be an unusual and inspiring sight.

c. A trip to Coney Island.

GENERAL

Reservations for hotels can be made individually or through the Secretary of the Association. Hotel Astor will be the official headquarters during the convention.

Uniform will be optional. Many will be present in civilian clothes and it will cause no embarrassment to be without uniform. It will be appropriate to wear uniform when visiting the Fleet. Either uniform or civilian clothes will be appropriate for the banquet. Dinner coats (tuxedo) not required.

It is especially important that the committee in charge of arrangements and the Secretary of the Association be informed as early as possible as to the number who will attend. To accomplish this with the least trouble to all concerned it is requested that the questionnaire furnished each member be accomplished and mailed at the earliest practicable date. It is requested that no cancellations be made after Thursday, June 7.

For further information address the Chairman of the committee in charge of arrangements, Colonel F. K. Ferguson, 641 Washington Street, New York, or the Secretary-Treasurer of the Association, 1115 17th Street, N.W., Washington, D. C.

Sabers to be Awarded

THE Executive Council of the United States Coast Artillery Association has decided to continue the policy established last year and award a saber to the Coast Artillery Reserve officer in each Corps Area who accumulates the greatest number of credit hours, by means of extension school work, during the year ending June 30, 1934. Corps Area commanders will be requested to designate the winners within their respective Corps Areas. The award of this trophy has been made possible through the generosity of a reserve officer who established an endowment fund, the proceeds from this to be used to provide suitable trophies for outstanding performance on the part of individual reserve officers. Last year the award of this trophy created a considerable amount of interest. Very little time remains before the competition closes but there is yet time for those near the top to make secure their lead.

May the best man win.

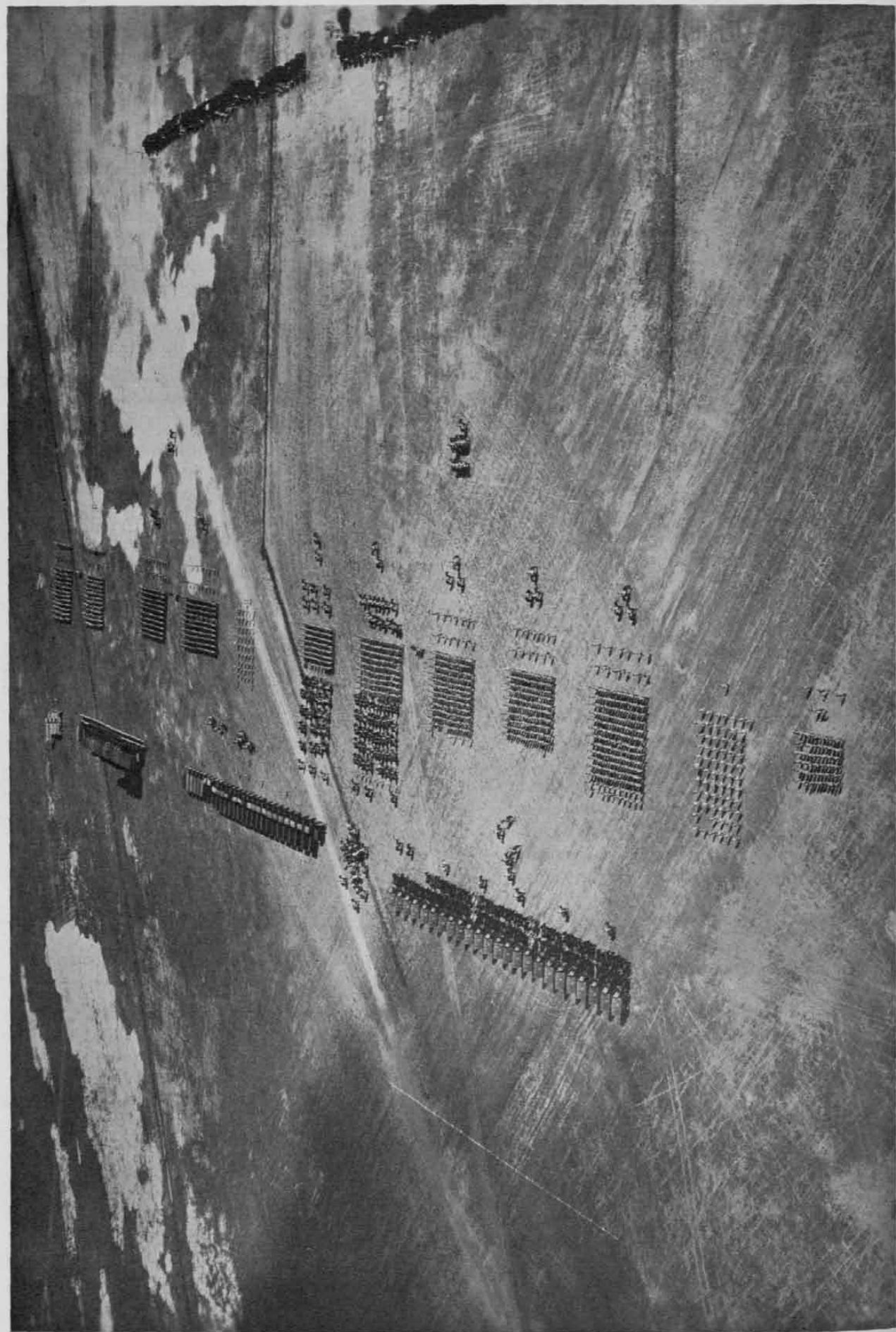
Back Copies of The Coast Artillery Journal

FROM time to time requests are received for back copies of the COAST ARTILLERY JOURNAL. We have attempted to maintain a small supply of previous issues but find that certain numbers are completely exhausted. Very frequently officers desire to dispose of old files of the JOURNAL. If any officer has on hand JOURNALS of the issues listed below and desires to dispose of these it will be appreciated if they will notify the JOURNAL office. Postage will be sent to cover transportation or reimbursement will be made upon receipt of the JOURNALS. We are especially anxious to obtain copies of the following:

All of the issues of 1929.

February, March, April, October, and December, 1930.

This is an opportunity to reduce the weight on your book shelves and at the same time assist the JOURNAL in filling orders for back numbers.



ATLANTIC SECTOR REVIEW, FRANCE FIELD, C.Z.

In line right to left: Headquarters Company, Atlantic Sector; 14th Infantry Band; 14th Infantry; 1st C. A. Band; 1st Coast Artillery; 6th Composite Group, Air Corps

Antiaircraft Defenses: Their Development During the World War

By MAJOR A. F. ENGLEHART, C.A.C.

PART I

TO what extent should antiaircraft artillery be relied upon for the defense of ground troops, cities and fortifications against hostile aircraft? A study of this question requires a review of the historical facts relating to aerial bombardment and the steps taken to combat these attacks. This history is not extensive, the first serious air raids having been made only twenty years ago.

ENGLAND

At the time of her entrance into the World War, England had given very little thought, and no preparation to the defense against hostile aircraft of her cities and ground troops. Directly raiding began by the Germans in 1915 against the cities of England, thoughts were focused on the necessary protection against these raids.

The first air raids by the Germans were made with Zeppelins. The only means of combating these raids was to use what is now termed the "pursuit" airplane. These planes took the air after receiving warning of the approach of hostile ships, but with no results. This was due to the failure of proper and timely reports, and the inability to communicate with the airplane, once it had taken the air. Country constables reported over commercial wire to the landing fields the approach and location of hostile aircraft. Such reports took considerable time, and by the time of their receipt were of little value.

Early in 1915 an observation system was devised in order to furnish information of the approach of hostile planes more rapidly and accurately. This system consisted of placing observers some thirty miles out from particularly vulnerable areas. London was provided with a double cordon. Coastal posts were established. At first, these observers reported over the commercial telephone lines, having to ring up for each report. This system clogged the telephone lines, and resulted in late and erroneous reports. Later special telephone lines were used to connect each observer direct with the sub-control posts, which in turn were connected to the main central station in the Horse Guards. This latter system allowed the central officer to be informed immediately, and accurately, of the approach and location of hostile planes. This information, in turn, was given to all aircraft fields and gun stations for their use in combating the hostile planes.

Sufficient airplanes to cover all the country could not be secured nor could they be kept in the air all the time. Through unsatisfactory results from this kind of protection came the development of antiaircraft guns to supplement the airplane defense. At first only some old 1-pounder and 2-pounder guns were available. These were

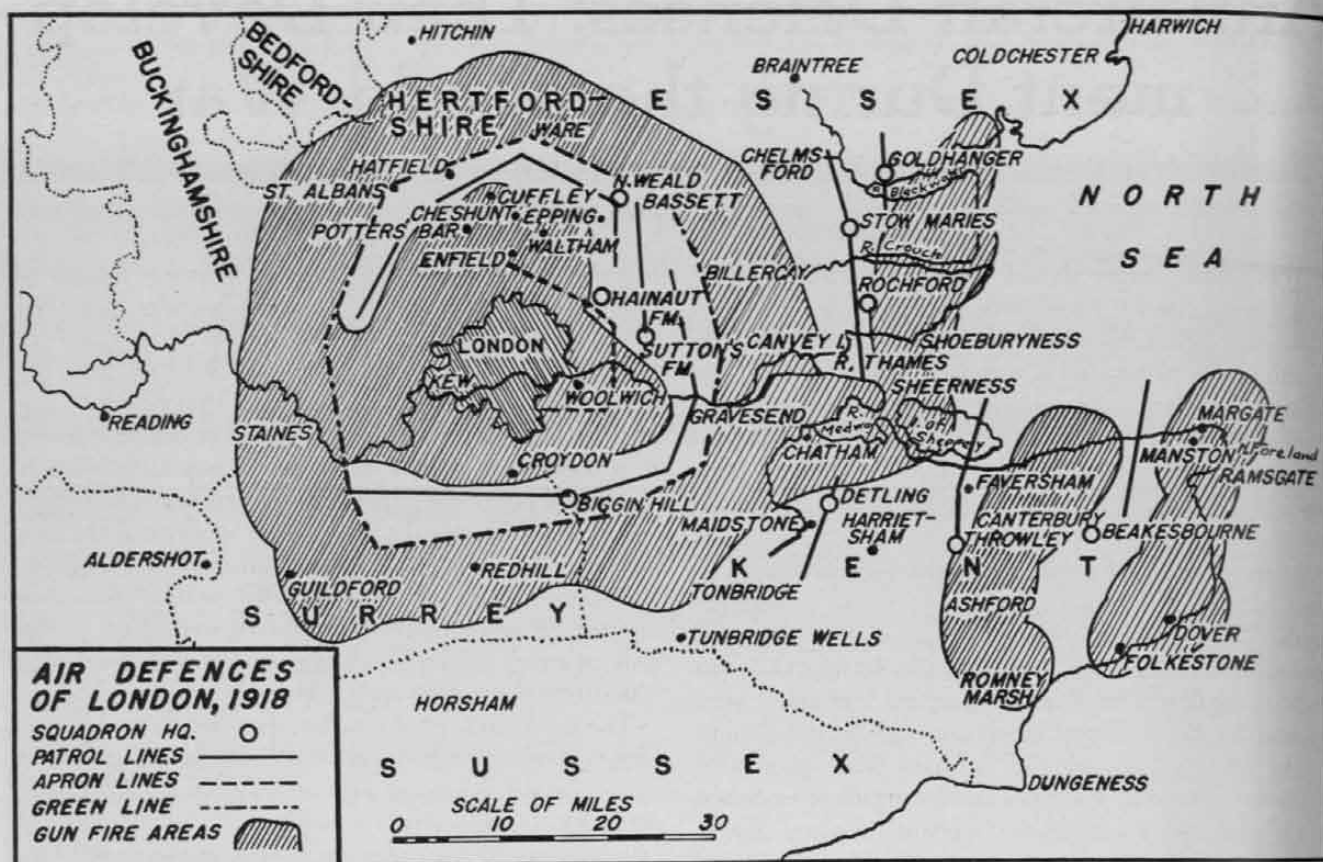
found to be useless, even against the slow-moving lighter-than-air craft. Late in 1915 some 13-pounder Horse Artillery guns were mounted on omnibus chassis, and established around London. By 1916 a better gun had been developed by relining the field 18-pounder to produce higher velocity, which increased the effective ceiling to 17,000 feet. These were placed around London in single gun positions, rather than in batteries of four guns. For example: In the London West Subcommand, there were nineteen guns emplaced in nineteen stations. Eighteen of these gun stations were within supporting distance of each other, although some were three to four miles apart. The nineteenth gun was situated about eight miles from the nearest supporting gun.

The antiaircraft guns were not expected to bring down targets, but to fire barrages, thus keeping the enemy at high altitudes, breaking up formations and making better targets for the defending airplanes. Though ammunition was ineffective and fire control undeveloped, the record made by the guns was very good. According to Captain Morris' account of the airplane raids, eleven attackers were shot down by defending airplanes and twelve were brought down by antiaircraft gunfire.

The defense system was quite successful in the daytime, but less so at night, due to the fact that defending airplanes and antiaircraft guns could not locate the target. Searchlights, for use in illumination of the airplane, or, in event of inability to pick up the airplane, for pointing the beam in the direction of the enemy, were installed. Once the hostile airplane was illuminated it became an excellent target for a friendly airplane, as the hostile aviator was blinded and could not direct his defense against an enemy that might attack him from any direction in the air or by gunfire from the ground.

Balloon barrages were employed in order to force the attacker to fly at higher altitudes when over sensitive areas. These consisted of captive balloons, rising to a height of about 10,000 feet, tied together with cables, from which hung weighted wire streamers. No evidence of an airplane striking these cables was noted, but it did cause the enemy to avoid known balloon barrages, or fly above them.

In July, 1917, it was decided to combine all the elements of the defense, both on the ground and in the air, under one commander. Under this unified command, constant improvements in the use of defending airplanes, observation and intelligence system, and antiaircraft guns and searchlights, were made. This system of intelligence and observation, antiaircraft gun and airplane areas was



started in 1917, but was not completed and placed in full operation until September, 1918. All observation stations, gun stations, searchlight stations and air fields were connected direct by telephone with the central station in London. A radio transmitter was able to communicate with airplanes in flight.

At the end of the war the London Air Defense area consisted of an outer ring of guns, approximately twenty miles from the outer limits of the city proper, thickened on the east to include the mouth of the Thames, with three belts further out: one extending to the north of the Thames, the other two south of the Thames, reaching out as far as the coast at Dover and Ramsgate. In between this ring of guns and the city was an airplane area, without guns, but with many searchlights. Then on the outer ring of the city and within the city itself was another ring of guns. A balloon barrage was placed on the natural avenue of approach from the east and northeast, just outside the limits of the city.

The principle of the defense was to furnish rapid and accurate information of the approach of a raiding force to the central command at London. The proper antiaircraft gun batteries to take the enemy under fire when within range, in order to break up the formations or drive them off, were notified. The defending airplanes took the air to meet the enemy when he had passed over the gun area and had entered the airplane area. If these defensive measures were unsuccessful in destroying or turning back the enemy, the antiaircraft guns on the outer ring of the city attempted to frustrate the enemy by fire.

This was not a hard and fast rule, as an order of 1917 prescribed:

"During such time as any hostile formation is approaching London, all guns outside the Green Line (line between the gun and airplane areas) will normally have priority of action; that is to say, while crossing all gun areas, any formation of our machines will fly to a flank, to give unrestricted action to antiaircraft guns. If, however, at any time while the hostile formation is crossing these gun areas, the patrol leader considers he has a really favorable opportunity to attack, he will do so, and the antiaircraft guns will stop firing. Inside the Green Line our machines will always have priority of action, that is to say, all antiaircraft guns will give preference to our machines, and will fire only up to that time when it becomes plain that our pilots have seen the enemy, and are in a position to attack him."

The last raid on England was made on the night 19-20 May, 1918, before this system was fully developed. Even with the system only partially developed, raiding proved too expensive for the enemy, and was discontinued.

The British Expeditionary Forces in France in 1914 did not have any antiaircraft defenses. In 1915, fifteen 13-pounder Horse Artillery guns, mounted on busses, were sent to the front, except the few kept at critical points on the lines of communication. No fire control instruments were available for these guns.

In 1916 an 18-pounder gun was rebored to three inches, giving a maximum ceiling of 19,000 feet. This gun remained the standard for the duration of the war.

At the end of 1915 there were twenty-eight English divisions at the front, and only thirteen antiaircraft sections (of two guns each). As new sections arrived in

France, they were attached to the headquarters of the Royal Flying Corps for brief preliminary training in recognition and characteristics of contemporary aircraft. By April 22, 1916, General Haig had a total of eighty anti-aircraft guns. On July 1, 1916, at the beginning of the Battle of the Somme, he had 113 guns, eighteen of which were protecting the lines of communication, eight were at General Headquarters, and eighty-seven were along the front of the four armies in the line.

In June, 1915, the anti-aircraft sections were combined into batteries of four guns each, and were placed for tactical purposes under the army artillery commander.

By 1918 the guns assigned to the army were placed in two rows, the front row consisting of two-gun stations about three miles apart covering the forward part of the area, and the second row of two or four-gun stations immediately in the rear. This defense took about 40 per cent of the anti-aircraft guns available in France. The remaining guns were employed in the protection of vulnerable points in the rear.

Planes brought down on the English fronts by anti-aircraft fire during the war, were:

- In 1914 — none.
- In 1915 — 20.
- In 1916 — about 50.
- In 1917 — 95.
- In 1918 — 176.

In 1918, the average number of rounds fired, to one enemy machine shot down, was 4,000 (only 1,800 in March, the best month, when there was a great deal of low flying)

At first searchlights were employed in the defense of General Headquarters at St. Omer only. Later, after attacks on the back areas in the vicinity of Calais, Audruicq, St. Omer, etc., it was decided to establish a lighted belt from the coast behind Nieuport to the neighborhood of Ypres. Sixteen sections, of two lights each, were concentrated in this zone. As a result of this lighted area, enemy bombers were driven up from 4,000 to more than twice that height, decidedly decreasing the effectiveness of their bombing.

Low flying planes attacked horse lines and battery positions along the front. Two sections of searchlights were placed on the Somme front to combat this, the beginning of the lighted belt at the front.

A Lewis machine gun was attached to each projector in order to protect the crew. A searchlight commander writes of this device:

"The Lewis gun had a good effect on the morale of the searchlight sections. When you are being attacked with a machine gun by an airplane in the beam, you can clearly see the bullets traveling toward you, and it is quite comforting to be able to see another stream of bullets traveling in the opposite direction."

Antiaircraft guns and searchlights were operating separately. Not until the results of the defenses of London were really appreciated in France, were they combined. Along with the combination, came an alert system, to

notify guns and searchlights of the approach of hostile airplanes. Later the friendly airplanes were included in this warning system.

The combination of an efficient observation and intelligence system, with quick alerts to friendly airplanes and anti-aircraft guns, soon brought striking results. Raids by bombers and low-flying attack airplanes on that part of the front were stopped.

FRANCE

For the air defense of Paris, the French depended almost entirely on anti-aircraft guns. By September, 1915, there were 41 fixed gun positions around Paris, each containing two 75-mm. quick-firing field guns, one 37-mm. quick-firing gun, two machine guns, and one searchlight, capable of illuminating aircraft at 10,000 yards. The outer line of posts consisted of eight positions, roughly fifteen to twenty miles distant to the north and east of the city (the points most liable to attack).

The second, third and fourth lines completely encircled the city, and were from five to fifteen miles distant. There were fifteen posts in the second line, eleven in the third, and seven in the fourth. Four 49-mm. quick firing and six machine guns were posted on high buildings to defend the most susceptible points within the city.

The guns were so arranged that any aircraft, while crossing the line of defense at any point, would be under the fire of four guns simultaneously.

There were some sixty airplanes attached to the city for its protection. Three were constantly on patrol duty over the city, while four others were ready to take off on receiving warning of an attack. Instructions to planes in the air were given by placing a large white arrow on the ground pointing in the general direction of the enemy. Airplanes were to attack the enemy even though friendly anti-aircraft guns were firing on them at the time.

The French developed an extensive intelligence and observation net that extended approximately fifty miles from Paris. There were 42 posts, each post being connected with headquarters in Paris by two independent telephone lines.

Extensive use was made of smoke screens to hide striking landmarks, such as prominent bends in the river, etc.

A balloon defense, consisting of both small single balloons and pairs of balloons in tandem, which could rise to about 4,000 meters, was also provided.

The effectiveness of the defense is borne out by the fact that on thirteen different occasions, when a total of 107 airplanes were directed against the city, not one reached its objective. There were 483 airplanes directed against Paris in 1918, with only 37 reaching their objective, thirteen of these being brought down.

The last air raid on Paris was made on September 16, 1918. The total air raid casualties throughout the war amounted to 266 killed and 603 wounded. The long-range German gun "Big Bertha," which fired into the city on 44 days between March 23 and August 9, 1918, produced very much the same results, 256 killed and 620 wounded.



Antiaircraft defenses of Paris, July, 1918

The antiaircraft guns attached to the armies in the field were of two types: semi-fixed, with limited mobility, and auto-cannon. They were used to protect the front line troops and establishments in the rear of the army. The batteries were located in the form of a T, with two batteries in front and one in rear. Searchlights were used to a limited extent. Machine guns were not employed in defense of ground troops, except for protection of searchlight and antiaircraft gun crews, and a few fixed establishments.

In 1918 the antiaircraft defense was attached to the air service, where it remained for the duration of the war.

By the end of the war the antiaircraft service of France consisted of 900 guns, 600 searchlights, 600 machine guns,

and 1,000 balloons, with a majority being employed in the protection of rear areas.

During the war, the antiaircraft artillery brought down:

In 1916 — 60 airplanes.

In 1917 — 120 airplanes.

In 1918 — 220 airplanes.

The ammunition expenditure per airplane brought down was: 11,000 shots in 1916, and 7,500 in 1918. If only motor propelled 75-mm. guns are considered, the expenditure at the end of the war falls to 3,200 shots.

GERMANY

The Germans began to consider air defense from the ground as early as 1912. By October, 1914, thirty-six special guns had been constructed for firing against air-

craft. Six of these were sent to the field armies, and the remainder were kept at home for the protection of important points, such as the Rhine bridges, airship establishments, and the works of Krupp and Ehrhardt.

As a result of the French attack on Freiburg on December 4, 1914, the industrial areas of Germany clamored for more protection against air raids. At this time all air defense was in the hands of the civil authorities in the different states. Reports of the approach of hostile airplanes had to be made through military channels, which were totally inadequate.

Early in 1915 a joint committee, composed of civilian and military members, considered the problem of air defense. Of first priority, they insisted on a proper intelligence and warning system. By the end of 1915 a double cordon of observers, approximately parallel to the Western Front, was connected by telephone to the central headquarters at Frankfort.

In October, 1916, General von Hoepfner was appointed to command the whole Military Air Service—airplanes, airships, balloons, weather bureau, antiaircraft troops at the front and the Home Air Defense.

About this time it was believed that airplanes were needed to complete the antiaircraft defense. At first six flights were assigned to the Home Defense, and were stationed in small groups to protect local points. In actual practice they flew off to engage in the general flight, leaving their point unguarded. Later these aircraft units were consolidated and directed from the central headquarters.

Searchlights in considerable number were available for Home Defense in 1917. These lights were not used to establish a searchlight barrage, but for the illumination of targets.

With the advent of airplanes gliding low to bomb their targets, balloon defenses were established around some of the most important works.

The warning system was similar to that of the English. Care was taken to limit the areas alarmed as much as possible, in order to avoid stoppage of work in places not immediately threatened. It was decided that the better the observation and intelligence system, the smaller would be the warning districts and the less disturbance created.

With the Home Defense operating, the enemy suffered heavily in all their attacks. For instance, in the course of a raid by the Independent Air Force on July 30, 1918, seven machines were lost. Again on August 21, 1918, after a raid on Frankfort and Cologne, seven machines were lost.

The effectiveness of the antiaircraft defenses at the front is established by the statement of Captain R. A. Jones, in his book *The War in the Air*:

"British airplanes by the end of 1915, suffered far more from gun fire than from enemy aircraft. Rarely did an airplane come back from a job over the lines undamaged by shell splinters, and the repair and replacements of damaged parts often kept a machine out of work for several days."

Along the Belgian coast, antiaircraft guns, with few

exceptions, were located well back from the shore line. The only antiaircraft gun battery that was found on the shore line was Battery Zeppelin (so named by the Allies). This battery was of necessity placed there in order to protect the Mole at Zeebrugge, but it could also be used for general harbor defense purposes. This Mole was the resting place for many seaplanes, and many hangars were erected thereon. Antiaircraft machine guns were located close to the battery or group of stations to which they pertained. Practically every battery above 105-mm. had at least two machine gun positions. These positions were usually on the flanks and generally symmetrically disposed.

At Heligoland, a very important harbor with its submarine base so vulnerable to attack, installations for antiaircraft defense consisted of:

- 4 88-mm Antiaircraft guns
- 6 76.2-mm Antiaircraft guns (transformed Russian guns)
- 3 52-mm Antiaircraft guns
- 8 37-mm Antiaircraft guns
- 1 105-mm Antiballoon gun.

The mission of the antiaircraft artillery was to keep the pilots high up and harrass them in their work. This had a heartening effect on the ground troops to which it gave visible protection. Incidentally, the bursts signalled the whereabouts of hostile aircraft to friendly pilots who might be near. Most important of all, from the flying personnel point of view, was the fact that good ground defenses reduced the demands made on the airplanes for protection and so released them for their more urgent primary duties.

The first line of defense was located from 2,200 to 2,300 yards behind the front. Antiaircraft guns were spaced less than 6,000 yards apart, out of barrage range and screened from balloon observation. Cross-fires were organized in order to keep an enemy airplane under constant fire. Other lines were organized in rear of the first line, extending back to include important points in the rear, such as railway stations, ammunition dumps, engineer dumps, airdromes and bridges.

The engagement of the enemy's infantry airplanes devolved upon the infantry and field artillery at the front. Each unit detailed machine guns for that specific purpose. Only in the rear areas were antiaircraft machine guns used to protect ground forces and installations.

Searchlights were used to illuminate targets for the antiaircraft guns, machine guns and friendly pursuit airplanes. This lighted belt extended well up into the division zone of action.

The following table shows the amount of antiaircraft guns in use by the Germans on October, 1918:

In Germany:	
122 sections of two guns each	244 guns
70 batteries of four guns each	280 guns
In the field:	
253 sections of two guns each	506 guns
155 guns on motor lorries	155 guns
110 batteries of four guns each	440 guns
TOTAL	1,265 guns

(Concluded in next issue.)

Automotive Maintenance for Coast Artillery Units

(Prepared under direction of the Commandant, The Coast Artillery School. *See footnote.)

OPERATION and maintenance of automotive vehicles in a Coast Artillery Regiment are of necessity interlocked. Because the operating agency must know what vehicles are in operating condition, the battery commander is charged with the first and second echelons or what is known as "Preventive Maintenance" (See Circular 1-10 OQMG, May 18, 1933).

At present, our training literature limits maintenance by the Coast Artillery to preventive maintenance within the battery, placing the responsibility upon the unit commander. As a matter of fact, both in peace and war, it has been found necessary to improvise a coordinating unit within the regiment which, at home stations, has been employed to supplement the functions of the so-called third echelon maintenance. Under the present policy of purchasing commercial type vehicles whenever possible, it is assumed that third echelon maintenance will become more a function of the regimental or post commander, and generally will be performed by Coast Artillery personnel. It is on this assumption that the following proposed outline of motor vehicle maintenance for Coast Artillery motorized organizations is written.

1ST ECHELON MAINTENANCE

First echelon maintenance is performed by the driver, working with the tools prescribed for his type of vehicle and such supplies as are necessary for the proper cleaning and lubrication of his vehicle.

Under first echelon maintenance, the driver is charged with obeying and causing obedience to all regulations bearing upon the proper operation and safety of his vehicle on the road together with any special instructions that may be issued by his unit commander. He is held responsible for the exercise of common sense and judgment in unusual situations.

In addition to the ability to drive his vehicle in a proper manner and to make emergency roadside repairs, the driver should have a knowledge of vehicle loading, approximate speeds on various roads and grades, precautions against fire and proper procedure in case of accidents. This requires that the new driver be given definite instruction and a clear and concise explanation of the functions of the various units of the vehicle. Drivers, who, after proper instruction, continue the more common practices of vehicle abuse, such as allowing the engine to labor, excessive use of the brake, turning curves too fast and continuing to drive with minor maladjustments, should be relieved.

The three outstanding faults of drivers operating alone

are overspeeding, overloading, and lack of consideration for others on the road. A driver of this type causes serious damage to the vehicle and embarrassment to the responsible officer of his organization. Drivers should be told that violations of traffic regulations will not be tolerated, and even that insistence on the strictly legal right-of-way, when causing accidents, will not be countenanced.

Unless under the immediate supervision of his superior, the driver should know that he is responsible for the distribution of the load and should see that it is properly secured and is safe for transit. He should refuse to accept a load beyond the capacity of his vehicle or one improperly loaded. Officers in loading vehicles should remember that an over-loaded truck is naturally the slowest one in a column and is the one most likely to develop trouble.

Modern trucks are capable of speeds in excess of those at which they will normally be authorized to operate. Final drive ratios in these trucks are high and the engine is necessarily running at a much higher rate than the engine of a passenger car at a like road speed. Speeding such vehicles will shorten their useful lives and will often make them a menace on the highways. Particularly dangerous is speeding on down grades. Under no conditions should a driver descend a grade with the transmission gears in neutral or with the clutch disengaged. Likewise, the engine should never be permitted to knock or labor while ascending grades. The driver must, by a timely change of gears, utilize a gradual transition of power, thus avoiding excessive strains on the mechanism.

Heavy traffic, dangerous curves and intersections call for reduced speeds. Poor roads set up stresses and strains which may go unnoticed for a time but ultimately cause trouble. Speeding over such roads should be avoided so that time may be saved in the end. Bad weather conditions and slippery roads call for reduced speeds and possibly for the use of skid chains. In a word, the driver must have his vehicle under control at all times and be prepared to meet any traffic emergency.

Except in emergency the driver should be strictly limited to such minor repairs as have been specifically authorized. Improvised repairs to enable him to return to the garage or keep in a convoy and which do not involve mechanically moving parts or mechanical, electrical or carburetor adjustments, should be authorized.

On the other hand, the cleanliness of the vehicle, the tightening of loose nuts, the replenishing of fuel, oil, water and anti-freeze, the examination of the fan belt, the care of the tires, the water level and cleanliness of the battery, draining of the air storage tank and the care of the cooling system are items that should be made the direct responsibility of the driver. Finally and most impor-

tant, the driver should be assigned to one vehicle and kept on it.

In addition, the driver should be trained to inspect his vehicle at halts and to note its performance while running. Any deficiencies noted should be reported to the motor sergeant or to the dispatcher immediately upon returning from a trip or at the first roadside halt when in convoy. When repairs or adjustments are being made by a mechanic, the driver should report as his assistant and thus obtain more detailed knowledge of his vehicle.

In organizations where a vehicle is in intermittent use, the driver can be trained in and held responsible for the lubrication of his vehicle, the employment of cold-weather expedients, the care of the battery, the cleaning of the cooling system and even the painting of the vehicle. Where the driver's time is limited, or in a motor pool, these operations should be the responsibility of a motor sergeant, truck master or a specialized mechanic and they should be coordinated by the responsible officer. In other words, when the driver is busily engaged or the organization increases in size, it is believed that this individual responsibility should be decreased and the second echelon functions of inspection, supervision and maintenance should be extended.

2ND ECHELON MAINTENANCE

In general the unit commander's responsibilities in the second echelon maintenance are the supervision and enforcement of all operation and maintenance functions, the training of personnel and the making of technical and non-technical inspections. In peace time, the unit commander may find his maintenance functions extended to include those of higher echelons, but in active operations the tendency will be to restrict second echelon repairs to a minimum.

The enlisted personnel for this echelon is prescribed in tables of organization while the tool sets, both on the vehicles and for mechanics, are prescribed in publications of the Quartermaster General's Office. The use of machine tools is not contemplated in preventive maintenance. Supplies furnished are largely of an expendable nature such as can be installed without tearing down a unit assembly. A few items such as distributors, carburetors, brake shoes and batteries should also be kept on hand for emergencies. The proper lubricants should always be kept available.

The battery motor sergeant is in direct charge of the mechanics. Normally he supervises the first echelon maintenance, makes or assists in the technical inspections, looks after the property and maintains the required records.

Battery motor mechanics are not expected to be experts but rather they should be trained to handle the common repairs and adjustments on the various vehicles and to assist in the technical inspections. They should be thoroughly trained to diagnose symptoms and to locate troubles readily so that they may be able to handle emergency repairs, replacements and adjustments on the

road. They should know how to disconnect driving axles on multi-wheel driven vehicles, how to get vehicles out of the mud and sand, and how to get a vehicle back on the road.

A schedule of maintenance should be established by the Motor Transport Officer as follows:

Daily Maintenance: These are repairs, often of an emergency nature, based upon defects reported by the driver. If the repairs needed are extensive, proper arrangements should be made to lay up the vehicle either within the organization or in a higher echelon.

Weekly Maintenance: This includes the inspection and servicing of the storage battery, and in cold weather, a check of the anti-freeze solution.

Bi-Weekly Maintenance: This includes the very important technical inspection and the repair work connected with it. In large pools, the vehicles are usually held in the garage for lubrication and inspection at the same time.

Seasonal Maintenance: This includes such items as changing oil with the season, cleaning the radiator before and after use of anti-freeze, periodic overhaul and painting of vehicles.

Finally, the unit commander should devise a system of servicing that is rapid, economical, and convenient; an accurate set-up of his record and supply functions and a thorough system of instruction for replacement personnel.

HIGHER MAINTENANCE

In the past, especially in peace time, conditions have either forced the battery repair personnel to perform repair work which properly belonged to higher echelons, or have made it necessary that improvised unit repair shops be established by the regimental organization at its home station. There follows a proposed outline of what should be incorporated in training literature and tables of organization for a motorized Coast Artillery Regiment to bridge the gap between "preventive maintenance" in the battery and the Motor Maintenance Units of the Quartermaster Corps, both under peace and war conditions.

Essentially, a motorized unit of artillery has but two functions to perform; namely: To move to a designated position and to supply effective fire. To do this it must transport itself, establish communications, supply itself and bring forward ammunition. The direction of the whole is the function of the commander and his staff. Remove the transportation and the regiment would cease to function, yet in the Coast Artillery Regiment the Commanding Officer has no single officer on his staff charged by tables of organization with the supervision of this element. In the past, thru necessity, commanders have arbitrarily designated officers for such duty, the selection usually being a lieutenant assigned to the service battery. After 16 years experience, the practice should be accepted and made part of our organization.

In the Corps there is a Motor Transport Officer with the Quartermaster Repair Units who works in close contact with G-4. It is thought that this organization should

be paralleled in the regiment by assigning a lieutenant in the service battery as the "Motor Transport Officer," and by giving him a small enlisted cadre of the best motor mechanics in the regiment, including two staff sergeants (Electrical "B"), a truck master and a clerk, possibly a dispatcher and the necessary mechanics, chauffeurs and vehicles.

When the regiment is actively engaged the Motor Transport Officer would find his time occupied by duties of the following nature:

Attending G-4 Motor Transport Conferences.

Furnishing data to S-3 for the preparation of movement tables.

Arranging and handling improvised convoy movements.

Consulting with the Provost Marshal as to police and traffic control.

Supervision or preparation of vehicles for movements.

Coördination with battalion staffs.

Trailing any movement with a regimental maintenance unit.

When the regiment is in a rest area or in a stabilized situation, his duties would become more technical. Probably at first he should make an inspection of all vehicles, deciding which could be repaired in the organization, by his cadre, or by the Corps Maintenance Battalion, or which must be replaced from a depot. With this information he would then submit his requirements for vehicles and parts to the G-4 Section and prepare an overhaul schedule. In an emergency, by pooling the available tools and parts and by stripping unserviceable vehicles and by the detail of part of each battery's mechanics, he could establish a temporary unit repair section. Otherwise, when so directed, he could coördinate the efforts of the regiment in the salvage of worn-out vehicles and in securing replacements of units, motor supplies and small parts.

In the meantime, the Regimental Commander, at all times, has pertinent information as to the motor trans-

portation situation from one technically trained source and knows the whole is being supervised by one head. No responsibility is shifted from the battery commander, but no longer is he assumed to be a technical motor expert in addition to his other professional requirements.

In garrison, unless the necessary Quartermaster personnel is available, it will generally be necessary to expand the Motor Transport Section into a third echelon shop and possibly to organize a motor transport pool. Naturally suitable buildings and tool equipment must be provided to meet these requirements. If, under the present motorization program, the unit replacement system is largely superseded by allotment of funds to the station Quartermaster for purchases of replacement parts, then all repair work which can be handled locally will be done in the regiment. Otherwise, it is thought that vehicles of major units will be sent to Corps Area fourth echelon shops when local facilities are lacking or the expense is too great to have the work done by commercial firms.

Under such an organization it is not contemplated that the regiment should take on the functions of a staff department, carry additional equipment, or limit its mobility. But in the field it must be prepared to carry on in an emergency and to push its second echelon maintenance as far as facilities permit, while in peace it is doubtful if the Quartermaster Corps will ever have the required personnel to meet all the additional third echelon requirements.

*With the present trend toward army motorization, the need for a policy governing the operation and maintenance of motor vehicles in motorized Coast Artillery regiments is becoming more and more apparent. The scheme here outlined has been evolved after careful consideration of the corresponding policies of other branches and of the views of numerous experienced officers stationed at Fort Monroe. Before recommending definite changes in the various regulations, in tables of organization and in training literature, it is felt that officers of the Coast Artillery Corps at large should be afforded opportunity for constructive comment. The Chief of Coast Artillery invites all officers of the Corps to submit such comments directly to The Commandant, The Coast Artillery School, Fort Monroe, Va. They should be submitted as soon as possible after the appearance of this article.



THE REQUIREMENTS FOR FIGHTING VEHICLES *can best be met by the formation of small units of vehicles similar in marching and fighting characteristics so that they may be marched, maneuvered, and fought as a unit.*—MAJOR RAYMOND MARSH, ORDNANCE DEPARTMENT.



Part I

THREADING its course carefully through the coral reefs, the trim coast guard cutter steamed for the entrance to a deep and almost land-locked bay, at the head of which a strip of sandy beach gave promise of a landing place for the troops on board. The coast had no indication of human habitation and its general aspect was somber and forbidding. There was no relief from the monotony of dark green forest extending in an unbroken sweep from the water's edge to the rain-lashed crests of the mountains in the interior, and even the shore line was obscured by an impenetrable tangle of mangrove trees growing half submerged in water and ooze as though the luxuriant vegetation had overcrowded the land by its own fecundity and was now forced to enter the water in search of less restricted environment.

The coast was uncharted and the interior was "Terra Incognita," for this was northeast Samar, a region which the Spaniards, during their three hundred and fifty odd years of rule, had left untouched and unvisited except by an occasional hemp trader, and which the Americans likewise had as yet neither garrisoned nor thoroughly explored. The salient features of the Island, as remembered by the white men who have campaigned on it, are the steamy heat of the days, the chill of the nightly rains, the jungle-matted swamps alternating with the steep sloped mountains, the mud everywhere, and the dank and gloomy forests infested with hostile natives and every variety of poisonous reptile, insect and plant.

After the termination of the Philippine Insurrection there was a short period of comparative peace and a civil government was established, the jurisdiction of which, however, extended merely to towns on the coast. Then "Papa Pablo," the weird "pope," organizer and leader of the mysterious movement known as Pulajanism, preached a holy war against the coast natives and the Americans, and announced the intentions of burning every town on the Island, slaughtering the inhabitants who failed to join him, and driving the Americans into

the sea. Neither the origin or the cause of this movement was ever clearly understood by the Americans, but it is certain that when "Papa Pablo" raised his crimson standard the mountain natives flocked by thousands to enlist in his fighting bands. The name "Pulajan" came from the red uniform worn by the fanatics, "pula" being the Visayan for "red," but the Pulajans called themselves "Militant Soldiers of the Church." After nearly a year of bloodshed and strife, "Papa Pablo" had almost accomplished his threats.

Under orders from the general in command, Captain Cochrane had embarked his company of Macabebe Constabulary on the cutter *Basilan* with the mission of establishing a base at San Ramon on the northeast coast, where the peaceably inclined coast people could be given protection and from which operations could be carried into the interior. Cochrane and a lieutenant were on the bridge with Westover, Commander of the *Basilan*, when the ship entered San Ramon bay.

"Where is the place? I don't see it" the Captain asked, as he scanned the shore line with his glasses. "I've never been here before," answered Westover, "and I hope I shall never have to return. One trip along this coast is enough for me, with no chart to go by and a saw-toothed reef poking out of the water every ship's length. Your town is supposed to be on the north shore near the head of the bay; at least that's what the *patron*

Marooned two months in the jungles of Samar, surrounded by hordes of fanatic Pulajantes, Captain Cochrane's company of Macabebe Constabulary battles with starvation.

of that Spanish boat at Lauang said. Maybe the Pulajans have burnt it."

Cochrane turned the glasses in the direction indicated. "I believe you're right," he said presently, handing the glasses to Westover. "Look just to the left of the strip of beach over the top of the long grass and you can see blackened timbers."

The cutter moved slowly ahead, almost without making a sound, through water the color of emerald. When a projecting cape of mangroves was rounded and the site where San Ramon had stood came fully into view, it was apparent that the village had long since been burned and abandoned.

As soon as the *Basilan* dropped anchor, a boat was lowered and the Constabulary officers took a platoon and went ashore to reconnoiter. Westover wished to accompany the party, but after Cochrane had suggested that the ship's one-pounders and gatlings be trained on the shore, either to cover the landing or to protect the withdrawal in case of attack, he decided to remain on board. Leaning over the railing of the bridge, he watched the whaleboat, as rowed by six sturdy Tagalog seamen, it moved swiftly towards the beach.

Not a sound came from the land except the lapping and gurgling of the water, washing about the roots of the mangroves. Mountain and shore seemed deserted, yet Westover had the feeling that every movement of the new-comers was being watched. Three squads leaped ashore when the boat touched the beach and, each moving in a different direction, disappeared in the long grass. Cochrane followed the center squad with the rest of the party, except two soldiers who remained with the sailors at the boat.

Presently the stillness was broken by a single shot followed by several others in rapid succession. The unwanted noise disturbed from their feeding place among some trees near the shore a flock of large birds with enormous red bills, and they flapped up giving raucous cries of anger and remonstrance.

The firing lasted but a few moments. After it had

ceased a deep bellowing note, too prolonged and sonorous to be of any but human origin, came from the mountain side above the burnt village. This sound was repeated from a promontory across the bay, again from a hill farther in the distance, and yet again from a crest far in

the interior. There was something about it which made Westover feel as though an icy hand had touched the back of his neck. He called to one of Cochrane's noncommissioned officers, who was standing on the lower deck, and asked him what the sound was. "That, *senor capitan*," answered the Macabebe sergeant, coming smartly to attention and saluting, "is a *boudjon*, the war horn of the Pulajans. *Capitan* Cochrane has heard it many times and he will tell you that with it they can send messages from hill-top to hilltop entirely across the Island. But see, we shall have news from on shore now, for they are signalling to us."

The message wig-wagged to the cutter was sent by Cochrane to inform Westover that the village was burned and abandoned, a nearby Pulajan outpost had been driven away, and that he would return on board before dusk. In about

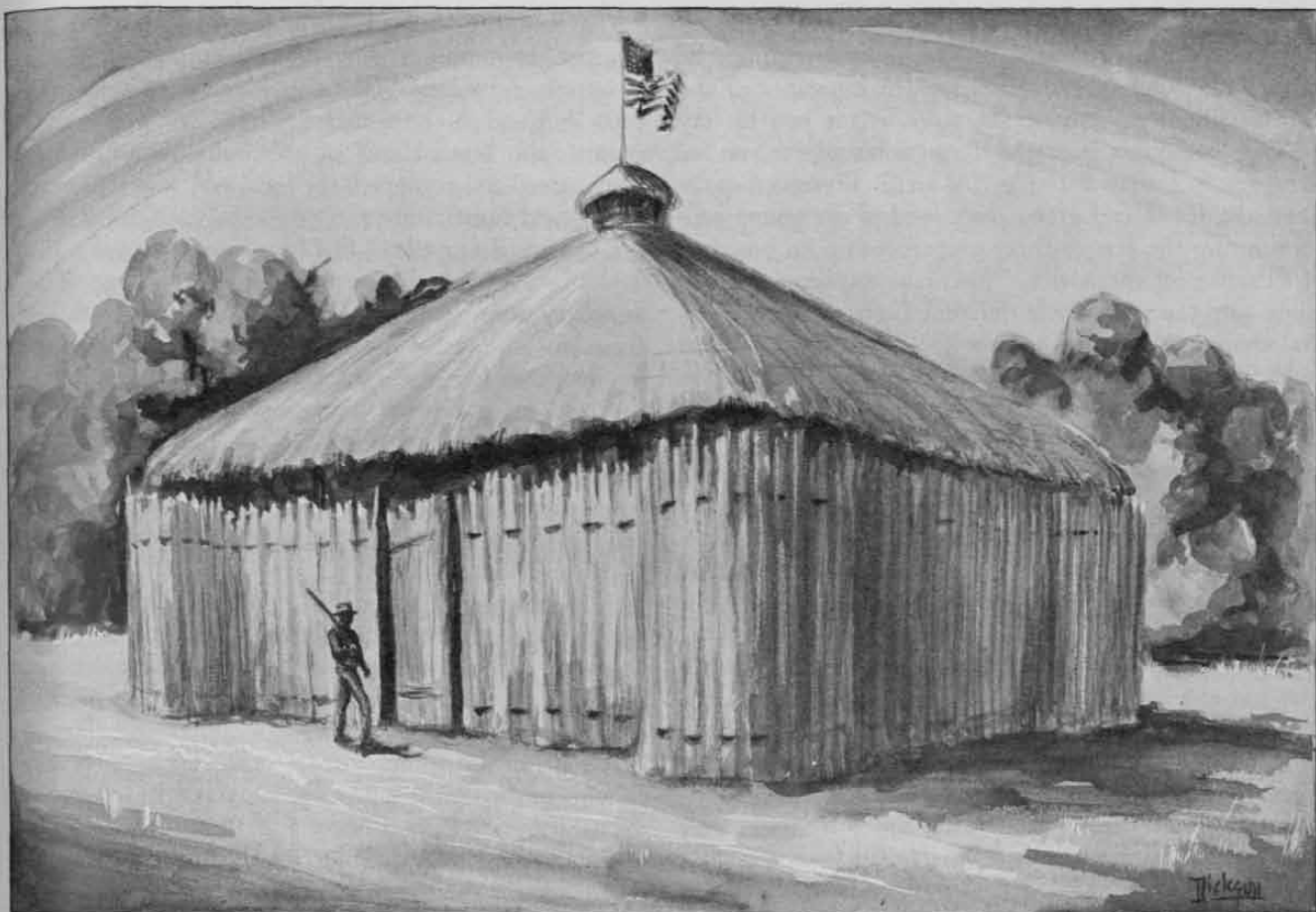
an hour he returned with his party. If he did not like the situation his face gave no indication of his feelings, for it was as serenely impassive as usual.

One of the Macabebes carried some murderous looking bolos, crescent shaped and over two feet in length. Westover took one from the man to examine it. It was heavily weighted towards the point, with an edge like a razor, and the handle had no guard but consisted merely of a round knob of caribao horn, thickly inlaid with silver. Another soldier brought two bloodstained tunics made of red cloth and ornamented on the breast and back with large white crosses.

Cochrane accepted the drink proffered by the well trained mess boy, but postponed giving an account of what had happened, saying that he wished to take advantage of the last opportunity to dress for dinner. He appeared later in spotless white and during the evening meal refused positively to "talk shop," as he expressed it,



He spent the rest of the afternoon in the sentry box on the roof



The edifice had a bizarre and yet formidable appearance

with anyone. Finally, when the table had been cleared and the mess boys withdrew after setting out whiskey, ginger ale, and a box of Manila cigars, he was induced to give his views upon the situation.

"What I have to say," he announced, "can be said in a few words. The Pulajans attacked San Ramon, chopped up all the people who didn't get away, looted the stores of the traders, then burned the place—this at least three months ago. My men jumped a small party of them this afternoon at a spring near the village. We killed two men; the others escaped, some of them wounded. Altogether there were not over a dozen of them. From the papers found on the dead men, I gather that they belonged to Cinicio Lasara's band, which incidentally is one of the best fighting outfits Papa Pablo has. I know about Cinicio for I had the pleasure of meeting him in a big fight over on the Gandara river last year." Cochrane lit one of the cigars and leaned back in his seat as though he had finished speaking.

"They seem to have this coast pretty well occupied, judging by the *boudjons*," Westover said. Cochrane leaned forward. "Yes," he answered, "I can explain the presence of fighting bands on this desolate and thinly populated coast only by the assumption that Maslog, their so-called impregnable stronghold and general headquarters, where Papa Pablo is supposed to hang out, is

somewhere in this region, perhaps just back of these mountains."

"Is that the place every officer on the Island, Regulars, Scouts and Constabulary included, has been trying to locate for so long?" asked one of the ship's officers.

Hazzard, the Lieutenant, replied: "Yes, and probably praying to God that he wouldn't find it."

All laughed. There was an element of truth in this remark, for the campaign against the Pulajans involved every form of hardship and danger and was without the usual incentive of credit or glory to be won.

Leaving the junior officers to continue the conversation, Westover rose, and taking the Constabulary captain by the arm, led him into the tiny compartment reserved for the commanding officer of the ship. "I want to know what you intend to do, Cochrane," he said. "My orders are to drop your company here and return to Catbalogan. I was told, however, that there was a fair sized town with plenty of fishing boats so you would at least have means of communication by sea with other stations. You have seen now that there is nothing here except a hundred, five hundred, maybe five thousand Pulajans, and the nearest military force is the Scout company at Lanang, distant two days by ship and probably two weeks march overland. If you disembark here you cut yourself off from support, and if your whole company doesn't get chopped

to pieces it will be a miracle."

Westover paused, but as Cochrane said nothing, he continued: "Our orders were given in ignorance of the true situation; my advice, therefore, is for you to stay right on board this ship, and if you don't take it you are a bigger fool than I think you are." Westover spoke earnestly, for he had grown very fond of the young captain during the few days of companionship on board.

"Thanks for the advice," Cochrane answered. "I am quite sure the situation is different from what the General thought it was. Nevertheless, I shall occupy and hold San Ramon, or rather, the place where it stood, in compliance with my orders. Undoubtedly some of the villagers who escaped are hiding in the jungle and will come in; anyway there will be good hunting, for I think the Pulajans are fairly numerous in this region. We may find Maslog and capture it, too."

"Or more likely get taken in yourselves;" Westover growled, "however, have your own way, man, have your own way."

"I'll send a report of the situation to headquarters by you and also a requisition for supplies, if you will do me the favor to take them," Cochrane continued, "We have rations for only ten days, which I can stretch out to last twenty, so please stress the importance of getting something to eat over to us within that time. You see, they expected me to get rice from the hemp traders in San Ramon and I stumbled over some skulls in the grass, which probably are those of said traders. Let's have a drink now and turn in for I want to get an early start tomorrow."

By daybreak the next morning the disembarkation was well under way. The company travelled with a surprisingly small amount of baggage, a few cases of extra ammunition, some rice kettles, a water can, two tin buckets and an axe, pick, and shovel comprising about all of it. The rations consisted merely of rice, coffee, sugar,

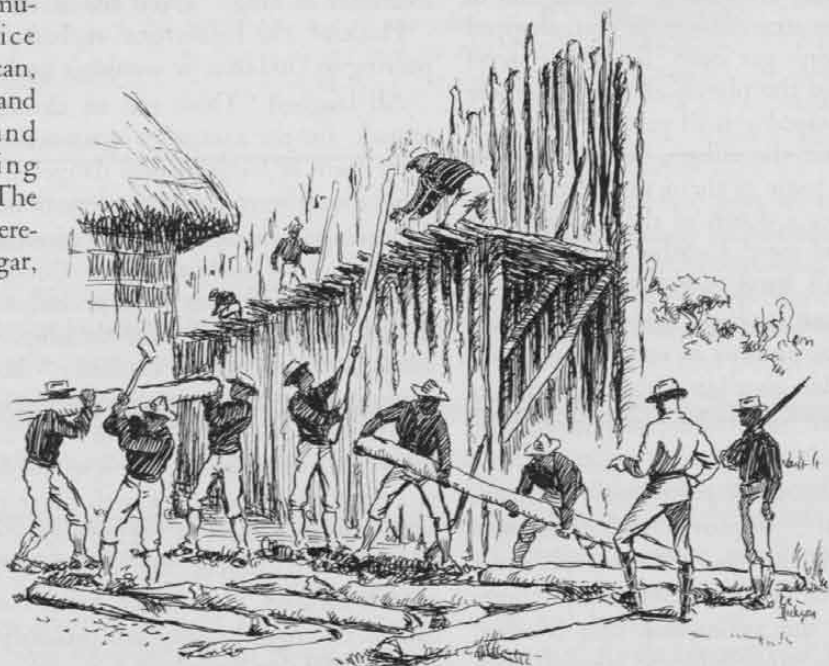
salt, and canned meat. Each soldier, in addition to rifle, bayonet, ammunition belt and canteen, carried a small haversack and a light blanket in which were wrapped an extra shirt and pair of trousers. A bolo, captured from the enemy, also formed part of the individual armament. Thus armed and equipped, the men were prepared to stay in the field indefinitely.

Cochrane deployed the first boat-load of men in a semicircle about what had been the plaza of the village. Then, as others were disembarked, he set them to work with their knives, cutting down the grass that had grown to ten or fifteen feet in height since the village was burned, the feathery fronds of which would form an excellent thatch for the temporary shelters to be erected as soon as the clearing was well in progress. When the disembarkation was completed the *Basilan* heaved anchor and got under way, Westover waving a farewell from the bridge as the vessel steamed out.

A less practical person than the captain might have found food for morbid thought at the severing of this last link with civilization, but there was no time for sentiment even had he been so minded, for there was an immense amount of work to be done.

He planned to construct a stockaded *cuartel* large enough to shelter the entire company and strong enough to enable him to leave it under a small guard while on expeditions in the interior. His first thought, however, was to provide for the immediate shelter and security of the company. He realized that the camp would be watched constantly and that safety lay only in unremitting vigilance at all hours of the day and night, therefore he established the most rigid guard routine.

Three sentry squads were posted at the outskirts of the village, two squads were held at the bivouac as a support, another squad was detailed to accompany men leaving the perimeter for any purpose, and the men engaged in clearing the field of fire and putting up the grass shelters were required to work with arms at hand. Even the kitchen police were prohibited from going for water to the spring at the edge of the jungle without an escort of one squad. A lookout station for both sea and land was also established in the top of a tall tree that stood near the landing place.



The men would have worked until night without murmuring

The situation was peculiar in that ordinary measures for security were inapplicable. Small patrols could not be sent out because every advantage lay with the Pulajans hiding in the jungle, and the killing of two or three soldiers and capture of their arms would constitute a victory for them, while to Cochrane it would mean a loss which could not be replaced. What he had to anticipate was a sudden rush from the jungle of hundreds of fanatics who believing that the *anting-antings* and other charms which they wore, blessed by their priests, made them invulnerable in battle, knew solely the desire to close in upon the soldiers and exterminate them with their heavy *bolos*. Such an onslaught could be stopped in the few yards of cleared space available, if at all, only by steady compact volleys delivered by men standing shoulder to shoulder and in readiness to present a wall of bayonets to those who survived the bullets. It was clear, therefore, that the men must be kept together. A few coils of barbed wire would have been invaluable for protection of the camp, but as they were not on hand, it was useless to long for them.

The temperature during the day was like that of a hot-house, but the work continued without flagging. Cochrane utilized the spurs of competition, personal example and other expedients familiar to those experienced in handling men with such good results that, without their suspecting it, the Macabebes were kept going throughout the day at almost a frantic pace. Before evening snug and comfortable shelters had been built in a semicircle around the tree at the landing place, a rain-proof kitchen and a store room had been constructed nearby, and protection had been established for the night posts of two sentry squads. In addition, a field of fire over a hundred yards in width had been cleared and the entire space enclosed by improvised *chevaux de frise* made of tough stakes tightly bound together with *bejuco*, and anchored. This obstacle was intended merely to delay the rush of the Pulajans the few seconds that would be needed to get the company into action. The jungle growth had been cut for a few yards outside the obstacle and left as it had fallen. Cochrane had observed that the Pulajans could advance almost noiselessly through standing underbrush, but that except during a heavy rain it was impossible for them to move over vegetation which had been cut without disclosing their presence. As an added precaution some empty cans found in the ruins of the traders' houses were suspended from vines stretched along the edge of the jungle.

Every house in the village had been burnt to the ground, but the uprights and framing of hard wood had not been destroyed. In a spirit of wanton destruction, however, the Pulajans had built fires around the uprights at the base, in order to burn them through, and this spared the soldiers much work, for Cochrane had the timbers collected as the clearing progressed for use in building the stockade to be started on the morrow. Hazard had marked out the trench for the stockade, and in

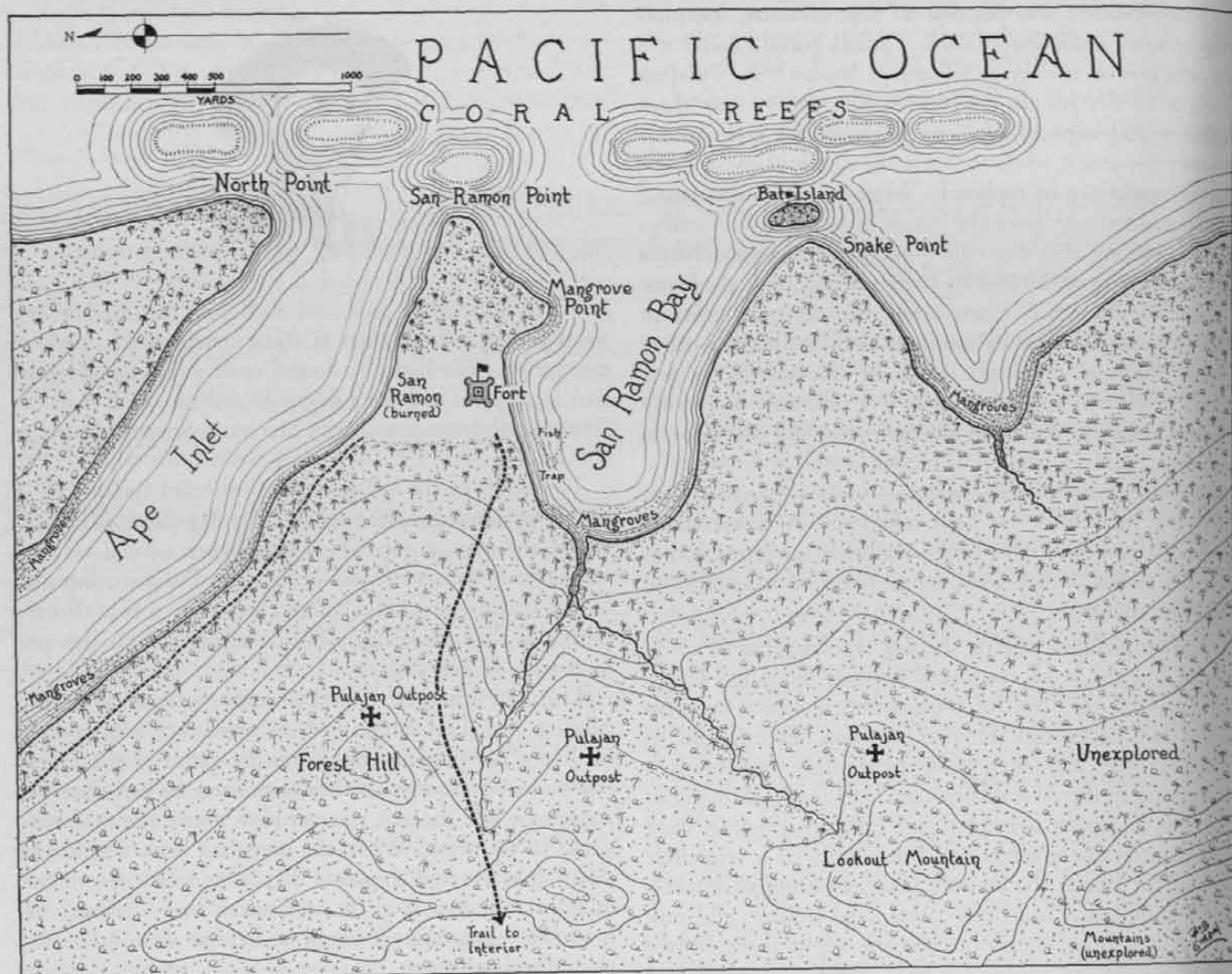


order to utilize the pick and shovel to the greatest advantage had left six men as three reliefs at the work of excavation. He had also found time to select a slender and lofty palm tree for a flag pole and to install it in the center of the camp with the Stars and Stripes hoisted at the peak.

The skulls of the villagers were collected and placed in a neat pyramid near the foot of the flag pole with those of the children on top. The Macabebes needed no such souvenirs to inflame them against the Pulajans, but this object lesson constantly before their eyes was a salutary reminder that there must be no negligence in the performance of guard duty.

The men would have worked until night without murmuring, but the Captain had unconsciously acquired the faculty of keeping his finger on the pulse of the organization so, observing that they were tired, he had the recall sounded while the sun was yet high above the mountain peaks to the west. When the men had been assigned to sleeping places and the posts they were to occupy in case of alarm, the first sergeant announced that "retreat" followed by "inspection" would be held at six o'clock, and then dismissed them.

It was Cochrane's theory that native troops on service in the field, being in a natural environment, are more inclined than white troops to forget or ignore the principles instilled on the training ground, without which combination of effort is impossible. It was his practice, therefore, to tighten rather than relax the bonds of discipline under the hardships and dangers of actual campaign. With white troops his methods might not have been successful, but it was doubtless due to them that in several years of active service the company had never retreated from an engagement, never abandoned a dead or wounded man and never lost a gun. At the retreat formation the Captain himself read and explained the orders for the security of the station, among which was the important provision that each man should keep his rifle, bayonet and ammunition within reach at all times. The ceremony was concluded by the sounding of "to the colors" by the field music of the company. The sun dipped below the horizon as the flag fluttered down. Night fell before the meager supper had been finished. With the darkness came a deluge of chilling rain, but the men were dry and warm under the thatched shelters and even the sentinels were comfortably protected from the downpour by rain capes plaited from leaves of the palm. At nine o'clock the liquid notes of "taps," rising



Sketch of San Ramon and Vicinity (from memory)

above the souging of the monsoon and swish of the rain, floated out over mountain and shore to proclaim the end of the day and that all was well with the little garrison at San Ramon.

The night passed without incident. The next and several succeeding days were occupied from dawn until dusk in the construction of the fort. A trench of rectangular trace, with salients at each corner, was dug near the beach opposite the center of what had been the village plaza. The hardwood uprights from the burnt dwellings were placed on end, side by side in the trench, with a third piece opposite the interval between each two, thus rendering the interior bullet-proof. The trench was then filled in and the earth tamped. The stockade was strengthened by cross pieces securely lashed to the inner wall with *bejuco* at a height of ten feet above the ground, and a flooring of split bamboo was laid at the same height over the entire enclosed space. A steep pyramidal roof, well thatched with leaves of nipa palm, covered the whole structure including the bastions at the corners. At the peak of the roof a circular sentry box extended around the flag pole which projected through the center. The building had no sides except on the face to seaward, from

which direction the monsoon blew continually. A single gate gave access to the ground floor from which a wide bamboo ladder led to the second floor. This gate was the invention of Hazzard and he was rather proud of it. Made of heavy logs, it must have weighed half a ton, but it was balanced on a vertical axis and could be opened by a push, while on the other hand it could be latched securely by a heavy bar which could not be reached from the outside. The hardwood uprights which formed the stockade were impervious to such cutting tools as were at hand, so the problem of making a double tier of loopholes was a difficult one. It was cleverly solved, however, by the company artificer, who made blow pipes of bamboo and burnt out the holes with the pick head and some worn out bolos, heated until they were red.

It was not deemed probable that fresh water could be found so close to the shore, but a well was started, nevertheless, and at a depth of a few feet water was found, which although slightly brackish, would do for cooking rice and, at a pinch, could be used for drinking. At the end of the first week the heavy work was done, and there remained only the finishing touches to be added. The edifice had a bizarre and yet a formidable appearance.

but it fulfilled thoroughly the dual purpose of shelter from the elements and protection from the enemy. However, it had one serious defect; this was the vulnerability of the palm leaf roof to fire, a weapon with which the Pulajans were very familiar. The Captain did not rest until he had found the unique solution of rearranging the lashings which held the four sections of the roof in place so that by cutting only one *bejuco*, the particular section secured by it would slide down and fall outside, presumably on the heads of the assailants.

A less serious, yet at the same time important question, was that of a name for the fort. As Cochrane's male relatives had all fought on the side of the Confederacy under Forrest, he was disposed to name the stronghold after that noted leader. On the other hand, Hazzard's male parent had marched with Sherman to the sea and he asserted with considerable reason that for an outpost such as this, which was upholding the sovereignty of the United States on its farthest frontier, a name of less partisan nature would be more appropriate. The work was therefore called "Fort Defiance," with the understanding, however, that a conspicuous height near the head of the bay should be called Forrest Hill, and a higher peak between the bay and the inlet to the north should be known as Lookout Mountain.

It was a day of general rejoicing when the flag was hoisted on the Fort for the first time and the bivouac was abandoned for the relatively comfortable new quarters.

Guard duty then became far less arduous, as a single sentinel in the sentry box on the roof sufficed during daylight hours, and a double post in each of two diagonally opposite bastions provided ample security at night. Two squads armed with riot guns were assigned sleeping quarters and combat stations on the upper floors of three of the four bastions, their mission being to deliver a flanking fire along the outer face of the stockade. The bastion nearest the sea was reserved by the two officers as their own quarters. The ground floor, utilized as a kitchen, store room, work shop, guard room and place-at-arms, was assigned for defense to the platoon on guard and a squad consisting of the mess and quartermaster sergeants, cooks and kitchen police, Cochrane very properly appreciating the advantages for night fighting of the grazing fire and better visibility afforded by the lower tier of loop holes. The men slept practically at their stations, so after

"call to arms" had been sounded a few times in order to habituate each man to taking his post quickly and without confusion, the entire company could be formed in readiness to fight within a few seconds at any time.

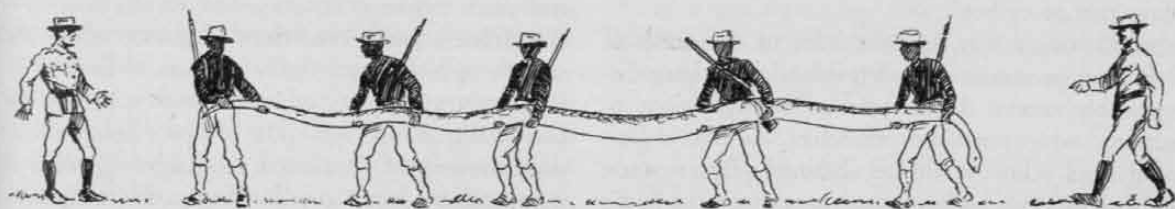
As the fort approached completion, the officers began to formulate plans for exploration of the adjacent coast and the interior. No Pulajans had been seen, but their constant presence in the vicinity was indicated by fresh tracks in the jungle near by, and the fact that the *bondjans* never failed to give warning from every hilltop whenever unusually large work or foraging parties left the clearing. Additional rations were necessary before an extended reconnaissance of the country could be made. The twenty day period

drew rapidly to a close and yet no steamer came. Almost from the first day the scanty supplies had been eked out by such few articles of food as the jungle afforded.

A large fish trap, built with much effort near the head of the bay where the water was shallow, brought only sparse results, the catches as a rule consisting mainly of jelly fish and octopi. The latter were boiled and eaten with avidity, but even hungry native soldiers were unable to find nourishment in the jelly fish. Singularly enough on one morning an eight foot shark was found in the trap and its capture excited no little excitement and amusement, for in its struggles to escape when the men arrived, it broke down the trap and also the platform on which they were standing, and they fell in the water on top of the powerful fish.

The inhabitants of the village had been hemp gatherers and fishermen, consequently but few food products had been raised in the vicinity and everything edible to be found in the small patches under cultivation had long since been gathered by the Pulajans. There was a limited supply of cocoanuts, and the forest yielded to the expert seeker such articles of food as palm cabbage, bamboo shoots, *obud*, a nut-like substance found in the heart of a small palm, *gabi*, a root similar to that growing in the Hawaiian Islands from which *poi* is made, and *palawan*, a root as large as a man's thigh which when cooked, as Hazzard remarked, looked and tasted like issue soap.

As the days lengthened into weeks and still no boat arrived, it became necessary to search farther and farther afield to find sufficient nourishment to keep alive the hundred and forty-six human organisms for whose welfare the Captain was responsible. Salt was made by



Every foot of it good meat except the head

evaporating sea water in one of the rice kettles, and a substitute for sugar was found occasionally in the form of honey stored in the dead and dried out trunks of bamboo trees.

The men suffered most of all from the lack of tobacco. The cigarette and cigar stumps carelessly tossed aside during the first few days following the disembarkation were eagerly searched for afterwards and used as stakes in the endless games of *panguingue* with which the men whiled away the pangs of starvation. *Papaya* leaves, dried and rolled into cigarettes, were used as a wretched substitute for tobacco until the few trees to be found in the environs were stripped of their foliage.

The two officers alternated in the dangerous expedient of creeping out after midnight with two or three of the best hunters to spend the long hours until daylight perched in the branches of a tree in the hope of shooting a wild pig, but not often were their efforts rewarded with success. Hazzard said his teeth chattered so from the cold that the noise frightened the pigs away from their feeding grounds.

From lack of use the few trails leading along the coast and into the interior had become choked with a dense growth in which vines covered with long sickle-shaped thorns intermingled with spiky grass, the serrated leaves of which cut like knives. It was a question whether the mountains or the swamps were more difficult of passage. There was mud everywhere—even on the sides of the steepest mountains—and in the mangrove swamps it was waist deep. On one occasion Hazzard attempted to cross a swamp and after wading for several hours in mud and water up to his shoulders, was driven by the incoming tide to a refuge in the tree tops where he spent the night, being “gnawn to the bone,” as he facetiously asserted, by millions of mosquitos.

An expedition led by Cochrane in the same direction was more successful, for after skirting the swamp he found higher ground and a stretch of forest peopled by large gray apes. He shot several of these and brought them back to the fort, to the delight of the Macabebes, who built fires on the beach and roasted them whole. The “corpses” bore a striking resemblance to those of human beings as they were laid on the coals. Hazzard remarked that the scene made him think of descriptions he had read when a boy, of cannibals preparing a feast of “long pig,” which is the South Sea Island term for roast missionary. This was a feast day for the officers as well, as Cochrane had also shot one of the red billed birds, which was found to be deliciously tender with a flavour resembling that of turkey.

Another discovery was that the inlet to the north of the San Ramon peninsula extended inland for a long distance, probably several day's march. The operations of the company were restricted, therefore, to the region south of it until a boat could be obtained. By common consent this important body of water was given the name of Ape Inlet, and it was duly entered as such on the sketch of the locality under preparation.

Jungle and forest were infested with leeches, and these creatures fastened themselves upon the men by hundreds, sucking the blood they could but illy spare and hanging on until each loathsome thing was distended to the size of a little finger. The wounds made by the leeches continued to bleed after they dropped off and often developed into tropical ulcers.

So far not a native had been seen. Although it was doubtful if any of the villagers could read, proclamations in both Spanish and Visayan, inviting the people to return and rebuild their homes under the protection of the troops, had been posted conspicuously on trees at the intersections of trails, but there had been no response to the invitation. This fact led to the conclusion that the Pulajans, in the pursuance of a well organized plan of supply, had driven the coast natives into the interior in order to use them to plant crops and carry burdens for the fighting bands. Such being the case, accomplishments of the mission at San Ramon would involve an expedition of several days duration beyond the mountains to the west for the purpose both of seeking the Pulajan stronghold and of rescuing the people of the coast. The Captain of course was reluctant to make such an attempt before the arrival of the long overdue boat bringing rations. There was every reason to expect the boat's coming, and as day after day passed without even an indication of smoke on the horizon to seaward the delay became more and more puzzling. The situation was inexplicable and under the circumstances there was justification for abandoning the station and trying to win through to the military post at Lauang, but Cochrane did not give this idea a moment's consideration.

The loyalty and abnegation of the Macabebes was splendid. During week after week of gradual starvation their cheerfulness and prompt obedience to orders remained unimpaired. As for their devotion to Cochrane, never was a choice delicacy such as a fish, a bird, a yam, or a morsel of dried meat obtained by any soldier that he did not proffer it at once to *Sa Capitan*.

The Macabebes are natural musicians and the company possessed an orchestra of many pieces; the instruments varying from a banjo made by attaching a hardwood neck to the half of a cocoanut shell, to wind instruments of several notes ingeniously constructed of different sized joints of bamboo. A concert was given nightly and the music helped materially to deaden the craving for food and tobacco, which otherwise would have been at its worst during the evening hours.

Cochrane had commanded these native troops for several years, yet he never ceased to wonder at their constant cheerfulness under conditions of service severe enough to sap the spirits of any body of men. His was a general service company, sent wherever there was fighting in any part of the archipelago. The prospect before the men was therefore one of continued campaigning, with death in many painful forms ever lurking in the foreground. Discipline was strict if not harsh, the pay was small, the clothing and equipment inferior, and the food poor even

under ordinary circumstances; yet they not only reenlisted in the company when their terms of service expired, but there was a waiting list of friends and relatives at Macabebe in readiness to fill vacancies caused by death or disease. They were ever ready to follow, or to procede the white officers into any danger, blindly and without question, so long as they realized the officer was there to guide and direct them. In their devotion and eagerness to please, they resembled a pack of well-trained hunting dogs.

The first sergeant, who had served in the Spanish army and was himself an excellent patrol leader and scout, asked permission several times to take a few men and surprise one of the various Pulajan outposts known to be in the vicinity; but Cochrane was unwilling to risk the loss of men and arms or to burden the command with prisoners before the receipt of rations would enable him to make the projected expedition in search of Maslog. His plan was to hold out if possible until the steamer came, then to surprise one of the outposts, and with the guides thus obtained, to make a dash for the main stronghold before the alarm could be given. He had no illusion as to the difficulties of such an undertaking, but he assumed that his prolonged inactivity would have induced the enemy to become careless, and in any case no other practicable course was presented.

The fish trap gave poor results and it was also the cause of an almost fatal injury to one of the best men of the company. The poor fellow was in water up to his waist trying to see what was in the trap when he was bitten on the leg by a fish so poisonous that he fainted outright from the pain. Within an hour the leg swelled until it was as large as a barrel and the man was in convulsions. Nothing could be done to help him and it was thought that he would die, but after several days of intense suffering he began to recover; several weeks passed however before he was again fit for duty.

This incident, added to the failure of the trap to provide fish in any but negligible quantities, led to a systematic search of the coastline for some kind of embarkation that could be used for fishing off the shore.

There had been plenty of boats in the village before its destruction and it was hoped that the Pulajans had concealed one for their own use somewhere in the vicinity. To the great joy of everyone Hazzard stumbled accidentally upon an immense banca concealed in a mangrove swamp and half filled with mud. This boat had been dug out of the trunk of a giant tree and the combined effort of half the men in the company was required to dislodge it from its bed. Two large holes had been burned in the bottom but the artificer plugged them with pieces of a cork-like wood of the variety used by the natives for making paddles, and stopped all apertures with the dried fiber of the wild hemp plant, held in place by an adhesive gum found in the forest. The stability of the boat was improved by attaching outriggers of bamboo to each side. Several paddles had been found among the driftwood on the beach, so the queer looking craft, offi-



Samar

cially christened the *Ark*, was soon in readiness for use. Cochrane regretted that he had left at Catbalogan a brass swivel gun captured in a preceding campaign against insurgents on the Island of Leyte, which would have been an ideal piece of ordnance for installation in the bow of the *Ark*.

Fishing tackle was improvised by plaiting lines with hemp fiber and carving out hooks from bits of shell, bullets being utilized as sinkers. A number of small fish taken from the trap having been cut up for bait, the boat put to sea on the afternoon of the day following its discovery, with Hazzard and fifteen Macabebes on board, the destination being a reef near the entrance to the bay where it was thought there would be good fishing. A great deal depended upon the success of the new venture so the boat was watched by anxious eyes as it left the beach and moved from the bay, the paddles dipping in unison and apparently everything going well on board. When it had disappeared beyond the mangrove cape, the hungry soldiers sat down to await its return, meanwhile licking their lips in anticipation of a supper of broiled fish with perhaps enough for each to eat his fill.

Ranks had just been broken after the evening ceremony of retreat, when the sentry on the roof called down that the boat was returning, and there was a chorus of joyful ejaculations when it was observed that the returning fishermen were waving their hats and the boat lay heavily in water as though well loaded. A hundred eager hands laid hold of the *Ark* when its bow touched the shore and drew it up on the beach.

"You must have had good luck," Cochrane said, as Hazzard, with a grin on his face, strode up and shook hands with him.

"So we did, but not the kind you expect," answered the Lieutenant. "Come and see what we've got."

Stepping to the side of the boat, the Captain looked down and saw, half filling it from bow to stern, not piles of gleaming fish as he had hoped, but a reddish coloured furry-looking mass that quivered in places, and from which came a smothered intermingling of snarls and squeaks.

"What in the devil have you got here, Hazzard," he asked, as soon as his astonishment would permit him to speak. A grinning soldier gave the answer by detaching an object from the mass and holding it up before Cochrane's eyes. It was an immense bat, nearly a yard from tip to tip, covered with reddish brown fur, and with a head resembling that of a small dog. Cochrane was aghast at its hideousness. "You are a hell of a fisherman," he said, with rather a forced laugh, "I send you after fish and you bring a boat load of bats."

Noticing the disappointment the Captain was unable to conceal, Hazzard spoke quickly: "But they are good to eat, at least the men say so. They say that if you skin them and wash them in vinegar they are as good as chicken."

Cochrane's chagrin vanished when he witnessed the men's happiness at the sight of the repulsive creatures. Dozens of willing assistants helped the cooks to skin and dress them, and at supper that night the accumulated hunger of weeks was satiated with broiled bat's breast topped off by a nutritious, if not savoury, stew of bat meat and *palawan*. There was no vinegar with which to take away the rank odour and taste of the meat, but it was edible and nourishing; consequently it was a God-send to the famished men.

During supper Hazzard related between mouthfuls that while his party was en route to the reef they passed an island covered with small trees, to the branches of which thousands of bats were hanging, and that yielding to the solicitations of the men who declared the bats to be excellent eating, he authorized the landing, with the result that a boat load of the animals was obtained within a short time simply by knocking them down with poles.

That night the two officers conferred at length upon the situation. It was now nearly two months since the *Basilan* had steamed away leaving them marooned on the inhospitable shore, as isolated from their kind as they would have been on a desert island in the midst of the Pacific. Cochrane had never given up the idea of a march into the interior, and the discovery made by Hazzard now led him to resume his planning. It was decided, therefore, that for the time being the lieutenant should make daily journeys to get a cargo of bats and fish, and that all food not needed for immediate consumption should be preserved by salting and drying for use as a reserve.

Taking advantage of the ebbing tide the *Ark* left next day before noon. Early in the afternoon heavy firing was heard in the direction of the Island. The sound rose to considerable volume, died down, then rose again, and this

was repeated several times. Cochrane was both perplexed and alarmed but there was nothing he could do except to wait as there was no way of reaching the Island, and even to get to the point opposite would have taken half a day. He spent the rest of the afternoon in the sentry box on the roof searching the land and water with glasses, and he had a feeling of deep thanksgiving when just before dusk the *Ark* appeared with no one missing. The beach scene of the preceding day was repeated, Hazzard stepping on shore this time with a broader grin than usual on his reckless young face.

"What have you been up to now?" Cochrane asked, too relieved at the safe return of the party to feel any resentment for the anxiety he had suffered.

For reply Hazzard pointed to his men, who were passing out of the boat, hand-over-hand, what seemed in the dim light to be an endless length of rubber fire hose about the size of a man's thigh. At last the head of an immense python came into view, then the tail of another appeared and the passing from hand-to-hand continued until two huge reptiles of equal length lay streached on the sand. Hazzard paced off the distance from one end to the other of the long line and then exclaimed in a triumphant tone, "There's forty-eight feet of snake for you, and every foot of it good meat except the heads." As a rule Cochrane was not given to mirth, but this incident broke down his reserve and he sat down and gave way to laughter.

Hazzard continued in a slightly aggrieved tone, "We were on our way to the Island when we noticed that the point opposite it is also a roosting place. We landed there to save time and saw these snakes in the trees after the bats. The men said they are good to eat so we opened fire at them. After they were wounded they showed fight and we had to do a lot of shooting to kill them. I knew the firing would alarm you but here was a chance I didn't like to let pass to get a big supply of meat that the men say is better than chicken."

The next day Cochrane went in charge of the fishing party and returned with a boat half filled with fine fish. Thereafter the officers alternated in making daily journeys to the reef and to Bat Island. At the end of a week enough fish and bats had been obtained and cured to last the company for several days.

Plans for the expedition having been completed, the early morning of the day following the next was then designated as the time for departure. Eighty of the men in best condition were selected to accompany Cochrane and were issued food to suffice them for several days when supplemented by the *camotes* and *palawan* it was hoped would be found en route. In spite of his strong protestations, Hazzard was ordered to stay at the Fort with the remainder of the company. His instructions were simple, namely; to hold San Ramon and never for one moment to relax his vigilance. If Cochrane failed to return, he was to continue holding the place until relief came, as it was bound to come finally.

(To be continued)

Elimination, Promotion, or What Have You

The Editor of THE JOURNAL:

There is an old saw that "fools rush in where angels fear to tread." Undoubtedly I should be classed in this category. I admit the allegation but I also believe that something should be done to improve existing conditions. For the past score of years we have heard much concerning "the hump," slowness of promotion, stagnation, retirement for age in grade, elimination, class B, selection, reward for merit, elimination of the unfit and many other terms which fecund imaginations succeed in coining. In the final analysis they all mean the same thing, i.e., that there is something wrong with the system of promotion in the Army.

It is scarcely necessary to review the history or to recount the conditions which brought this about. Briefly, it is the result of the hump—two humps in fact. Why these humps were created, why they have remained with us, why they have proved to be such a source of unrest and dissatisfaction have no place in this picture. It is their presence and not their cause with which we are now primarily concerned. They may be likened to a malignant tumor in an individual. The doctors having correctly diagnosed the case and determined that there is a tumor—two tumors in fact, the answer seems quite simple and obvious. Put the patient under the influence of an anesthetic and have a skillful surgeon wield the scalpel. Of course, this is going to be painful to the patient, both physically and financially, but we hope that the patient will survive and that he will be better after the operation. This is common sense. Why cannot we apply the same principle to the two malignant growths now strangling promotion among the commissioned personnel of the Army?

Many schemes have been proposed to accomplish this desirable result. Some of them have been wonderfully conceived, some are exceedingly drastic, others are a timorous attempt at applying a palliative.

Perhaps it transcends the ridiculous, it may even be *reductio ad absurdum* for the writer, considering his total lack of qualifications for playing the rôle of a surgeon, to even suggest a means by which the officer personnel of the army can be saved from threatened calamity. It is quite evident that if the constituted authorities of the Army do not devise some means to correct the evil our friends(?) in Congress will devise a means for us. The results may not be so good. I shudder when I vision even the shadow of the terrible calamity lurking in the background.

But what is this panacea, this cure-all that will rejuvenate the commissioned personnel and start it on its way with new confidence, new life and new vigor? Why be so impatient? I am coming to that in a minute, but first I want to explain that I have no ax to grind; also, that I am not a lion tamer and have no intention of sticking my head in the lion's mouth. I may not be adverse to twisting his tail but I want to be certain that there are a num-

There is something wrong with the system of promotion in the Army.

ber of strong iron bars between the twister and the restaurant department of the aforementioned lion. I am convinced that if the scheme which I am about to propose is put into effect a long, loud roar, approaching in volume that created by a thunderstorm, will be heard from the Army, especially from that part of it which will be the recipient of the pruning knife. When the roar starts I hope to be in a cyclone cellar protected from the fury of the storm. Before proceeding further with this dissertation, I believe it to be desirable to enunciate certain basic premises, the correctness of which will be admitted by all those who have given the question careful consideration. These may be summarized as follows:

- a. There is something wrong with the system of promotion when officers are required to serve approximately seventeen years before reaching the grade of captain, with the prospect of spending twelve more years in that grade, or twenty-nine years to a majority.
- b. There is something wrong when officers have remained in the grade of colonel for fourteen years with no hope of ever reaching a higher grade.
- c. There is something wrong when capable, energetic, young officers are forever debarred from any reasonable prospect of reaching higher command before they have passed the half-century milestone.
- d. There is something wrong when many officers in the grade of colonel will not be given command of regiments, or smaller units, or when they cannot be assigned to duty on the general staff. Places for them must be found where they can do little damage. This is a brutal statement but it is no secret. It is not limited to any one arm or service. It is an unfortunate situation growing out of circumstances which have long since passed into history.

It is this latter premise which is indirectly responsible for the conditions enunciated in the others and it is for the correction of this condition that I am proposing a remedy. In case the reader cannot stand the suspense any longer I will now expound, in a broad general way, my proposal. The details need not be mentioned here. They will require much prayerful thought combined with hope and a large dose of charity.

Suppose a statute could be placed upon the great books (or wherever statutes are supposed to be placed), providing in substance that brigadier generals of the line will be appointed by the President upon the recommendation of a board of major generals convened for the purpose; and provided further that when a vacancy exists in the grade of brigadier general it will be filled by the promotion of the senior colonel of the line, *unless* the board finds that he is not qualified for the increased rank and responsibility. In this case the vacancy will be filled by the promotion of the next senior colonel of the line *unless* he is

also found to be unqualified for the promotion, and so on down the list in numerical sequence until an officer is found who meets all the requirements. This process to continue until all the vacancies in the grade of brigadier general have been filled. So far the operation is simple and painless.

Now comes the intricate part. The man does not exist who is infallible. So far as we know only one person ever approached omnipotence and even He could not select twelve tried and true Disciples without making a mistake, therefore, it is not reasonable to assume that a board of major generals could be infallible. We will grant that and we want to reduce the chance of making a mistake. Now if the senior colonel of the line is passed over the second time by the board of officers in making their recommendations then it becomes reasonably certain that this colonel is not qualified for higher command and higher responsibilities, therefore, he should automatically pass out of the picture and be relegated to the retired list. The same procedure would be followed in filling all vacancies in the grade of brigadier general. Each colonel in turn, if twice passed over, would not continue to block promotion for years to come merely waiting for remorseless and relentless time to tick off its fateful seconds until he reached the age of sixty-four.

Suppose we examine some of the pros and cons of this plan. I admit that there are cons although they are greatly outnumbered and outweighed by the pros. Nothing can be perfect and it is not possible to devise any scheme which is free from imperfections and objections. Some of the pros are:

- a. It will create a healthy flow of promotion by knocking off the top of the dam without destroying its foundation.
- b. It will eliminate from the picture those officers who have passed their prime and are now marking time merely waiting for the inevitable.
- c. It will make it possible for the War Department itself to clean its own dirty linen without calling in the congressional washwoman.
- d. It will make it possible to remove painlessly from the picture those who are no longer performing their full mission in the army, without resorting to the operation of class B with its attendant stigma and disgrace.

But, says some one, we now have a law for removing from the picture the inapt and inefficient. True enough: that law should continue to operate. The proposed scheme is not intended to supplant the class B procedure, it augments and supplements it. It will accelerate promotion, it will tend to reduce the humps, and over a period of years it will operate to correct those conditions which we recognize as needing or perhaps demanding correction.

Now for some of the cons. It will operate to retire officers who are still physically sound and capable of rendering a degree of service to the Government. True enough, but remember I stated in the preamble that it was impossible to eliminate the tumor without causing

financial and physical pain. I believe that the method proposed will cause less financial and physical discomfort than will result from any other method. After all, we owe a certain protection, perhaps gratitude, to these officers and we should seek diligently for ways and means to injure them as little as possible.

It will increase the list of retired officers and the consequent expense. We cannot deny this allegation—but would any other scheme which has ever been proposed—but this scheme has certain inherent advantages which other schemes lack in that it provides adequate reward for service rendered, and it has the great advantage of leaving no tin can tied to an officer to rattle every time his name is mentioned.

This plan will undoubtedly prove anathema to the proponents of promotion by selection. Right here we want to state that we do not believe in promotion by selection; that plan has been considered too often and has too many serious objections. We do not believe in *selecting up*, what we are proposing is to *select out*. These are two very different conditions. Under this plan all officers will be assured of promotion by seniority up to and including the highest grade that they can ever expect to hold. If they are gently but firmly requested to step from in front of the footlight and take a place in the audience no one will be the loser thereby. They have received their full share of the acclaim of the public and the emoluments of the office. The only possible difference is a reduction in their pay a few years earlier than it would otherwise occur, a minor consideration when compared to the advantages to the service, which, after all is the primary objective.

I might go on and elaborate upon this thing in greater detail but why prolong the "cry in the wilderness." I am willing to bet that this proposal never gets to first base. Do I hear a weak voice way back in the audience raising the question "why?" I was afraid this would come up but since I am forced to answer it I will. The very officers whose approval would be necessary before this scheme could be put into effect are afraid that by the simple process of the passage of time they will arrive at the position of number one on the list of colonels and how they recoil from the thought of cold steel being applied to their Adam's apple. Need I go farther. I hope I have started something but I am not an optimist and I do not expect this to receive any serious consideration. I have dared to twist the lion's tail and I dare you to publish it.

Yours for more rapid promotion,

IMA JINX, Major, S.O.L.

EDITOR'S NOTE: We have accepted the dare, with the hope that, as the author states, "we may start something." May we hear from others on the subject. The JOURNAL is not responsible for the personal opinions of contributors.

Training for Mobilization

BY CAPTAIN JOHN J. ALBRIGHT
29th Infantry

FOR the past four years the training program of the 29th Infantry has included a short period for a "mobilization test." The expressed purpose of these practice mobilizations is "to provide for the orderly mobilization and entrainment of the regiment for a four-day rail movement." By choosing this type of movement—by rail—and by visualizing a prolonged absence from the post, the problem is complete in that the solution requires practice in everything that would be performed in any kind of an emergency or for departure by any means of transportation. Each year the officers and men of the regiment have learned something new, and the training has been so valuable that it has been deemed wise to repeat it in the next training year.

In 1930 and 1931 the regiment was able to secure actual trains of box, stock, and flat cars. This made possible a very realistic test, in which the regiment with all of its equipment was loaded on trains and moved a short distance. Even this short move, with the characteristic jars of American trains, tested the efficiency of the loading of baggage, the blocking of wheeled transportation, and the set-up of the field ranges.

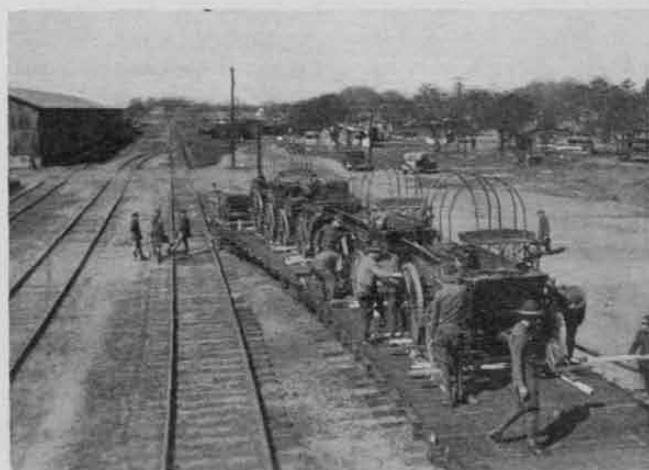
As a result of these years of experience, the regiment has evolved complete and detailed mobilization plans that are available for the present or an entirely new complement of officers. It is now possible to effect a move of the regiment on very short notice, without confusion, loss of time, or a following flood of letters and papers "to be completed" after the troops have departed.

Requests for copies of these plans, received from individual officers and from other organizations, seem to warrant giving wider dissemination of the details of the plans.

The plan for the regiment consists of a series of plans for the various organizations and officers of the regiment. These separate plans are:

- (a) Regimental Staff Plan.
- (b) Rifle Company Plan.
- (c) Machine Gun and Cannon Company Plan.
- (d) Headquarters Company Plan.
- (e) Service Company Plan.
- (f) Train Commander's Plan.
- (g) Train Quartermaster's Plan.

Each plan contains two main divisions, (a) those things to be accomplished by the individual to prepare himself and his personal belongings for the move, (b) those things for which the various officers and noncommissioned officers are responsible in preparing the organization for the move. Under each division, everything necessary to be done is listed by numbered steps. The plan is flexible in that the various steps need not be ac-



Blocking detail at work

complished in the order listed, but may be completed in the order found desirable for any particular length of time which the organization may have to prepare for the move.

Of these plans, that for the rifle company is the simplest and will serve well as an example. Under the heading, "Individual Soldier, Initial Steps," five separate steps provide for the assembly and inspection of the individual clothing and equipment, the disposal of surplus government property and the man's personal belongings, and the necessary arrangements to be made for the family in case of a married man. Under succeeding headings the duties of the squad leader, section leader, platoon sergeant, mess sergeant, supply sergeant, company clerk, first sergeant, and those of the company commander and the company officers are listed in detail. Each one must himself accomplish the initial steps of the individual soldier, and in addition must perform the duties that pertain to his assignment in the company. These latter duties are very definitely stated, and recite to each officer and noncommissioned officer his particular duties and responsibilities.

The final paragraph of the plan contains a check list for the use of the company commander. This list is made up under two headings, (a) lists and forms to be prepared prior to M-day and filed with the company plan, (b) lists of all things to be accomplished before entraining. With these plans containing assignments to specific duties and the resulting spread of responsibility to various individuals, the company commander can, by a reference

M Day plans as prepared by a regiment that believes it could efficiently leave its post within 24 hours or less in case of necessity.

to his check list, be assured of boarding the train with a carefree mind and a thoroughly prepared and efficient organization.

In 1934 lack of any funds for the rent of railroad cars forced the regiment to use its ingenuity to make an actual test of its plans. Permission was obtained from the railroad to use two empty box cars and two flat cars, which happened to be on siding on the day of the test mobilization. Organizations were assigned to load these cars with kitchens, baggage, animals, carts, wagons and rolling kitchens. Assignments were divided so as to give as many companies as possible experience in loading actual cars. Each car was loaded twice, once for each of two different trains, and all organizations sent officers and non-commissioned officers to observe. Complete trains, less the four actual cars, were staked out on the drill ground by means of tent stakes, tape, and a tag showing the kind of car—box, flat, stock, tourist, or pullman. This expedient was much more realistic than it sounds or than it was expected to be. Rations for a four day trip and baggage were loaded, animals were placed in the synthetic cars and held in place by the drivers, transportation was blocked in place according to instructions contained in Paragraph 19, AR 30-955, and finally the companies marched to the train and boarded the cars assigned to them. Train commanders and train quartermasters completed their duties as for a real train.

Within barracks the steps of the plan had been fully carried into effect. Personal belongings had been wrapped in bundles, utilizing the paper saved from laundry bundles. These bundles were addressed for mailing home or tagged for storage with the Quartermaster. In order to save the men the cost of laundry and pressing bills, the men's best uniforms and civilian clothing were permitted to be left in the wall lockers and surplus clothing was placed in neat piles on one end of the bunk instead of being turned in to the supply room. All other steps were faithfully carried out.

Property was segregated for ease of checking by representatives of the Quartermaster and Ordnance Officer. Credit memo receipts and receiving reports for salvage were prepared with lists of items and the actual numbers of each item of clothing and equipment. Requisitions for all existing shortages in organization property were prepared. Company fund property was crated and stored, or arrangements were made for its sale. All papers concerning personnel—telegrams, discharge and reenlistment papers, transfers, relief from special duty, return from furlough or detached service, clearance certificates for officers—were actually prepared and stamped "PROBLEM." Barracks were cleaned and ready for inspection. Fires were put out in the kitchen stoves. Store rooms were cleared of everything except property to be taken over by the Quartermaster. Stables were emptied, policed and disinfected. During the day of the test the Regimental Commander inspected all activities. All of the regimental staff and battalion commanders, in addition

to their mobilization duties, checked all details according to a careful prepared check list.

Immediately after the completion of the problem, each company turned in a file of all papers prepared in conformity with the conditions of the problem. These papers were checked as to completeness and correctness.

In brief everything was done to make the test as realistic as it was possible to make it. The results were (1) a very clear picture in the mind of each officer and man of exactly what would be done in case of an actual move, (2) a regiment that believes it could efficiently leave its post within 24 hours or less in case of necessity, (3) a very thoughtful consideration of many serious problems which are ordinarily forgotten in the peace-time routine of the average post to which the organization has become more tightly bound with each passing peace-time year.

The rifle company mobilization plan, the problem as worked out by the 29th Infantry, and the Field Order follow:

Rifle Company Twenty Ninth Infantry Mobilization Plan Phase "A"

1. PURPOSE: To provide for the orderly mobilization and entrainment for a four day rail movement.

2. Upon receipt of mobilization orders the following procedure will govern:

(a) INDIVIDUAL SOLDIER, INITIAL STEPS:

Step I. Each man will display his full-field equipment on his cot for inspection. In addition to normal articles displayed, he will place on the cover of his trunk locker all extra articles of clothing and equipment that are to be carried in the barrack bag.

Step II. Upon completion of the inspection he will assemble his full-field equipment and hang it on the foot of his bunk. The additional articles will be packed in the barrack bag and this, also, tied to the foot of his bunk.

Step III. Each man will turn in to his section leader in the platoon squad room all articles of clothing and equipment not listed to be taken—see company Appendix No. 1. Bunks, pillows, mattresses, foot-lockers and wall lockers will be left in position to be checked.

Step IV. Each man will prepare a bundle of all his surplus personal property not to be taken with him, wrap and tie it securely, and label it with his name, rank and organization and the name and address of his nearest relative. This bundle will ordinarily be mailed immediately. If not desired to be mailed, it will be turned in to the Supply Sergeant for storage with the Quartermaster.

Step V. If married, he will make necessary arrangements for moving his family from the post.

(b) PLATOON SERGEANT:

Step I. He will himself perform the initial duties of the individual soldier.

Step II. He will have the platoon prepare for inspection on the bunks, all equipment listed to be taken per company Appendix No. 1.

Step III. He will supervise the issuing of additional equipment, per company Appendix No. 1.

Step IV. He will assist the platoon commander in the full-field inspection and the assembly of rolls and barrack bags immediately thereafter. He will have the pack assemblies and barrack bags hung on the end of the bunks.

Step V. He will supervise the performance of the initial steps of the men in his platoon, per paragraph 2-a.

Step VI. He will organize his platoon into new squads and sections with the present available strength, the runners to be assigned to squads.

Step VII. He will have the platoon squad room thoroughly policed.

Step VIII. He will report to the First Sergeant when Steps I to VII have been completed.

(c) SECTION LEADER:

Step I. He will himself perform the initial duties of the individual soldier.

Step II. He will assist the platoon sergeant in reorganizing the platoon, issuing equipment, preparing it for inspection and assembling it thereafter.

Step III. He will check in all surplus clothing and equipment of the members of his section. He will have these articles assembled in bundles of ten each and turned in to the Supply Sergeant.

Step IV. He will check all bundles of personal property. Those for mailing will be turned in to the Orderly Room. Those for storage will be checked in to the Supply Sergeant.

(d) SQUAD LEADER:

Step I. He will himself perform the initial duties of the individual soldier.

Step II. He will supervise the preparation of the equipment of his men for inspection by the platoon commander and supervise its assembly upon completion of the inspection, per company Appendix No. 1. He will see that each man's barrack bag is labeled with his name, rank, organization, company number and Army serial number.

Step III. He will assist the section leader in the checking of the surplus clothing and equipment.

Step IV. Upon reorganization of his squad, he will secure the necessary additional equipment per company Appendix No. 1, and issue it to his squad.

Step V. He will supervise the policing of his area of the barracks.

(e) MESS SERGEANT:

Step I. He will himself perform the initial duties of the individual soldier.

Step II. He will perform the duties of a Section Leader for his kitchen force per paragraph 2-c, and will cause the kitchen force to take turns in complying with the provisions of paragraph 2-a, in so far as it pertains to them.

Step III. He will secure the necessary rations for the



The synthetic trains

period the company will be on the train. (Four days.)

Step IV. He will cause all surplus kitchen equipment to be thoroughly cleaned and placed in the kitchen supply room ready to be checked by the Quartermaster. China and silver will be placed on tables in mess hall. Mess stools and tables will be cleaned and left in the mess hall for checking.

Step V. He will cause the kitchen and mess hall to be swept and scrubbed; the garbage stand and cans to be cleaned; and the vegetable cellar to be emptied and cleaned.

Step VI. He will draw from the Supply Sergeant all necessary field equipment and be prepared to place the field range and fire-proof box in the kitchen car, to store the food for meals enroute, and to have plans and menus for feeding enroute.

Step VII. He will secure from the Supply Sergeant an extra joint of stove pipe, an extra elbow, wire and nails for securing stove pipe of field range in the baggage or box car.

Step VIII. He will secure the necessary firewood for fuel enroute.

Step IX. When he has completed Steps I to VIII, he will report that fact to the First Sergeant.

(f) SUPPLY SERGEANT:

Step I. He will himself perform the initial duties of the individual soldier.

Step II. He, or his representative, with the section leaders, will check in all surplus government equipment and clothing in the large attic Supply Room and will sort it into piles of the same kind of clothing and equipment.

Step III. He will prepare credit Memorandum Receipts by branch, of all government property that is to be left behind, will check it with the accountable officer, and receive receipts therefor. Breakage allowance for china to include the date of departure will be completed.

Step IV. He will requisition and draw—rounds of cartridges, caliber .30, ball, tracer, armor piercing; caliber .45 and Very Pistol Ammunition.

Step V. He will prepare lists of all bundles of personal property (not shipped by soldiers to relatives) cause them to be placed in the large attic supply room and receive receipts from the Quartermaster for them.

Step VI. He will prepare the necessary property for shipment with the company and list it with all necessary data for shipping tickets and bills of lading.

Step VII. He will accomplish the shipping tickets and Form No. 33 and clothing accounts of all men who are to be transferred to other organizations, or to be discharged and reenlisted, upon being furnished their names by the First Sergeant.

Step VIII. He will perform the duties of a section leader for the barber, tailor, artificer, and armorer.

Step IX. He will furnish to the Platoon Sergeants, the necessary shipping tags for barrack bags and bundles of personal property.

Step X. When Steps I to IX are completed, he will report that fact to the First Sergeant.

(g) FIRST SERGEANT:

Step I. He will notify the company officers and key noncommissioned officers of the mobilization.

Step II. He will himself perform the initial steps for the individual soldier.

Step III. He will confer with the Company Clerk in reference to reports to be made out in transferring men to be left behind (men awaiting trial or result of trial by General Courts-Martial; men with less than three months to serve in current enlistment who do not desire to reenlist; sick in hospital; absent sick) and with reference to telegrams and reports on men to be returned for duty (D.S., Special Duty, furloughs, garrison prisoners and those awaiting trial or result of trial of Special or Summary Court-Martial), and discharge and reenlistment of men with less than three months to serve who desire to reenlist.

Step IV. He will furnish the Supply Sergeant and Platoon Sergeants the names of the men to be transferred to other organizations and those to be discharged.

Step V. He will perform the duties of a section leader for the clerks and buglers.

Step VI. He will prepare a report of the strength of the company showing the number of men by grade who actually accompany the organization on the move. This report will be submitted to Assistant S-1 at the train.

Step VII. He will have the company fall in in proper time to entrain.

(h) COMPANY CLERK:

Step I. He will himself perform the initial steps for the individual soldier.

Step II. He will prepare telegrams for the recall of all men of the company on furlough.

Step III. He will prepare and submit to Assistant S-1, separate rosters of: (a) men sick in hospital and absent sick, (b) prisoners awaiting trial or result of trial by General Court-Martial, (c) men with less than three months to serve and who do not desire to reenlist, (d) men with less than three months to serve and who desire to reenlist.

Step IV. He will prepare and submit to Assistant S-1 an informal report of the number of replacements necessary to fill the company to full strength when transfers have been completed.

Step V. He will prepare and submit to Assistant S-1 a roster of garrison prisoners and prisoners awaiting trial by Special or Summary Court-Martial, who will be returned to the company for duty.

Step VI. Prepare necessary records for discharge of all enlisted men holding reserve commissions if they have been called to active duty as such.

Step VII. He will prepare records of men to be transferred and those to be discharged for reenlistment.

Step VIII. He will check and pack the Field Desk.

(i) OFFICERS:

Step I. Each officer will prepare his own clothing and equipment.

Step II. Each officer will obtain proper clearance from Post Headquarters.

Step III. Each officer will make necessary arrangements for disposition of his personal effects and for moving his family from the post, if married.

Step IV. Platoon Leaders will see that their platoons comply with the provisions of paragraph 2-a-b-c-d.

Step V. The officer in charge of the mess will have general supervision of the mess. The first squad of his platoon will report to the mess sergeant upon completion of the duties enumerated in paragraph 2-a-b-c-d.

Step VI. The Company Supply Officer will have general supervision of the supplies. The first squad of his platoon will report to the Supply Sergeant upon completion of the duties enumerated in paragraph 2-a-b-c-d.

Step VII. The other platoon leader will have general supervision of the company headquarters group and disposition of company fund property. The first squad of his platoon will remove the property from the recreation and reading rooms to the attic supply room, pack and crate it for storage or will complete the arrangements for the sale of part or all of it in accordance with the decision of the Company Commander as to its disposal.

Step VIII. The second in command will assist the Company Commander, particularly supervising the settlement of accounts, disposition of Post Exchange Shares, return of Post Exchange and U.S.A.M.P. coupons and sale of company fund property. He will check the necessary reports, shipping tickets, lists of property to be shipped, memorandum receipts, etc., which must be accomplished.

(j) COMPANY COMMANDER:

Step I. The Company Commander will complete Steps I to III, for officers.

Step II. He will exercise a general supervision of the company.

Step III. He will submit a Ration Return to date of departure, and, if necessary, one for the duration of the journey.

Step IV. He will personally accompany the representatives of the Quartermaster on the final inspection of the barracks.

Step V. He will get \$100.00 in cash from the Company Fund for miscellaneous purchases, or be prepared to pay for them by check.

3. COMPANY COMMANDER'S CHECK LIST.

(A) Prepared prior to M day and filed as appendices to this plan:

1. Complete list of organization and individual property to be taken, showing how it will be carried.
2. Specimen tag for mailing personal property.
3. Specimen tag for marking barrack bags.
4. List of officers' equipment and weight allowances.

5. Articles to be returned to Quartermaster, Ordnances, Engineer, Signal, Department of Experiment, etc., listed on the proper form for receipt by the accountable officer.

6. Menus for four days on train.

7. Requisition for food supplies for four days on train, showing in Column I, amounts required; in Column II, amount on hand; in Column III, amounts to be requisitioned. Column II and III to be filled in on receipt of orders.

8. Requisition for ammunition.

9. Copies of AR 30-930, 30-935, 30-940, 30-945.

(B) To be completed before entraining:

1. Requisition for existing shortages of clothing and equipment.

2. Telegrams for recall of all enlisted men on furlough.

3. Separate roster of men sick in hospital, prisoners awaiting trial by or result of sentence of General Court-Martial, and of men with less than three months to serve in current enlistment who do not desire to reenlist, who are to be transferred from the regiment.

4. Check lists of men to be returned to duty from Special Duty, D.S., garrison prisoners.

5. Records for discharge of men who have less than three months to serve in current enlistment who desire to reenlist.

6. Records of men transferred to other organizations, complete.

7. Report of shortage of personnel to Assistant S-1.

8. Disposition of Company Fund property.

9. Vouchers for payments received from return of Post Exchange Shares.

10. Receiving report of clothing being turned in for salvage.

11. List of bundles of personal property left behind to be stored by Quartermaster.

12. Shipping tickets for freight shipped and lists of boxes, crates, etc., to be entered on bills of lading.

13. Credit memorandum receipt for Quartermaster property left behind.

14. Breakage allowance for china to date of departure.

15. Credit memorandum receipt for Ordnance property turned in.

16. Credit memorandum receipt for property turned in to R. S. O.

17. Credit memorandum receipt for property turned in to Department of Experiment.

18. Credit memorandum receipt for rolling kitchen equipment returned to the Service Company.

19. Receipt for U. S. A. M. P. coupon books.

20. Roster of company showing number of men by grade who accompany the organization on the train.

21. Clearance papers for all officers.

**Headquarters Twenty-Ninth Infantry
Office of the Regimental Commander**

Fort Benning, Georgia,

MOBILIZATION

Mobilization and movement by rail.

SITUATION:

The following radio from the Commanding General Fourth Army—transmitted by the Commanding General, Fourth Corps Area—is assumed to have been received at Fort Benning 7:30 a.m. today, January 24, 1934.

“Commandant, The Infantry School,
Fort Benning, Georgia.

“M day special mobilization plan X January twenty fifth stop Twenty Ninth Infantry will entrain at Fort Benning starting January twenty fifth as follows colon trains numbers one and two will depart at ten AM stop Trains number three and four will depart at four PM stop All serviceable motor transportation assigned regiment will move overland under its own power to arrive at — by noon twenty seventh semicolon plan X changed accordingly stop

Signed MOSELEY”

NOTES:

1. The regimental commander desires that each officer and enlisted man of the regiment enter into the spirit of this problem and by carrying out his part to the last degree and in the most realistic manner possible within the limits of the problem, make it a real test of the preparation of the regiment for war.

2. With the above in mind the following will be observed:

a. Rations and forage will actually be drawn.

b. Ammunition will be drawn and issued as per table of basic allowances. An ammunition dump will be established at the entraining point and distribution made there.

c. The necessary telegrams covering leaves, furloughs, detached service, and Reserve Officers, will be prepared but not sent.

d. The Commandant has been requested to release all officers and enlisted men on special duty and undergoing sentence of Special and Summary Court-Martial for the problem January 25th. Necessary action will be taken in the premises.

e. All necessary paper work—in connection with officers and enlisted men to be transferred will be prepared. It will be assumed that all enlisted men except one in each organization with less than three months to serve, desires to accompany the regiment.

f. Property will be handled as prescribed in company mobilization plans. All necessary papers will be accomplished and a *clearance obtained*.

Outer civilian clothing and hat and one special measurement uniform per man need not be packed but will be left in wall locker. All other clothing of enlisted men will be disposed of as prescribed in company mobilization plans Phase “A.”

Exception: 1. (a) Surplus articles of government clothing and equipment will be grouped for each man, so that no man's clothing and equipment will become

mixed with others. *This exception holds good for this test only.* These articles will be grouped and placed on one end of his bed.

(b) A list of all articles named in (a) above will be made by each man, turned in by the man through squad, section and platoon leaders to the Supply Sergeant and a consolidated list of these articles prepared for the Quartermaster receipt.

3. Details as to trains and entraining will be published later.

4. Company Commanders will read the basic mobilization plan on file in Regimental Headquarters.

5. Not later than 8:00 a.m. January 26th, 1934, the original of all papers prepared to carry out the provisions of the problems will be turned into the regimental commander. *They will be clearly marked “problem” to indicate that they belong to the problem.* The regimental Adjutant has rubber stamps available for this purpose.

In addition every officer will submit an informal report not later than noon January 27th, 1934, which will state what part he individually played in the mobilization of his organization and whether or not his organization mobilization plan Phase “A” was sufficient and correct for its purposes. He will note in this report any corrections necessary in the plan or any suggestions for its betterment, as well as the lessons he has learned.

Included in this report will be his plan for caring for his personal effects left behind. Married officers will include the disposition of their families on the basis of their not being able to occupy their quarters beyond 14 M.

6. The actions and orders of all concerned to carry out this problem will be checked, in accordance with basic Mobilization Plan.

By order of

Captain, 29th Infantry,
Adjutant.

OFFICIAL:

Captain, 29th Infantry,
Adjutant.

Headquarters Twenty-Ninth Infantry Office of the Regimental Commander

Fort Benning, Georgia,
January 24, 1934

FIELD ORDERS) NO. . . . 1)

1. The regiment will move by rail pursuant to the Regimental Mobilization Plan.

2. During the movement, companies of the Special Units Battalion will be attached as follows:

To the 1st Battalion: R.M.G. Co., Service Co., less detachments.

To the 2nd Battalion: Cannon Co., Headquarters Co.

3. The entrainment will be carried out as follows:

Entraining Points:

See Mobilization Memorandum dated January 24th, 1934.

Train Nos. From Points		TYPE	TRANSPORTATION GROUPINGS	Time of Departure	
A	B			DATE	HOURL
1		2	Adv. Ech. RHQ, RHQ Co. and Band Co. E, Co. F, Det. Serv. Co. Train Comdr: Major	Jan. 25	10:00 A.M.
	2	1	Co. B, Co. D, Det. Serv. Co. and Serv. Co. less Dets. Train Comdr: Major	do.	10:00 A.M.
	3	1	Hq. & Hq. Co. 1st Bn., Co. A, Co. C, R.M.G. Co., Det. Serv. Co. Train Comdr: Lieut. Colonel	do.	4:00 P.M.
4		2	Rear Ech. RHQ, Hq. & Hq. Co. 2nd Bn. Co. G, Co. H, Cam., Det. Serv. Train Comdr: Lieut. Colonel	do.	4:00 P.M.

a. Regimental Entraining Officer and Assistant:
Post: In vicinity of R. R. scales.

b. Baggage and transportation will not arrive at entraining points prior to three hours before scheduled departure of trains. The contents of all wagons will be placed in baggage cars. Wagon covers will be removed.

c. Each train commander will prepare for the R.T.O. a statement showing the number officers, men, animals and vehicles and the amount of baggage to go on his train.

4. Motor Transportation will move at 5:00 a.m., January 25th.

Initial Point—29th Infantry Motor Park.

The motor column will be commanded by the Commanding Officer, Motor Platoon, Service Company. (F. W. D's are considered unserviceable and will not be taken.) Drivers of all vehicles will be attached to the Service Company for rations.

5. Regimental Headquarters will close at 3:45 p.m., January 25th and open upon the arrival of the first train at the destination.

By order of

Captain, 29th Infantry,
Adjutant.

Headquarters Twenty-Ninth Infantry
Office of the Regimental Commander

Fort Benning, Georgia,
January 24, 1934.

MEMORANDUM ON MOBILIZATION.

ATTACHED TO: FIELD ORDER NO. 1.

(MOBILIZATION)

1. For the purpose of this mobilization, loading of trains will be carried out as follows:

a. Two (2) box cars and two (2) open end coal cars will be spotted at the red hangar for loading as follows:

TRAIN No. 1—the east box car—Company "F"
the east coal car—2 wagons—Hq. Co.
1 rolling kitchen, Hq. Co.

TRAIN No. 2—the west box car—Company "B"
the west coal car—8 carts, Co. "D"
1 rolling kitchen, Service Co.

TRAIN No. 3—the west box car—animals, Service Co.
the west coal car—8 carts, R. M. G. Co.
1 rolling kitchen, Co. "A"

TRAIN No. 4—the east box car—Company "G"
the east coal car—8 carts, Cannon Co.
1 wagon, Cannon Co.

All officers will inspect one of the above trains of cars during or after loading.

b. Entraining Point A:

Troops, stock and flat cars of Trains Nos. 1 & 4 will be staked out in the north half of the cuartel.

Entraining Point B:

Troop, stock and flat cars of Trains Nos. 2 & 3 will be staked out in the south half of the cuartel.

Box cars, except those companies actually loading in paragraph a above will be staked out by organizations concerned inside the cuartel, opposite their respective barracks.

Men, animals, baggage, equipment, etc., will actually be placed in the outlined car spaces, (wagons, carts, etc., will be blocked) and ready for the train of outlined cars to be assembled as shown in the schedule of departure.

2. The Regimental Entraining Officer or his representative will be stationed at the Band Stand in the cuartel.

3. Trains Nos. 2 & 3 consist of the following:

Type I: 1 Pullman
10 Tourist
6 Flat
5 Stock
3 Box (kitchen and baggage)

Trains Nos. 1 & 4 consist of the following:

Type II: 1 Pullman
9 Tourist
3 Flat
2 Stock
3 Box (kitchen and baggage)

By order of

Captain, 29th Infantry,
Adjutant.

How the Disarmament of Germany Came to Pass

BY MAJOR ALEXANDER L. P. JOHNSON
34th Infantry

WHEN, on November 11, 1918, the signing of the Armistice suspended actual hostilities, a war-weary world was anxious that the carnage of more than four years cease forever. It was patent that the internal situation of Germany would not permit her to renew hostilities, and the Allied High Command, appreciative of the great sacrifices the victory had entailed, naturally wished to secure that victory by providing safeguards against a possible comeback by the enemy such as was staged by Napoleon after Elba.

The terms of the Armistice were sufficiently drastic, so it seemed, to make Germany militarily impotent at least for a time. On the other hand, so great was the versatility of the beaten foe, so formidable his military power and prowess in that titanic struggle against a world in arms, that many of the military leaders and most of the political leaders of the victorious powers were disinclined to accept the completeness of their victory without a triumphal march through the Brandenburger Tor. Allied political leaders were moreover concerned with the latent military powers of the vanquished Teuton, and the thought was uppermost in their minds that Germany must be disarmed completely, not only to prevent a renewal of hostilities, but also to permit their own armed hosts to turn to more productive occupations.

Mr. Lloyd George in particular felt grave concern over this matter in view of the political situation back home, which was anything but reassuring. Unless the enemy's forces could be reduced without delay, the British Government might have had to face the stern necessity of maintaining compulsory military service which was neither to the liking of Lloyd George nor to that of the British people. The British War Office had informed the Premier that compliance with Marshal Foch's requirements would necessitate the keeping of 1,700,000 British troops with the colors. This certainly was a formidable demand which Lloyd George knew the British people were not likely to concede. He was, therefore, determined to bring about a drastic disarmament of the enemy, allowing the German Government to retain only enough armed forces to maintain internal order. He also felt that German armaments and instruments of war ought to be limited to the actual needs of the forces Germany was to be permitted to retain.

With these practical objectives in view, Lloyd George submitted to his confreres a draft resolution which was made the subject of discussion at a conference held at Quai d'Orsay on January 23, 1919, by the delegates of the Big Five. Mr. Lloyd George's draft provided for the ap-

"It would be a shame to leave temptation at poor Germany's door."

pointment of a commission consisting of two representatives each of the five principal powers and five delegates at large of the lesser nations represented at the Peace Conference. This commission was (1) to advise on an immediate and drastic reduction in the armed forces of the enemy, and (2) to prepare a plan in connection with the Leagues of Nations for a permanent reduction in the burden of military, naval and aerial forces and armaments. The first of these was a burning question with Lloyd George. He, therefore, urged that it be considered in connection with the terms for a renewal of the armistice. The second clause, being essentially in the nature of a political "beau geste", could well be left to some undetermined, more auspicious future date.

President Wilson seriously objected to the term "drastic" as conveying the impression of a threat. The canny Welshman, however, had no intention of hurting German susceptibilities. He did not intend his draft for "boche" eyes at all, but merely to serve as a guide or "Richtschnur", as the Germans would more aptly call it, for the Allied Commission which he proposed to set up. The Germans were merely to be informed that they were expected to reduce their forces to a minimum necessary for the preservation of internal order. No doubt that was simple enough for the Germans who were well trained to accept and obey orders. Mr. Wilson, however, entertained serious conscientious scruples in the matter, and he wanted to make sure that it would actually be possible to go ahead with the plan without consulting the Germans. He believed that it might be better to take up this proposition with the Armistice Commission first so as to give the Germans a chance to say what number of troops they would actually need.

Mr. Clemenceau rose to the occasion and with true Gallic politeness offered to summon Marshal Foch. The matter, however, was of vital political moment to Lloyd George and he declared his unwillingness to accept any views Marshal Foch might express unless they had the support of the British military experts. He knew that he could not honor Marshal Foch's demands for British troops, and it was really for this reason that he proposed the reduction of German armaments as an alternative to keeping up those of the Allied and associated powers.

It will be remembered that Marshal Foch had demanded as a part of the Armistice conditions that the Germans surrender certain artillery, aviation and other material,

but, being a soldier, he did not impose upon the enemy any requirement of demobilization of the German Army. Marshal Foch himself explained this omission by saying, that he did not wish to put anything into the Armistice agreement that he could not possibly enforce.

In the meantime the German internal situation had grown perceptibly worse. Relations between Germans and Poles were strained to the breaking point. German troops were being massed on the Polish frontier. Marshal Foch was afraid that the hot-headed Poles might be foolish enough to attack the Germans. Of course the Allies were staunch supporters of the Poles, but even so, it would not have been good form, and it certainly would have been unbecoming a distinguished military man, to support the Poles in attacking Germany and at the same time demand of Germany that she disarm.

Mr. Lloyd George had, however, another trump to play. In order to forestall any course of action detrimental to British interests, he declared to his associates that Great Britain was unable to maintain the armed forces demanded by Marshal Foch. This statement had the desired effect, for all realized that British withdrawal at this juncture of the proceedings would jeopardize everything. Signor Orlando, clever diplomat of sunny Italy, at once sought to reconcile the conflicting interests and demands. He agreed that Mr. Lloyd George really had some good and valid reasons, and M. Clemenceau's anxiety was no less justified, hence he deemed it unnecessary to disagree "over something that is not even a matter of concern to the Peace Conference, but something that should be disposed of as a mere incident of the Armistice". He therefore suggested that Marshal Foch include the disarmament of Germany as a condition *sine qua non* for renewing the terms of the Armistice, and that the Marshal and his crowd of military advisors see to it that the same be properly enforced. That passed the buck to the military where it belonged. Orlando's good and timely suggestion saved the day and the Dove of Peace once more hovered and fluttered over a peaceful Peace Conference which then and there summoned the military experts and advisors, and charged them with the duty of determining the size of armies the Allied and associated powers were to maintain on the Western Front and, more particularly, what immediate and drastic reductions could be effected in the enemy's still extant military forces.

On February 7, 1919, the curtain rose on the second act of the great drama, when the Supreme War Council convened at the Quai d'Orsay for a further consideration of the vexing problem of military matters, checks and balances. Marshal Foch rendered a report on what Allied forces he expected to have at his disposal at the end of March along the Western Front. His analysis showed that France at that time still would have approximately sixty-six full strength divisions aggregating about 1,350,000 men. British fighting strength would still amount to over 200,000 men, comprising ten infantry and two cavalry divisions. The American Army, on April

1, would consist of fifteen divisions in the zone of armies and five divisions at or near embarkation points. The United States forces, he estimated, would amount to 1,400,000 men, half of them representing actual combat strength. The Italian Army was also counted upon to muster in excess of 1,000,000 fighting men. This, Marshal Foch was satisfied, would constitute a sufficient military force to oppose Germany along the Western Front up to April 1. It would perhaps be unfair to accuse Marshal Foch of undue apprehension, or an inclination to overestimate the enemy's strength. He may not have feared the Teuton, but he most certainly did not trust him either, and consequently took no chances.

Now then, just what did Marshal Foch expect to face with this formidable fighting force of approximately four million men? A commission consisting of General Weygand, French Army, General Thwaites, British Army, and General Nolan, American Army, submitted a G-2 estimate of the enemy's strength on February 1, 1919. We must, therefore, take their word for it since that was the best information at Marshal Foch's disposal and, no doubt, upon this information he based the estimate of his own requirements. This commission estimated that at the end of January, 1919, there were at least 600,000 to 700,000 men with the colors in the German Army. Various matériel with the fighting forces, exclusive of matériel in depots, factories and arsenals was estimated as follows:

Machine Guns, all types, at least 50,000

Field Guns, including antiaircraft, 8,000

Heavy Guns, including super-heavies, 2,500

Trench Mortars, between 4,000 and 6,000

Rifles for the fighting troops of the line, 1,300,000, and probable total of 3,500,000 to 4,000,000 at the front, in the interior and in arsenals

German aviation was more difficult to estimate. At the time of the Armistice there were 3,000 machines stationed along the front. On account of the intensity of production, and the necessity of frequent replacements this number was presumed to represent only a fraction of the grand total actually at Germany's disposal. That number was estimated at 10,000 to 12,000 machines. Although Germany had surrendered a large part of the machines belonging to the squadrons at the front, it was quite possible that her factories had been able to turn out an equal number since then.

These estimates did not take into consideration the large quantities of war matériel taken by the Germans on the Western Front in course of war, nor the huge quantities of Russian matériel that still remained in German hands. To be sure, Germany still was a formidable foe, nevertheless Allied superiority in manpower and resources was sufficiently apparent to lay at least some of Mr. Lloyd George's worst fears. But his fears, like Banco's ghost, refused to be laid. Perforce the disarmament of Germany was to be the prerequisite of a renewal of the Armistice, which was due to be signed on February 20, when the Armistice then in force would expire.

Again, President Wilson assumed the thankless rôle of the conscientious objector. He seriously apprehended the grave danger that perchance the Armistice might not be renewed if it were attempted to enforce serious and extensive additions to the original terms, and if renewed under such conditions, he just naturally wondered whether the Allies could actually enforce them.

Marshal Foch was quite certain the Germans would not accept these additional terms without pressure, but he was quite prepared to apply the thumbscrews. He would not haggle at all over the proposition, least of all would he base Allied demobilization plans upon German promises, the fulfillment of which could not be insured. With him it was simply a question of making the "boche" sign on the dotted line and see himself to the enforcement of the terms.

The discussion then turned to the question whether the surrender of matériel demanded by M. Loucheur would sufficiently weaken Germany at least for the duration of the Armistice and how long it would take Germany to replace the armament she would have to surrender, and other equally interesting but purely academic questions. Again Mr. Wilson proved the marplot by putting just a simple, practical question, such as would occur to the average American whose mind was still free of the virus of European intrigue and skullduggery. He just wanted to know how it was proposed to get all the matériel Germany might promise to surrender and later should refuse to give up. Whereupon Marshal Foch bit the corner of his martial moustache and bluntly replied: "By war!"

President Wilson had got into the war and had enough of it. The very possibility of more war was enough to give him the cold shivers. He felt, moreover, that it was not quite sportsmanlike to correct errors of omission in the original Armistice agreement, and he feared that by attempting to do that very thing, the Allies were running the grave risk of bringing about a situation where their bluff might be called. The President also feared that the enforced reduction of the German Army would merely swell the ranks of the unemployed and thereby add the element of unrest to the danger and detriment not only of Germany but the Allies as well. He, therefore, advanced the very practical plan of appointing a civil commission to meet a similar commission appointed by the German Government, to negotiate with them and tell them that if Germany would reduce her military forces and yield a proportion of her mischief-making equipment, the Allies would counter by reducing the size of the Army of Occupation and cut down charges for its upkeep; they would at the same time relax the blockade of Germany, allow the passage of sufficient raw materials, except for armaments, to enable Germany to renew her economic life. This was a very practical as well as generous suggestion, and it had the merit of eliminating the military from the consideration of a military problem. Mr. Wilson endeavored to make it even more palatable

by the gracious remark that, surely, the Allies would avoid doing anything improper, such as exacting terms that would only risk a renewal of the war and bring about an intolerable state of affairs.

Mr. Lloyd George was not at all bothered by scruples such as seemed to prey upon Wilson's mind. To his way of thinking, the Allies were bound neither by honor nor sportsmanship. He did not know how long the Armistice would last, and all that concerned him was to prevent a renewal of hostilities. And there was the real rub. America had commenced to withdraw her troops soon after the signing of the Armistice. Great Britain was also reducing the size of her forces in France, and Lloyd George fully shared the apprehensions of Sir Douglas Haig, that if the Germans really meant mischief they could easily get together an army of three to four million well trained men with a full complement of officers, non-commissioned officers, and the necessary equipment and matériel.

There also was present the danger of Germany changing her government over night and that, of course, might entail a change of policy. Nobody really knew who would be on top in Germany a few weeks hence. "And," added Lloyd George with a touch of piety, "it would be a shame to leave temptation at poor Germany's door". Certainly, under circumstances such as these, he thought, it would indeed be anything but unfair to impose upon Germany conditions that would constrain her to good behavior. As long as everybody agreed with that view, Lloyd George really saw no objection to following the line of action suggested by President Wilson. "But," added the Premier, "there was nothing said in the Armistice about furnishing Germany with food and raw materials, and he wanted it to be understood, that if it was fair to change the terms of the Armistice in favor of Germany, it was equally fair to change them in favor of the Allies."

Mr. Wilson was frankly ruffled by the attitude of his British colleague. He was a moral and humane man and had no desire to let the German people starve. To be sure, the price Mr. Lloyd George had in mind to exact for such concessions was not at all extravagant. Again, if the Allies were prepared to assist Germany to renew her economic life, they had a right to exact guarantees for their own security. Thus argued Mr. Wilson, the practical statesman, with Mr. Wilson, the idealist. The former won the argument and the latter was compelled to acknowledge that, under the circumstances, it would be both right and honorable to impose conditions upon Germany such as were advocated by Mr. Lloyd George. That brought the twain together on the same side of the fence and it was M. Clemenceau's turn to disagree.

The Tiger saw the Allied military force dwindle and that spelled danger to France unless a firm attitude were adopted. The present moment, to his mind, was decisive, while yet the Allies possessed a sufficiently large force. As he saw it, the question was not one of winning the

war, but of losing the fruits of victory. He cared nothing about ethical niceties or juridical subtleties. However, he knew his Germans. Clemenceau favored menacing the Germans and he meant "to do it now!" The "boche" understood the language of force, and that was precisely the language the bellicose Tiger proposed to use. He had no patience with Mr. Wilson's idea of buying German good-will by the offer of food and raw material. With dramatic pathos M. Clemenceau declared that if he so far forgot the interests of his country and of Europe as to consent to such a proposal, the Chamber would forthwith dismiss him, and it would be fully justified in doing so.

That got the pot boiling. Mr. Wilson was all for negotiations; Clemenceau declared in favor of the mailed fist. Having started the log-rolling, Mr. Lloyd George had reason to be pleased. He was satisfied with the result of his efforts. He had Clemenceau argue precisely for the very things he wanted. Now if he could side with Mr. Wilson long enough, he felt sure he could bring about an adjustment of these conflicting views.

"Marshal Foch is a great soldier," said the Tiger in concluding his argument, "and we are prepared to honor him as such, but he is not a military Pope. He sometimes makes mistakes. as a matter of fact, it is the Marshal who is opposed to the idea of disarming Germany." Fundamentally M. Clemenceau had no objections to the granting of concessions to the Germans, but he insisted that they should in the first place accept the Allies' demands as a matter of right. That was precisely Lloyd George's point of view. If he could only convince Mr. Wilson, there would be complete accord among the Big Three, leaving Italy to pronounce the benediction. Baron Sonnino and Signor Orlando ably seconded the Tiger's views, and it would have been simple enough to decide the issue by a majority vote leaving Mr. Wilson alone in opposition.

But that would never do. Mr. Wilson held the purse-strings. He held the balance of power. He controlled the strategical position. Nothing could be done without him and certainly nothing against his will. Besides all that, Mr. Wilson was a highly sensitive man. Nothing he resented more than opposition to his own views. He had to be cajoled and wheedled into seeing alike with his opponents. Sonnino and Orlando, who played the astute game of the silent onlookers, now proceeded to employ all the guiles and artifices of European diplomacy to ensnare the obdurate American. "Why Mr. President," the Italian delegates suggested, "the proposition is really quite simple. All that was desired, is to take the guns away from Europe's Bad Man, and relieve Europe of the necessity of remaining an armed camp."

At the psychological moment Mr. Lloyd George offered a draft of possible solution as follows:

The Supreme War Council agree:

(1) That a civilian commission of the Allied and associated powers shall be attached to Marshal Foch on the occasion of the next renewal of the Armistice and in connection with the Marshal's negotiations shall endeavor to

arrange with the Germans that controlled quantities of food and raw materials, other than those required for the manufacture of material of war, shall be allowed to reach Germany. That it shall be an essential part of the above arrangement that the demands set forth in M. Loucheur's report be complied with.

M. Loucheur headed a committee consisting of Marshal Foch, General Bliss, General Sir Henry Wilson, General Sir Frederic Sykes and General Diaz. His report, in printed form, had been handed to the delegates as they assembled that morning. M. Loucheur's committee, in view of the uncertainty regarding the actual strength of the German Army and the resources of raw material at its disposal, recommended specifically that the strength of the German Army be reduced to twenty-five infantry divisions and five cavalry divisions, and that all material in excess of the requirements of such a force be handed over to the Allied and Associated Powers. The committee also insisted that the German Government should pledge itself to discontinue the manufacture of war matériel during the Armistice. In order to insure correct execution of these demands certain German munition factories were to be placed under Allied control. Likewise it was stipulated that certain special machinery was to be removed and destroyed.

The committee, of course, anticipated that Germany might attempt to put obstacles in the way of proposed control. It was therefore recommended as an alternative guarantee, perhaps less comprehensive but sufficiently efficacious, that absolute control by military occupation be established over the area extending east of the Rhine for an average depth of fifty kilometers from Cologne to a point fifteen kilometers north of Duisburg, in such a way as to include Essen with the famous Krupp Works, the greater part of the Rhenish Westphalian coal fields, and the metallic industries dependent upon them. The importance of this region from a strategical point of view is so great that it would practically be impossible for Germany, once disarmed, to take up arms again if she did not have at her disposal the free use of its resources.

In case of necessity, these arrangements could be made even more stringent, the report pointed out, by a simple prohibition of all trade between the occupied and unoccupied territories. M. Loucheur's report naively suggested that the desired results could be obtained by means of negotiations or they could be enforced upon the enemy as a condition of the renewal of the Armistice.

General Bliss dissented from this report on the ground that its provisions seeking to extend the Allied Zone of Occupation negated the idea of reaching an agreement with Germany by negotiations. Prior to the signing of the original Armistice, General Bliss had insisted upon a complete disarmament of Germany. His terms were then considered too harsh. General Bliss deemed it now inconsistent to go beyond the terms of the original Armistice. In his blunt, straightforward manner the old Indian fighter of the Western prairies declared that M. Loucheur's proposal, if accepted, would constitute nothing less

than a breach of the Armistice on the part of the Allies and the United States.

Although Mr. Lloyd George's adroit draft resolution attempted to stampede the Supreme War Council into accepting M. Loucheur's report, neither M. Clemenceau nor President Wilson were willing to follow the lead of Britain's Premier. M. Clemenceau advanced two objections to Lloyd George's proposition. In the first place, he could not assume any obligations in the matter of supplies without consulting his experts. In the second place, it was contrary to his direct, outspoken character to discuss rewards first and make demands afterwards. He wanted the military conditions accepted first, and after that he had no objections whatever to any amount of diplomatic negotiations.

President Wilson regarded M. Loucheur's recommendations as a panic program. He could reconcile himself to the surrender of the big guns, if that was what his friends wanted. He could even go so far as to agree to a control of German factories by regulating raw material that went to them; but he balked at the proposition of sending army officers to control factories. That would never do. It surely would invite a peck of trouble, and it would take more military force to get out of the mess. The canny Welshman promptly agreed with Mr. Wilson. Baron Sonnino ventured the remark that perhaps some of the demands might be tuned down a whit. This calmed the ruffled passions, and it was agreed to appoint a fact-finding commission to determine just exactly what war material Germany was to surrender as a condition for the renewal of the Armistice.

Discussions were resumed on the following day, February, 8th. At this time M. Tardieu offered a solution which demanded the German Government that it furnish a complete inventory of war material, including airplane motors and naval aircraft. All surplus was to be surrendered to the Allies. Appreciating, however, the fact that the contemplated enumeration of matériel would consume much valuable time, M. Tardieu, with French frugality, took time by the forelock and proposed that certain quantities of matériel should be surrendered at once. This suggestion evoked considerable argument and discussion. Finally, President Wilson pointed out to the distinguished gathering that when the Armistice was flashed to America, the people over there regarded its conditions as terms of absolute surrender rather than a mere suspension of hostilities. If the present demands were sent to the United States, the American people would say that the original Armistice showed an amazing ignorance of the actual situation in Germany. "It is very important," said the President, "that the Allies should make a good impression on the world. These continual aggravations to the Armistice puts the Allies to a moral disadvantage." The Germans were beaten, he thought, and they knew it. "Their spirit was broken, and they would not renew the struggle."

The professorial warning went over without apparent

effect. After a great deal of caviling, President Wilson and M. Clemenceau agreed to make an immediate demand upon the Germans that they supply information concerning the number of machine guns, field guns, heavy guns, airplane motors and naval aircraft they had in their depots, factories and elsewhere, and that this information was imperative for the determination of the terms for the renewal of the Armistice. The refusal of the Germans to cease hostilities with the Poles served as a suitable pretext for making this demand.

It is quite impossible, within the limitations of this paper, to go into all the bickerings and discussions relative to the disarming of Germany as an additional condition of the Armistice. Suffice it to say that on February 12th, on President Wilson's motion, it was decided to appoint a commission of military, naval and air advisers, composed, in addition to the Commander-in-Chief, of three representatives of each of the Great Powers. It was also agreed that Marshal Foch should obtain from M. Clemenceau the text for the renewal of the Armistice which should be presented to the Germans. The Tiger thus won a complete victory, and Mr. Wilson made preparations for a speedy return to the United States.

When the Armistice was renewed on February 16th it did not set a definite time limit for its continuance. The Great Powers reserved to themselves the right to terminate the Armistice upon three days' notice. The Germans were given to understand that the final military peace conditions would be presented to them with as little delay as possible. Marshal Foch pressed hard for an early decision on the final military, naval and air conditions which were to be imposed upon the enemy. When the Supreme War Council again met, on March 3d, Marshal Foch submitted a brief summary of the report by the Interallied Committee appointed on February 12th. This report proposed:

- (1) Maximum military and aerial strength:
 - a. Land forces not to exceed 200,000 men, exclusive of officers whose number was not to exceed 9,000.
 - b. Air forces not to exceed 1,000 men, including officers; these forces not to be maintained after October 1, 1919.
- (2) Staffing of large units:
All delegations agreed to fix the maximum number of large units and staffs at 15 infantry divisions, 5 cavalry divisions, 5 Corps H.Q., and 1 Army H.Q., staff officers were limited to 300.
- (3) Method of recruiting strength:
Officers and N.C.O.'s recruited voluntarily, the former to serve 25 years, the latter 15 years. Enlisted men recruited by draft or any other method at the discretion of Germany, to serve not more than one year. Number of trainees in each class not to exceed 100,000 men.
- (4) Armament, war machines and ammunition:
In accordance with the needs of an army as fixed by these terms. All surplus to be surrendered to the Allies.
- (5) Supervision of proper execution of these terms to be entrusted to a Committee of Control.

These terms represented the unanimous opinion of the

military experts, although the British delegation favored voluntary service for a long term, but they accepted the conditions outlined by Marshal Foch in order to arrive at a decision. There were some differences of opinion in the matter of control recommended by the military, naval and aerial subcommittees. To iron out these differences the report was referred back to Marshal Foch and his associates. With this task completed, the report was re-submitted to the Supreme War Council on March 6th.

The report did not suit Mr. Lloyd George at all. He saw grave danger in an army of 200,000 men raised by annual recruitment, either voluntary, compulsory, or otherwise. This would enable Germany to build up a huge army at the rate of one million trained men every five years. Of course Mr. Lloyd George had no knowledge of military matters and he quite naturally failed to discern the sardonic subtlety of Marshal Foch's plan. He would allow, nay compel Germany to train a brand new contingent every year, and turn Prussia's deceit after Jena to his own advantage by forbidding the training of staffs. That was the weakness in the system Foch desired to foist upon Germany. Quoting Marshal Bugeaud, Foch said: "it would be better to have an army of sheep commanded by a lion than a number of lions commanded by an ass." This, in language intelligible to the layman simply meant, that the command and staff were the all-important things and not the common soldier. The military advisors of the Supreme War Council were in favor of a system that would have deprived Germany of a staff which could, after a number of years, gather and drive the large flock of sheep which would still abound within her confines.

Mr. Lloyd George could not, however, see things that way. He remembered Napoleon's experience after Jena. Such a mistake must not be repeated if he could prevent it. Germany had plenty of capable staff officers who would be available for many years to come. Whatever might be said against the "unspeakable Hun," he was supremely efficient. Be that as it may, there was no valid reason in the world why Germany should have a larger army than Great Britain. And that was that Mr. Lloyd George declared himself unequivocally in favor of imposing upon the German Army far more effective limitations than those that were proposed by Marshal Foch.

The following day, March 7th, Mr. Lloyd George submitted his definite views on the military, naval and aerial terms of the peace. These he summarized briefly in the following principles:

- (1) German military, naval and aerial forces to be raised entirely by voluntary service.
- (2) The minimum period of service with the colors for all ranks to be twelve years.
- (3) Strength of the German Army and Air Force not to exceed 200,000 men of all ranks, organized in not more than 15 divisions and 3 cavalry divisions.
- (4) The strength of the German Navy not to exceed 15,000 men of all ranks and ratings.

In order that there might be no misunderstanding in

the matter, Mr. Lloyd George made plain his reasons for the proposal submitted. There was to be no second Jena. The plan he proposed was the only effective method of preventing collusion between Germany and another power, such as Russia for instance, to secure guns and other matériel. A voluntary army was more expensive than a conscript army, hence Germany would get far less for her money, and after reparations payments there would be little money left for military adventures.

The Supreme War Council adopted the resolution offered by Mr. Lloyd George without any objection. The victory of civilian "experts" in military matters was complete. Lloyd George and Clemenceau had their day while President Wilson was absent in the United States. Marshal Foch, however, still refused to admit defeat. He insisted, that not one of the members of the military committee favored Mr. Lloyd George's principles. General Desgouttes, another distinguished warrior, felt sure that he would never agree with the views of the British delegation in favor of a voluntary long term army in Germany. This, he thought, would make Germany far stronger than if she were compelled to maintain a short-term conscript army.

It was too late. "Governments cannot force the military authorities to change their opinions," the fiery old Tiger remarked curtly, "but the decision would nevertheless remain with the governments." To make sure that such would be the case, Lloyd George then and there served notice that he would never sign on behalf of Great Britain a peace which gave Germany an army on other conditions than those outlined by him. As to the air force, he had no objections to its entire suppression as recommended by the air committee.

On March 10th, Marshal Foch, in accordance with previous instructions of the Supreme War Council, submitted a draft of regulations concerning a definite military status for Germany after the signing of the treaty of peace. In submitting this draft, the staunch old warrior made the following declaration:

"On February 12th, the Governments entrusted a Military Committee with the task of laying down, in all liberty, the conditions of Germany's disarmament. After a particularly thorough study of the questions, the military representatives established the draft of March 5, which was based upon the short term of service.

"On March 7th, the Governments, upon demand of the British Government, entrusted the same representatives with the laying down of a draft based upon the long-term service. The draft of March 10th is submitted as a consequence of these directions.

"From a military point of view, I hold the draft of March 5th is preferable for the considerations already explained and owing to a thorough study to which it was submitted.

"If in spite of all, the Governments were to adopt the principle of the long-term service and rally to the draft of March 10, it is indispensable, in order to diminish the danger which, in my opinion, exists with an army based upon a long term of service, to reduce the strength from 140,000 men provided for in the draft to 100,000, this for various reasons which will be explained."

The draft contained the following principal provisions:

- (1) Complete demobilization of Germany within two months;
- (2) thereafter Germany's military strength is not to exceed 140,000 men, including officers. (A further reduction to 100,000 was held indispensable by Foch.) The number of officers is not to exceed 6,000 of the total.
- (3) Recruitment on a voluntary basis with the terms of enlistment fixed at twelve years.
- (4) Authorized major units not to exceed eleven infantry divisions and three cavalry divisions. These may be formed with not more than four corps staffs and one army staff. All other groupings, formations or organizations of command are explicitly forbidden.
- (5) Composition of all units, large and small, to conform to a carefully prepared Table of Organization appended to the report, and forming part of the draft.
- (6) The only *raison d'être* of the German Army is the maintenance of internal order, and it cannot be assigned to any other duty, except in case of necessity, police control of frontiers.
- (7) Functions of High Command are limited to administrative duties. Staff officers of the War Ministries of all German States are limited to a grand total of 300, and these included in the total authorized strength.
- (8) All military training schools and centers are to be abolished, except those indispensably necessary for the recruitment of necessary officer personnel. The number of students admitted to these to be proportionate to vacancies.
- (9) Armaments, equipment and ammunition supply of the German Army shall not exceed the limits prescribed in the annexed Tables of Allowances.
- (10) Stocks of munitions to be stored at fixed points and their location to be communicated to the Allied and Associated Powers.
- (11) Production of Chemical Warfare material, armored cars and tanks is forbidden.
- (12) Manufacture of arms and munitions authorized only in a limited number of factories, the names and locations of which are likewise to be communicated to the Allied and Associated Powers.
- (13) All fortresses, fortified works and land forts within fifty kilometers of the right bank of the Rhine to be disarmed and dismantled. The fortresses along the southern and eastern frontiers to maintain the status quo. The armament of these is never to exceed, as regards number and caliber, those installed at the time of signing these articles.
- (14) Any territory on the left bank of the Rhine, which may be left to Germany after the signing of the Peace Treaty, to be completely demilitarized.
- (15) All excess war material and special machinery to be surrendered to the Allied and Associated Powers.
- (16) Germany is forbidden to manufacture war material for other countries, nor is Germany, any German state or citizen, permitted to receive such material from other countries.

The draft further provided for the repeal of all military laws of Germany in conflict with its provisions, and its own enactment into the public law of Germany. It fixed conditions of service for officers and enlisted men, and placed restrictions upon societies of retired officers and soldiers, war veterans, rifle clubs and the like, and prohibited the imparting of military instruction to any of

these, or the employment for such purposes of public servants, gendarmes, customs guards and police officials. For the proper execution of the provisions of these articles the plan created a Military Control Commission under whose close supervision it was to be carried into effect.

The reduction of the proposed strength of the German Army from 200,000 to 140,000 men, and Marshal Foch's desire for a further reduction of this figure to 100,000 evoked considerable discussion. General Bliss felt sure that safety in Germany could not be insured with less than 140,000 men.

"The United States did very nicely on 100,000 men and no constabulary before the war," retorted Marshal Foch. "If Germany were given an army of 140,000," the grizzly old warrior added, "what with sailors, constabulary, forest and customs guards, she would have a trained force of not less than 206,000 men. This would constitute an aggressive force able to mobilize at once. It would compel the Allies to maintain an equal number of trained men."

Mr. Lansing, who in the absence of President Wilson headed the American delegation, promptly challenged the Marshal's figures relative to America, which overlooked the item of National Guard, something like 125,000 more or less trained men who had proven their worth on the Mexican border and later in France. In addition there were thousands of men in the different state constabularies, not to mention the tens of thousands of policemen, all trained in the use of firearms. "It is a fact," said Mr. Lansing triumphantly, "before the war the United States of America was perhaps the least military nation on earth, and yet she had available in times of peace 300,000 to 350,000 trained men." No doubt, this revelation of America's military preparedness before the Great War was as much of a surprise to General Bliss as to Marshal Foch.

It was clearly Clemenceau's turn to cinch the argument. The security of France was at stake. British and American troops would soon be gone home, and France will then have to look out for herself. The Tiger wanted, in the first place, to lighten the burden of his own country. He, therefore, insisted upon the adoption of the Marshal's figures. Nothing could suit Lloyd George any better. The less of any army Germany could maintain, the better he would like it. Even the least of it was too much for him. He, therefore, cheerfully agreed with Clemenceau that the security of France would in the final analysis be France's burden, consequently she was entitled to a decisive vote in the matter. Great Britain had a small army before the war, in fact slightly over 100,000 men, and yet she had to provide security for a far flung Empire, not to mention Ireland. Germany had neither empire nor an Ireland to worry about. "Should Bavaria represent Germany's Irish problem," added the canny Welshman with a roguish twinkle in his eyes, "it was not the business of the Allied Powers to arm Germany against her." Lloyd George felt strongly for France, and he did not

think that the British and American delegates had any right to oppose her views. All this was so logical that it did not fail to impress Mr. Lansing. In fact it impressed him so profoundly that he gladly agreed with everybody and did not mind saying so. That fixed Germany's military strength definitely at 100,000 officers and men.

M. Clemenceau had some misgivings about the purpose and usefulness of an army staff if the army was merely to serve as a police force. Again everybody agreed, and "Army" and "Army staffs" went into the discard, Marshal Foch failed, however, in an attempt to put over a prohibition amendment against maneuvers by staffs and troops of units larger than regiments.

Marshal Foch's generosity in leaving Germany's southern and eastern frontiers intact evoked some lively interest. It soon developed that the southern fortresses, two in number, were more than fifty kilometers from the frontier and could not possibly cause any harm. The eastern fortresses presented a more ticklish problem. Nobody knew their actual status and the members of the Supreme War Council deemed it undesirable to insist upon their being dismantled since quite possibly they might have been in Polish hands. Even if left to the Germans, they felt, these fortresses might offer some security against any Bolshevik aggression.

The Supreme War Council adopted the proposed draft with some minor modifications of no particular importance. Mr. Lansing, on behalf of the United States, reserved his assent to the concluding chapter. Everybody seemed happy and satisfied except the soldiers. Generals Desgouttes and Weygand of France, and General Cavallero of Italy entered further protests against the proposed long-term army. M. Clemenceau cut short the discussion by declaring that the only satisfaction he could offer the generals was to promise that their protests would be duly recorded in the minutes.

When, on March 17th, the corrected draft of the military clauses was presented to the Supreme War Council, President Wilson had resumed his seat, having returned from America on the preceding day. The Council accepted the articles with little or no discussion. Mr. Wilson saw some objection to the Interallied Control Commission because the article failed to fix a time limit

for its continuance. He expressed the opinion that if Allied Armies were to be maintained forever to control the execution of the peace terms, then not peace but Allied military domination would be the result. America would never consent to such an arrangement. Of course, Mr. Lloyd George promptly agreed with Mr. Wilson, and the Council obligingly modified the obnoxious phraseology in conformity with President Wilson's wishes. On the whole, the discussion of the proposed military clauses progressed with good-natured rapidity and, barring a few minor changes, the Council approved them in their entirety. Even Mr. Wilson seemed to have derived some benefit from his brief sojourn in the United States. He appeared more cheerful and pliant in the discussions.

The solution of the naval clauses proved much simpler than that of the military problem. Here British views and interests were paramount. And the British knew just exactly what the conditions were, what they wanted, and what they could get. Admiral Wemyss made no bones about it at all. He frankly admitted that this was the time to get what was to be gotten, and any delay might merely complicate matters. The Allied admirals thoroughly agreed as early as February 8th that they could fix with absolute exactitude what should be the state of the German Navy in time of peace, and they went ahead and did it. That is precisely where Navy men have the advantage over the Army. Anyone may put on a military uniform and think he is a soldier. Politicians need not even bother about putting on the uniform to become possessed of an infallible knowledge in military matters. Even the brashest politician is, however, quick to realize that the sea is no place for landlubbers, and that in naval matters discretion on his part is the better part of wisdom. The admirals, largely under British tutelage, proposed, and the Supreme War Council cheerfully disposed. Of course, there was a little discussion, even some haggling about the naval terms, but that was merely the politician's way of saving his face. When the verbal barrage ceased, the naval terms stood inscribed upon the scrolls of the Treaty of Versailles as conceived by the British Admiralty and ably seconded by their fellows of the lesser Naval Powers including the United States.

Rifle Antiaircraft Notes of Rebel Forces

AS TOLD TO LIEUTENANT BURGO D. GILL,
C.A.C.

THE experiences related herein are those of a young soldier of fortune who saw service with the Riffs as a Captain of Cavalry during the summer of 1925, and later as squadron commander, as well as the adjutant general, of Emilio Aréval Cedeño's revolutionary Army in the Venezuelan uprising of 1930-'31.

THE RIFFS.

Experienced foreign officers, some of them World War

veterans, in the Riffian Army trained certain of the Riff units in antiaircraft tactics. This training was quickly assimilated after an incident that occurred in either 1923 or 1924 when a large detachment of Riffs were caught by attack planes in a mountain pass. It was thereafter the usual thing for Riffs to make the passage of such ravines, or mountain passes, in dispersed formations with outlying air scouts. They never bivouaced at night in a cramped position either.

On the march, in camp or at a halt, outguards were always posted to give the alarm of an approaching plane. The favorite instruments of alarm in 1925 were the

whistles pillaged from dead French officers and noncoms. If this warning failed due to distance, two shots were fired. Without waiting to try and spot the approaching plane, everyone scattered. When well dispersed, all dismounted, if mounted, and made ready to fire when the plane came in sight. Firing was fast and furious to the accompaniment of a pandemonium of yells and curses.

The French and Spanish air attacks were surprisingly harmless.

The foreign officers present with the Riffs, which were mainly German, Russian, Egyptian, an Englishman or two besides three or four Americans, tried to teach the Riffs a system of leads to be used in firing their rifles at attacking planes. Actually, in the great majority of cases, this instruction failed of being put over completely, but a curious compromise was reached that the average Riffian rifleman used. The instructors thoroughly instilled the point that one must shoot in front of a plane to hit it. So far so good, but after that point was once aimed at, the Riffian "buck" kept on shooting in that same direction using his initial lead without trying to follow the plane. He kept on firing in this manner until the plane had passed this point.

However, while the above seemed humorous, and the writer sarcastically asked what were the Riffs able to hit, the officer in question stated that he saw seventeen French planes shot down in five days. He also referred to the official losses sustained by the French African Army Corps (the Moroccan) while engaged against the Riffs.

There were no antiaircraft guns in the Riffian Army. The officer suspected that a few flyers might have served with the Riffs, but that they never flew. Of Riffian planes, there were none! All of the antiaircraft defense was by rifle fire assisted by light, air-cooled machine guns. There were no water-cooled machine guns that he saw. This soldier of fortune believed that the fire from the machine guns did very little damage against enemy planes, but that the mass of fire from scattered riflemen did the trick. The Riffians also trained special groups of from thirty to sixty men in each squadron of cavalry to fire against planes, and that these detachments were all armed with rifles of German or French make.

VENEZUELA.

This soldier of fortune, while serving in Cedeño's Army, commanded the whole antiaircraft platoon of the army. The army in this case consisted of about 1,200 men, mostly cavalry. This platoon of antiaircraftmen, who did regular troop duty as well, was about half of this officer's squadron, really an overgrown troop. The Venezuelans were trained in taking leads with their rifles when firing against planes. However, the Venezuelan rebels understood that not only must they fire ahead of the target, but that they must continue to follow the plane. In other words, they were a lot more "savvy" on this point than the barbaric Riff.

Cedeño's Army was armed with a motley array of weapons, but after the revolution got well started, this

officer persuaded Cedeño to reclassify and rearm the troopers so that those in the same unit would have about the same sized machete, make of pistol, and same caliber rifle. The antiaircraft platoon were all armed with Mauser rifles. Each rifleman was taught to raise the rear sight leaf and fire with that as "firing data." Besides this "increase of range," the platoon was divided into three equal parts using "one," "two," and "three" windage leads for deflection. In other words, one group used a minimum deflection, another the maximum, and the third group a medium lead.

The army was trained in U. S. Cavalry "scatteration formation" tactics upon the approach of any planes.

Not much effort was made in Cedeño's Army to teach machine gunners to fire upon planes; for after all, in a rebel army, it is easier to have the individual rifleman open up than to lay the stress on quick-acting machine-gun sections. This system of putting the onus upon the individual, incidentally, was better on the whole for the morale of the entire organization. It gave everyone something to do.

The machine guns, each night in camp, were posted in shallow pits for the camp's defense. However, they were always placed so that they could fire upon low flying planes.

While Cedeño was in open rebellion from November, 1930, to April, 1931, the air attacks and scouting by the Federals were nil. During Captain Winston Ehrgott's march upon San Fernando de Apure, friendly population along the route of march informed them that about six planes had searched the llanuras for them. However, neither side ever saw the other.

A little later, while they were bivouaced at Cubarro on the Arauca River that separates Columbia and Venezuela, a scouting plane flew over them one morning. It was shot down. That afternoon seven attack planes, flying in rather wide open formation of a point followed by two groups of three each, attacked them again. Of these seven airplanes, two were shot down, and one was damaged so badly that the flyer had a forced landing in the Arauca River.

During this air attack the enemy planes used small bombs and machine guns. Luckily, no Cadeñista was wounded, and only two animals, of which one was hurt but slightly.

Naturally, the whole army fired during these two attacks as well as the little used antiaircraft platoon. While the rebel army was being attacked, a few Martin-Colt machine guns came into action.

These three episodes, the last one so disastrous for the Federals, ended the war in the sky as far as that revolution was concerned.

In closing, the writer asked this soldier of fortune what he thought the chances were for an attack plane flying over a regular army battalion or cavalry squadron, thoroughly trained in their own antiaircraft defense. He simply answered

"Hell, I'd feel sorry for the poor guy."

Changes in Target Practice Instructions for Period July 1--December 31, 1934

BY CAPTAINS S. L. McCROSKEY AND C. S. HARRIS, C.A.C.

I—GENERAL

1. A revision of TR 435-55, Coast Artillery Target Practice, has been made by the Coast Artillery Board under instructions from the Chief of Coast Artillery. Also, the annual Training Memorandum, instructions for Coast Artillery target practices, has been prepared. The latter is supplementary to the former and applies for the period July 1 to December 31, 1934. The exact date of publication of these two documents cannot be stated at this time, but it is hoped that they will be in the hands of the using troops prior to June 30, 1934.

2. Under the present plan of issuing instructions for Coast Artillery target practice such instructions are divided into two categories; i. e., those that are more or less permanent in nature and are expected to be applicable for several successive years, and those subject to frequent changes as a result of modifications in method or desired changes in emphasis on features of training. Instructions which fall in the first-named category are included in TR 435-55, while those which fall in the latter category are issued annually in a training memorandum. Previously this was called the "Annual Letter."

3. The purpose of this article is to present advance information on changes in target practice instructions that have been made and that will be applicable to firings held between July 1 and December 31, 1934. It is hoped that it will be useful to battery commanders in the conduct of training which will be carried on prior to the issuance of the two publications above mentioned. It is assumed that the reader is familiar with TR 435-55, dated June 30, 1930, and also with War Department Training Memorandum No. 1, dated May 1, 1933.

b. Perhaps the most important changes in instruction for this period are the elimination of classification of practices and the general moderation of restrictions on methods of fire. It is the intention to allow to harbor defense and regimental commanders great freedom in trying out special methods of fire so that practices may more nearly approximate actual service conditions. Practices are still required to be analyzed and all of the usual records kept unless, in the opinion of the Coast Artillery district or brigade commander, the keeping of such records would interfere with the conduct of the particular type of practice prescribed.

c. Ammunition allowances (July 1 to December 31, 1934) are approximately one-half of the usual amount. In some cases special authority has been given to convert the money value of ammunition to any desired type of ammunition and allow only a part of the batteries to fire. Where such special authority has not been given, batteries will conduct practices using only one-half of the usual allowance.

II—SEACOAST

4. The following changes affect Regular Army Seacoast firings:

a. *Records, reports.*—The Tabular Analysis, Form No. 23, is required to be submitted with the target practice reports. Only one copy of the graphical analysis is required instead of the two previously required. An additional copy of the Matériel and Powder Report, Form No. 25, is required to be prepared and transmitted to the local Ordnance officer. The following blank forms for seacoast target practices will be furnished upon application submitted direct to the President of the Coast Artillery Board:

- Form No. 21 — Timekeeper's Report
- 23 — Tabular Analysis
- 24 — Graphical Analysis
- 25 — Matériel and Powder Report
- 26 — Work Sheet, Determination of Deviations
- Cover Sheet

(All other required forms are to be prepared locally.)

b. *Trial fire and adjustment.*—No limitation is placed on the conduct of trial fire, except that in no case will more than four observed rounds be utilized, and in the case of batteries limited to a total of seven rounds for the entire practice, not more than three observed rounds will be utilized. The method of adjustment is optional. Setting shots are not authorized.

c. *Normal ranges:*

Caliber	Normal range, day firing (Yards) ¹
3-inch guns	6,000
6-inch BC and DC	9,000
155 mm ²	12,000
8-inch Railway	12,000
10-inch DC	12,000
12-inch Mortar (1,046-lb. projectile)	6,000
12-inch DC (870-lb. projectile)	12,000
12-inch DC (Except with 870-lb. proj.)	14,000
12-inch BC, Model 1917 (870-lb. proj.)	15,000
12-inch BC, Model 1917 (except with 870-lb. proj.)	17,000
14-inch Turrett	14,000
14-inch DC	16,000
14-inch Railway	20,000

¹For night firing, the normal range will be taken as fifty per cent of the foregoing values, except that no value less than 5,000 or greater than 8,000 yards shall be used.

²Super charge will not be used for 155-mm guns unless range is over 14,000 yards.

d. *Number of guns to be fired.*—All 3-inch, 6-inch, 155-mm, and 12-inch mortar practices will be fired with two guns. All other practices may be fired with one gun only. Mortars will fire in one zone only.

e. The score for Regular Army seacoast firings has not been changed from that published in TM No. 1, 1933, except in the case of the B component, which now is:

$$B = 36 \left(\frac{PE + DAPE}{d} \right)$$

where PE is the probable error as taken from Table I, TR 435-55; DAPE is the developed armament probable error,

and "d" is the average deviation of all record shots from the target. The change is to simplify computations and does not materially affect the value of B.

f. K factors remain as they were in TM No. 1, dated May 1, 1933.

g. A new and separate score sheet is provided for use in lieu of the form on the reverse side of the graphical analysis. This form is modified to include space for all elements of the existing score.

b. *Determination of deviations.*—The new TR 435-55 describes a tabular method for determining deviations of impacts. This method once understood should require less time and be considerably more accurate than the old graphical method previously used. In addition, the methods of obtaining results are such that the computations may be checked easily. A special form (No. 26) will be supplied for use as a work sheet. In order that opportunity for study of this new method may be available, a part of paragraph 21 of the new TR 435-55 is quoted below:

"21. Determination of deviations. — a. General. — (1) Theory. Deviations of impacts from the target will be determined by the tabular method as explained below. Tables V, VI, VII and VIII, paragraph 29, are furnished to reduce the amount of computations involved. A general explanation of the principles is as follows:

In Figure 1 a type sketch of the problem is indicated. In this sketch:

V is the towing vessel

T is the target

G is the gun

S is the splash

TC (perpendicular to VT) is the camera deviation in yards (from Form 20).

Td=MN (perpendicular to GT) is the lateral deviation in yards (from Form 19).

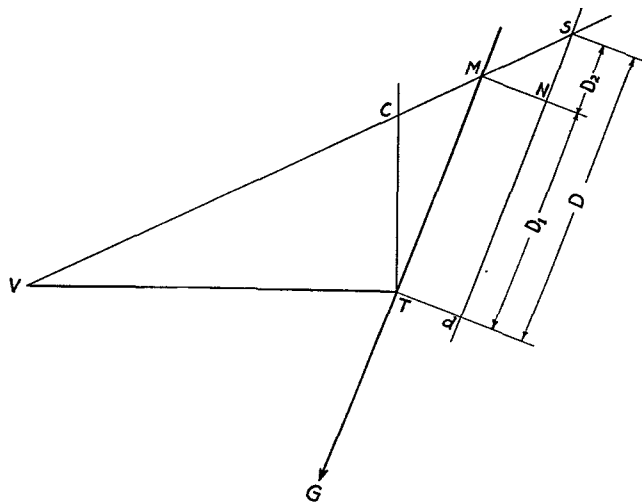


FIGURE 1

The range deviation (D) of the splash from the target equals $D_1 + D_2$. $D_1 = TM$ and $D_2 = NS$. The solution for the determination of D is divided into two parts: i.e., first the value TM or D_1 is determined by solving the oblique triangle VTM; second, the value NS or D_2 is determined by solving the right triangle MNS.

In triangle VTM:

$$\frac{TM}{VT} = \frac{\sin TVM}{\sin VMT}, \text{ from which}$$

$$TM = \frac{VT \sin TVM}{\sin VMT} = D_1$$

In the above equation VT is known.

Angle TVM may be found from the equation:

$$\tan TVM = \frac{TC}{VT}$$

Angle VTM = $180 - (TVM + VMT)$

Angle VTM = $180 - \text{Angle VTG}$

In right triangle MNS the value MN is known (lateral deviation in yards).

Angle MSN = angle VTG — Angle TVS = Angle VMT

$$NS = \frac{MN}{\tan NSM} = D_2.$$

In preparing the tables for making the solution of this problem certain complementary or supplementary angles are used in place of the values indicated above. This is done for the purpose of simplification of the tables and of the operations involved."

The Tables V, VI, VII and VIII, referred to in the above quotation are used in conjunction with Form 26 to make the computations. No interpolations in the tables are required. Detailed instructions, as to procedure in making the computations, are included on Form 26 as well as in the Training Regulation.

i. *Tables.*—Table I (Probable Errors), has been extended to include data for the 12-inch, 870-pound projectile. Also, the table of probable errors for mortars (Table I) has been modified so that there is now only one value listed for each zone regardless of the elevation. This is considered to be sufficiently accurate for scoring purposes. It considerably reduces the work required in computing the score of mortar practices. A new table of probability factors has been included. This table has been extended so that no interpolation is now required. In fact all tables are so arranged that no interpolation is necessary.

j. *Safety precautions.*—The paragraph on safety precautions, has been carefully coordinated with TR 140-5. Cross references are made so that instructions on any points covered may be found readily. In addition, a paragraph on checking the safety of pointing guns in direction is included. This paragraph is substantially the same as paragraph 3, War Department Training Memorandum No. 1, 1933. It has been asserted by some that the method prescribed may be difficult to carry out but if the operations of the safety pointing checkers are completely separated from the operations of the firing battery, it is believed that with a little training the plan will work smoothly and that the safety of the towing tug will be materially greater than heretofore.

k. *Spotting.*—The only change in regulations on spotting is that single-station spotting is no longer a requirement for batteries of 155-mm and below. This change was made in TM No. 1 for 1933. However, since but few Regular Army firings were held under the provisions of that memorandum, it is thought worth-while to again call attention to the change.

5. *National Guard Seacoast Firings.*—National Guard practices are to be conducted substantially as required for Regular Army practices except for the differences in the method of scoring and in the reports required to be rendered. It may be that National Guard practices will be classified in the usual manner. Information on this point is not now at hand. Score for National Guard firings is to be as indicated in T.M. No. 1 for 1933, except for the width of the various zones of the target and for the range component. Target zones are now 3, 6, 9 and 12 direction probable errors wide instead of 2, 4, 6 and 8 as before. The range component of the score as stated in T.M. No. 1 is multiplied by 6. This change was made in order to make it conform more nearly to the corresponding component of the Regular Army score. It operates to impose a smaller penalty for firing at ranges less than normal.

III—SUBMARINE MINES

6. *Mines.*—For the period under consideration, mine practices will be conducted substantially as indicated in the old TR 435-280 and T.M. No. 1 for 1933. Minor changes from those instructions are as follows:

a. *Score.*—(1) The firing component is now stated so that each hit has a value of 100 points divided by the number of mines required to be fired, instead of divided by two. This change was made necessary because of the uncertainty as to future ammunition allowances.

(2) The discussion of the submergence component is changed to make clear that, in scoring, the submergence of mines is always referred to mean low water. For example, if a mine, when planted has a submergence of ten feet and the height of the tide is ten feet, the mine will be considered a floater.

b. *Tests of mines.*—The electrical tests of loaded mines in the cable tanks have been discontinued, for the reason that such tests are considered to be somewhat dangerous. All other tests are prescribed in T.M. No. 1 for 1933 and the old TR 435-55.

c. The following blank forms for mine practices will be furnished upon application submitted direct to the President of the Coast Artillery Board, Fort Monroe, Virginia:

- Form M-1 — Summary of Mine Service Practice.
- M-2 — Planter Record.
- M-3 — Casemate Record.
- M-4 — Loading-Room Record.
- M-5 — Plotting-Room Record.
- Cover Sheet.

IV—ANTIAIRCRAFT

7. *All batteries.*—Heretofore it has been required that a record target practice be completed on the day it was begun. Under the new regulations the regimental commander is authorized to postpone the completion of a practice when:

a. No sleeve target is available with which to continue the practice; or when

b. Firing cannot be resumed because of an unsafe field of fire. In either event, a detailed explanation will be submitted. No matériel change has been made in the method of computing the score for any type of antiaircraft practice.

8. *Antiaircraft Guns.*—a. Changes in TR 435-55.—(1) Each gun battery, primary assignment, will train at least one two-station altimeter section and at least one stereoscopic height finder section.

(2) (a) In order to simplify the problem of determining the number of hits as well as that of checking reports, a method of determining deviations by computation replaces the plotting method used heretofore. Incident thereto the shape and dimensions of the hitting volume have been changed. The new hit-

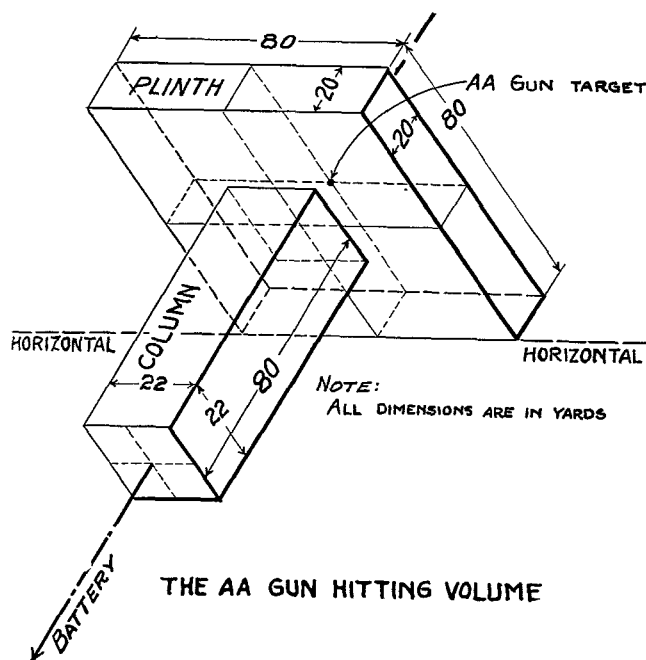


FIGURE II

ting volume is illustrated in Figure 2. The change was made solely for simplification. The over-all cubic volume is approximately the same.

(b) 1. The location of the target in space is computed for every five seconds during fire, and the following data tabulated:

- (a) Horizontal range, slant range, and altitude from battery (O_1).
- (b) Horizontal range, slant range, and altitude from flank (O_2).
- (c) GTF angle.

These computations are made from simultaneous readings of azimuth and angular height from the two base end stations.

2. It is desired to determine with respect to the target the deviations of each burst in yards as follows:

- (a) Lateral deviation, measured perpendicular to the line of position, in the horizontal plane.
- (b) Vertical deviation, measured perpendicular to the line of position in the vertical plane.

(c) Range deviation, measured along the line of position.

The vertical and lateral deviations of each burst from the battery (O_1), and the lateral deviation from the flank (O_2), all in mils, are taken from the camera records, or from the visual observation records. The time of each burst is determined and all bursts which occur within two and one-half seconds of any time for which the position of the target is computed, are grouped and considered to have been fired with the target in that one position. The vertical and lateral deviations are obtained by converting the mil deviations to deviations in yards. The lateral flank deviation (not range deviation) is obtained in like manner. These deviations are then combined with certain other factors to obtain the true range deviation along the line of position as explained below.

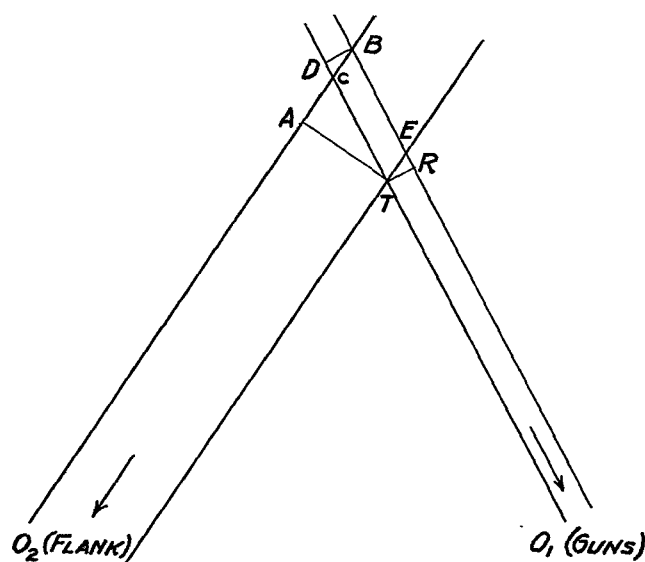


FIGURE III

Figure 3 represents a horizontal projection of the situation at the target. The target is at T, the burst at B. The problem is to solve for the horizontal range deviation, TD.

The following quantities are known:

(a) Lateral deviation $TR = DB$.

(b) Flank deviation TA .

(c) Gun-Target-Flank angle

$GTF = \text{angle } TCA = \text{angle } BCD$.

In right triangle

TAC , $TC = TA \csc TCA = TA \csc O_1 TO_2$.

Table IX in TR 435-55 contains values of F_1 which are natural cosecants; hence the product of F_1 and the flank deviation (TA) gives the distance TC .

In right triangle

BDC , $DC = DB \cot DCB = DB \cot O_1 TO_2$.

Table X in TR 435-55 contains values of F_2 which are natural tangents; hence the product of F_2 and the lateral deviation (DB) gives the distance CD .

The horizontal range deviation $TD = TC + CD$.

Figure 4 represents the situation at the target projected onto the vertical plane of position.

The problem is to solve for the slant range deviation TK .

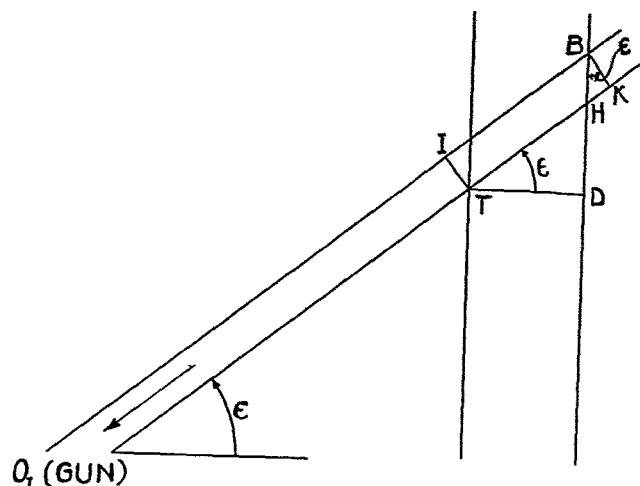


FIGURE IV

The following quantities are known:

The horizontal range deviation TD .

The vertical deviation $TI = KB$.

Angular height = angle HTD = angle HBK .

In right triangle TDH , $TH = TD \sec \epsilon$.

Table IX contains values of F_3 which are natural secants; hence the product of F_3 and the horizontal range deviation (TD) gives the distance TH .

In right triangle BKH , $HK = KB \tan \epsilon$.

Table X contains values of F_4 which are natural tangents; hence the product of F_4 and the vertical deviation (KB) gives the distance HK .

The slant range deviation $TK = TH + HK$.

The lateral deviation, the vertical deviation, and the true slant range deviation of the burst have now been obtained, and a comparison of these deviations with the corresponding dimension of the hitting volume indicates immediately whether or not the shot was a hit.

b. Provisions of Annual Training Memorandum.—

Batteries firing antiaircraft guns as an additional assignment are not required to fire a record practice. Each battery will fire one or more preliminary practices. Antiaircraft batteries, primary assignment, are required to fire one or more preliminary practices and one record practice, night or day. The requirements specified heretofore as to courses, maneuvers, ranges, and altitudes are waived. The practice may be fired on either three or four courses. The regimental commander will prescribe the courses to be flown. However, each course will vary from each other course both in altitude and in angle of approach. Battery commanders are allowed to select the methods of altitude determination and range spotting which they use.

9. *Antiaircraft Machine Guns*.—No matériel changes have been made in TR 435-55 for machine gun practices. The annual training memorandum prescribes changes as indicated below.

a. Each Regular Army antiaircraft machine-gun battery will conduct one preliminary and one record practice with .50 caliber machine guns. In the record practice each platoon will fire on two of the four courses. In addition, each of the two platoons will conduct one preliminary

and one record practice with .30 caliber machine guns.

b. Each Regular Army battery firing machine guns as an additional assignment will fire one preliminary and one record practice with .30 caliber machine guns.

c. The requirements specified heretofore as to courses, maneuvers, altitudes, and ranges are waived. Each record practice will consist of four courses. The regimental commander will prescribe the courses to be flown. Each course will differ in type from the other courses in the practice.

d. The guns will be sited in such manner that adjacent guns are separated by at least twenty yards.

10. *Antiaircraft Searchlights*.—a. The provisions of TR 435-55 for searchlight batteries follows closely the "Proposed Regulations for Antiaircraft Searchlight Practices." The two special courses prescribed in War Department T.M. No. 1 for 1933 have been included, with the modification that the low altitude course will be flown at the minimum altitude consistent with safety.

b. *Provisions of the Annual Training Memorandum*. (1) Regular Army antiaircraft searchlight batteries, primary assignment, will conduct two record practices. Other searchlight batteries will conduct one record practice.

(2) *Maneuvers*. On each side of the four regular courses of a record practice, when the plane has been picked up and illuminated for thirty seconds, all lights will uncover except two, and thereafter not more than three lights will illuminate the plane at any time. The pilot of

the plane will be signaled to maneuver freely. Thereupon he should attempt to escape from the lights, employing any maneuvers consistent with safety, except that he will continue in the general direction of the objective. On the two interior courses the pilot will be permitted to attempt to escape through either flank of the defended sector. If, one these courses, the plane is illuminated until it reaches the boundary of the 90-degree sector, the battery will be judged successful in the illumination, and for the purpose of computing the score, the value Rc will be taken as the horizontal distance from the point of pickup to the bomb release point. If the target is lost before it reaches the 90-degree sector boundary, the value Rc will be computed as prescribed heretofore for any lost target. This requirement has been added to provide greater interest and more training during the illuminating period.

(3) *Special Defensive Factors*. (a) Where local terrain conditions prevent the establishment of the normal 90-degree sector, the Coast Artillery District Commander will prescribe the sector to be defended and the number of searchlights to be employed in the record service practice. The sector and number of searchlights will be so prescribed that, as nearly as practicable, a defense problem comparable in difficulty with that of the normal 90-degree sector, will be presented.

(b) Scores for practices conducted in special defensive sectors will be adjusted by the Chief of Coast Artillery in accordance with the difficulties of the several defense problems presented, as compared to the standard problem.

History of Gunners' Examinations in the 240th Coast Artillery (TD)

BY CAPTAIN S. R. DOWS, C.A.C., N.G.

EXAMINATIONS—than which there is nothing more essential and nothing more discriminatory—have long been the subject of discussion by instructors and students. Many schemes have been tried in various institutions and each scheme has its followers. The bone of contention is always, "This examination is not comparable with that one and hence a grade on the one cannot be compared with a grade on the other."

In my school days the engineering department had a scheme of saying that a certain percentage of the class should be graded "A," a certain percentage "B," etc. The contention was that all groups of men are equal (just like probability in fire adjustment) and that the only problem was to separate the grain from the chaff. Thus no penalty nor premium was placed on the students selection of an instructor. It is a swell plan after the correct percentages have been determined and after the proper adjustments have been made for large and small classes and for "wild shots."

We have read with a great deal of interest the article by Captain Parker and Lieutenant Dunnelly of the 243d C. A. They have estimated the situation in about the

same manner that we did and have arrived at a solution surprisingly similar to ours. The slight differences are matters of opinion but we take this opportunity to comment for the benefit of others who may be interested.

Up until 1924 we followed the procedure of giving oral examinations. We have a distinct advantage in that our Regiment is all under one roof and our armament is all 155-mm. guns. We do have the Combat Trains and the Headquarters and Service Batteries to contend with, and they are no small problem. TR 435-310 was not particularly kind to us in that many subjects covered by the prescribed examinations are foreign to the work of the batteries being examined.

We heartily subscribe to everything which was said against oral examinations for National Guard Coast Artillerymen. A true measure of knowledge and ability could only be achieved by the working of a miracle.

In 1924 we instituted the use of "true-false" examinations and found them quite superior to the oral type. We soon discovered certain apparent weaknesses. It appeared that the ambiguous type of question is inherent in "true-false" sets. After each examination we would tabulate

the questions and indicate the number of times the questions were answered incorrectly. The ones which were quite universally missed were then scrutinized to determine whether it was the question itself which was wrong or whether the question was OK but the instruction had been weak. Usually we saw a weakness in instruction.

The true-false question is also quite misleading from the standpoint of instruction since a *false* statement may very readily lodge in a man's mind. Where these statements referred to safety precautions we hated to make any incorrect statements.

For these and other reasons we have abandoned the true-false type in favor of the other type suggested in the article. We ask questions which can be answered by "yes" or "no" or by inserting a word or number in a blank space. We also have the type of question in which certain words are crossed out in order to leave a correct statement. We have resorted to sketches for nomenclature and also for service of the piece. Our Sergeant Major, Master Sergeant Heller, is an artist with the mimeograph machine so the problem is simplified in that regard.

To minimize the cost of stencils and mimeographing we have so designed our question sets that they may be used many times. A Second Class Gunner's examination consists of six or seven pages and we have three sets of these pages so that any combination of sets can be put together on short notice. We also use such questions as:

"The purpose of the (replenisher) (counter recoil) (counterpoise) (recoil cylinder) is to (assist in closing the breech) (return the gun to firing position) (cushion the recoil of the gun)."

In using that question the examiner first strikes out the subjects not desired and the candidate strikes out the answer not desired. The result is a simple statement which, if correct, gets full credit.

The reason we use our system of questions and question sets is that we return the examination papers to the men after they have been graded. We have no secret question sets to be guarded against pre-examination "boning" because all the sets are out. We do have a shortage of Gunners' Instruction Books (I expect to receive a letter from the JOURNAL calling my attention to their ad—but our credit is not what it should be) and we find that by returning the papers to the men we prolong their interest in the subject to a *post mortem* which is usually quite as valuable as the instruction which preceded the examination.

We are now in our third year with the new type ex-

aminations and the men who take them are quite enthusiastic. We have maintained a very close Regimental supervision in order to establish uniformity of results. And now we have made a further move which may be of interest since it is a relinquishment of Regimental supervision. The foundation has been laid for worth-while instruction and accurate examining and the problem of carrying on has been handed to the Battalion organizations. Experts are still to be examined by the Regimental Board but First and Second Class Gunners are a battalion problem from here on. Examination questions may be prepared by the battalion boards or they may requisition questions from Headquarters. The purpose of this move is to make examinations more flexible since our requirements for promotion to noncommissioned status include gunner qualification. It frequently happened that non-com candidates required special examinations which were not always available.

After ten years of written examinations we are convinced that the 243d C.A. is on the right track. In the past three years we have given no less than a dozen examinations using the newer type of question, the direct type, with sketches for nomenclature and service of the piece, and find them quite accurate in their results. We believe that the valuable part of our plan is that the papers are returned to the men after they have been corrected so that each candidate knows exactly wherein he has failed and so that the discussion of questions will be of value to other candidates and the general instruction of the battery.

One of our questions says "Check the knots on the following list which you are able to tie" (a list of ten knots follows). The examining officer waits until this part of the examination has been checked and then hands the candidate a rope and lets him "hang himself." To be sure, they are not all reached, but the question serves to lighten the load of examining because there is always a bit of fun at someone's expense—and our men have learned how to tie knots and what they are used for.

A bit of imagination, a little work, a good mimeographer, and many things are possible with written examinations. The complete examination must accomplish several things; determine the knowledge of the candidate, bring to light any weaknesses in the methods or scope of instruction, measure in a degree the comparative ability of various instructors, and last but not least, the complete examination will serve in itself as additional instruction. To this end we are constantly endeavoring to improve our examinations.



IT IS IDLE TO DREAM of an all-robot army. No machine can replace the brains of men, but machines may be employed to replace muscular power and to extend the striking power of legs and arms.—MAJOR RAYMOND MARSH, ORDNANCE DEPARTMENT.

The Coast Artillery School Courses For Officers of the Regular Army, School Year, 1934-1935

By MAJOR K. T. BLOOD, C.A.C.

BEGINNING with the school year 1933-1934, the quotas of student officers, Regular Army, to the special service schools, were reduced by 50 per cent. This reduced quota does not admit of two full courses for each officer at the special service school of his arm as previously contemplated. The quota will provide, however, for the annual attendance at one course of a class at least equalling in number the average annual officer replacement in each arm and, in addition thereto, provide for special courses for a limited number of officers. The War Department considers it essential that each officer pursue the one full course of instruction conducted at the service school of his arm.

As a result, the present Advanced and Battery Officers' Courses will be merged into one for the school year 1934-1935, under the name—"The Regular Course, Coast Artillery School." Although the school year is increased to ten months' duration, from September 1, 1934 to June 28, 1935, it is manifestly impossible to include all instruction previously given in the Advanced and Battery Officers' Course in a single course. It is therefore desirable that some of the basic instruction be completed prior to attending the Coast Artillery School. It is considered important that prospective students review such subjects as map reading and sketching, the use of logarithms and trigonometric tables, the solution of triangles and the use of firing tables, before starting the school course. Accordingly a bulletin of information has been prepared by the Coast Artillery School and forwarded to students who have been selected to attend, giving portions of texts which should be reviewed and furnishing examples of the problems to be solved, with solutions. The bulletin is furnished with the object of assisting the student. If he is unable to take advantage of this information before coming to the school it will in no way prejudice him. This procedure is intended to cover the transition period before the present troop school system is changed to require officers to pursue definite subcourses of the Extension Course as a requisite for eligibility to attend the service school course. This basic instruction will then be provided for in the revision of Army Regulations No. 350-2600 "Troop Schools for Officers."

Based on the foregoing considerations the following Regular Course has been prepared and approved for the school year 1934-1935:

Regular Course

No.	Subject	Hour	Department
1.	Military Topography and Field Engineering	16	Engineering
2.	Orientation	111	Engineering

3.	Electrical Matériel	157	Engineering
4.	Submarine Mines	82	Engineering
5.	Motor Transportation	59	Enl. Spec.
6.	Basic Gunnery	44	Artillery
7.	Seacoast Artillery Matériel and Gunnery..	94	Artillery
8.	Seacoast Artillery Firing	92	Artillery
9.	Antiaircraft Matériel and Gunnery	106	Artillery
10.	Antiaircraft Firing	78	Artillery
11.	Organization, Tactics and Technique.....	507	Tactics
	(a) Combined Arms in Coast Defense and Seacoast Artillery	(106)	
	(b) Antiaircraft Artillery.....	(96½)	
	(c) Infantry and Combined Arms and Combat Orders	(136½)	
	(d) Air Corps	(57)	
	(e) Logistics	(40)	
	(f) Field Artillery	(40)	
	(g) Chemical Warfare	(11)	
	(h) Cavalry	(9)	
	(i) Combat Intelligence	(7)	
	(j) Signal Corps	(4)	
12.	General Conferences	34	
13.	Equitation	45	
TOTAL		1,425	

Advanced Technical Course

The Advanced Technical Course, open to selected graduates of the present Battery Officers' Course, will be held during the School Year 1934-1935. It is the result of combining the old Advanced Engineering and Advanced Gunnery Courses and will continue throughout the school year. Its purpose is to train suitably qualified graduates of the Battery Officers' Course for duty as artillery engineers, communications officers with troops, or instructors in the Coast Artillery School. Its scope is as follows:

Summary of Course

No.	Subject	Approx. Hours	Department
(a)	Mathematics	50	Artillery
(b)	Duties of the Artillery Engineer:		
	1. Fortification Power Plants.....	44	Enl. Spec.
	2. Harbor Defense Searchlights	12	Engineering
	3. Storage Batteries	19	Engineering
	4. Orientation	33	Engineering
	5. General	32	Engineering
(c)	Advanced Electricity	147	Engineering
(d)	Duties of the Communications Officer:		
	1. General	7	Engineering
	2. Telephony	99	Engineering
	3. Radio	132	Engineering
	4. Message Centers	7	Engineering
	5. Signal Communication Problems	25	Engineering
(e)	Submarine Mines	33	Engineering
(f)	New Developments in Electrical Matériel..	18	Engineering
(g)	Antiaircraft Apparatus	165	Art. & Eng.
(h)	Ballistics	22	Artillery
(i)	SC Artillery Matériel and Gunnery.....	92	Artillery
(j)	Methods of Instruction	284	Art. & Eng.
(k)	Course at Aberdeen Proving Ground.....	120	Ordnance
TOTAL		1,341	

COAST ARTILLERY BOARD NOTES

Any individual, whether or not he is a member of the service, is invited to submit constructive suggestions relating to problems under study by the Coast Artillery Board, or to present any new problems that properly may be considered by the Board. Communications should be addressed to the President, Coast Artillery Board, Fort Monroe, Virginia.

THE COAST ARTILLERY BOARD

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SECTION I

Projects Completed Since the Last Issue of the Journal

PROJECT NO. 947—OIL CLOTHING FOR USE BY ARMY MINE PLANTER PERSONNEL.—For a number of years the Tables of Basic Allowances have provided for the members of the crews of Mine Planters a special form of clothing which, it was presumed, was to be more suitable for the duties of such men than was the orthodox uniform which provided for the wants of the soldier when he was ashore. About a year ago samples of a special oiled clothing were sent to the Coast Artillery Board for test. The Board carried on a test for some time through the agency of the Commanding Officer of the Mine Planter *Schofield*, but due to the mild weather conditions at Fort Monroe, such test was inconclusive. The clothing was then sent to the Cable Ship *Joseph Henry*, and the commanding officer of that vessel really made the report concerning the clothing, which was to the effect that the coat seems very suitable but that there was no particular use for the trousers. Hip boots are provided for the crews of Mine Planters, and such boots make the use of water-proof trousers rather unnecessary. The Commanding Officer of the *Joseph Henry* recommended and the Coast Artillery Board concurred, that a water-proof hat of the same material as the clothing, or of rubber, be procured for test. The ordinary blue denim hat (just as apt to be brown) is far from satisfactory in wet weather.

PROJECT NO. 986—AIR-BRAKES ON THREE-INCH ANTI-AIRCRAFT GUN MOUNTS M2 AND ON INSTRUMENT TRAILER M1.—As stated in the last issue of the JOURNAL, quite extensive tests were made to determine whether or not air-brakes should be used on loads towed by the high-speed prime movers. The test showed conclusively that if advantage is to be taken of the high speed provided by such powerful prime movers, brakes on the towed vehicle are a prime necessity. Furthermore, it is quite apparent that a hand brake cannot be made to meet the requirements. When the driver of a prime mover brakes his

own vehicle he should feel assured that the towed vehicle is not going to run up on him. He would be much more assured of this if he could apply such brakes himself rather than depend upon the action of a rider or brakeman on the towed vehicle, who may be asleep, cold, or looking at the scenery. The Board recommended, in effect, that steps be taken to install air-brakes on all anti-aircraft vehicles to be towed and that the necessary connections be put on all such vehicles and on all prime movers.

PROJECT NO. 988—LINN HALF-TRACK TRUCK.—As stated in the last issue of the JOURNAL, the Linn Half-Track Truck, a powerful prime mover with caterpillar type of rear bogie, was tested during the month of March. The vehicle functioned most satisfactorily, and the Coast Artillery Board recommended that one of these vehicles be provided for an extended test by some organization manning 155-mm. matériel. However, certain modifications were recommended, including the alteration of the engine assembly to permit the fording of deeper streams and to provide a smooth tread with the traction device so that asphalt roads or roads that might be softened by warm weather would not be damaged by the passage of the vehicle. It was also recommended that the vehicle for service test be provided with a winch, and that the body conform to the design of the conventional B-type of cargo body. It might be stated that the Board did not contemplate that all prime movers be provided with winches, but it does hold that a certain percentage of the vehicles with an organization should be so equipped, and the installation of the winch on the one to be provided for test was accordingly recommended.

PROJECT NO. 991—TRAINING MEMORANDUM—INSTRUCTIONS FOR COAST ARTILLERY TARGET PRACTICES, CALENDAR YEAR 1934.—This publication is generally known as the "Annual Letter." This year's letter is based on the new edition of TR 435-55 which, it was hoped, would be in the hands of troops in time to cover all firing during the calendar year 1934. A complication is now introduced by the fact that National Guard organizations,

and possibly some others, will be required to start their training for target practice before receiving the new TR 435-55. Furthermore, the suspension of practically all regular Army target practices until after July 1, 1934, and the fact that there is to be only fifty per cent of the annual allowance in the latter half of this year, complicates the issue of instructions. However, all complications should be removed and all instructions for 1935 practices should be in the hands of troops well before New Year, 1935.

PROJECT No. 995—MODIFIED DUMMY PROJECTILE EXTRACTOR.—The sticking, during drill, of dummy projectiles in major caliber guns and mortars has been a source of irritation to Coast Artillerymen for years. Many modifications have been made on the projectile and several extracting devices have been brought forth. Now the very elementary solution of putting more men on the extractor has come forward. The extractor used on sixteen-inch howitzers, which has a very long stave and cross-handles, which provisions allow a number of men to apply their combined effort on the projectile, was substituted for the short-staved extractor provided for the twelve-inch gun. The longer extractor seemed to work very well, and the Board recommended that a hand extractor of the type furnished for sixteen-inch howitzers, but with the stave shortened to eighteen feet, be adopted as standard for use with ten, twelve, and fourteen-inch seacoast guns, and that certain minor modifications be considered in connection with the hook of the extractor.

SECTION II

Projects Under Consideration

PROJECT No. 929—EXPERIMENTAL FIELD CHRONOGRAPH (JACKSON).—A chronograph is, at best, an auxiliary instrument. This particular one is designed as a field instrument and probably could never take the place of the more refined instruments in use at the Aberdeen Proving Ground. It can therefore hardly be classed a necessity, and it is to be presumed that the Chief of Ordnance has given his test of this instrument at the Proving Ground a rather low priority. At any rate, the instrument has not yet been sent to Fort Monroe for test, but such test may have been delayed by bad weather, as stated in the last issue of the JOURNAL.

PROJECT No. 953—RADIO-CONTROLLED, HIGH-SPEED TARGET.—As already published, funds have been made available for the purchase of a motorboat and for the installation of radio-control on such boat. It is reported that supply departments concerned are making progress in the procurement of matériel. However, this project presents a fairly good example of the interdependence of unrelated events: the President has cancelled all airmail contracts; the Army Air Corps took over the duty of carrying airmail; and to assist in this work, the Chief Signal Officer of the Army made available to the Air Corps all of a certain kind of radio set, namely, Radio Set SCR-187. The

Radio Set, Type SCR-187 is the only army set possessing the desired characteristics. To insure non-interference, it is necessary to operate this boat with wave lengths outside of the broadcast band, hence (until just now) there loomed the difficulty of obtaining a proper radio-control set. It seemed that the Coast Artillery Board would be required to make its own radio instruments; that is, the one for the control station, or airplane, and the other, the receiving installation to be installed in the boat. However, many of our troubles really never happen, and as this is being written, the Chief Signal officer is supplying another model of control set that has every promise of being most satisfactory.

PROJECT No. 973—TEST OF LACQUERS AND VARNISHES FOR USE AS RUST PREVENTIVES.—The tests outlined in the last issue of the JOURNAL are being carried on. It will not be safe to make final report for some time, but more than one of the lacquers being tested are giving every promise of being just what battery commanders and Ordnance officers are looking for in order to lay up armament and feel assured that it is not rusting, while at the same time it is made to present a good appearance.

PROJECT No. 975—TEXT ON TRACER CONTROL.—The Board has been very busy since the last issue of the JOURNAL, and no time has been available for concentration on the preparation of this text, but, as already stated, the scarcity of opinions, and the divergent views of those that have been expressed, indicate very clearly the necessity of coördinating antiaircraft machine-gun work. Again it is hoped that, within a few weeks, the draft of this text can be sent out to selected officers for notation and comment.

PROJECT No. 987—LUMINOUS PAINTS FOR GUNS.—Notice has just been received that there will be sent to the Board within a few days, thirty-six grams of radium luminous paint. The Board intends to apply this to certain parts of the breech of a 155 mm. gun and to conduct night drills with that gun. If no ammunition can be made available for night firing, it has been proposed that flashes can be simulated by the use of high-power photographic flashlight apparatus.

PROJECT No. 989—AZIMUTH AND ELEVATION CHECKING DEVICE FOR 155-MM. GUNS.—(March-April issue of the JOURNAL). The Commandant of the Coast Artillery School contemplates firing 155-mm guns in a practice at Fort Story, Virginia, for the student personnel of the School during May and June of this year. It is hoped that this firing will afford the Board an opportunity to test this checking device, a pilot model of which has been made.

PROJECT No. 990—TEST OF DULUX, NON-OXITE, AND OTHER PAINTS.—This, really, is a continuance of Project No. 608, Duco Surfacing for Guns. In the old project Dulux paint seemed to offer some promise as an exterior coating for seacoast guns, but for various reasons the test was not considered conclusive. A new project has been taken up which contemplates a comparative test,

to extend over a long period of time, involving Dulux, Non-Oxite, standard OD, and standard OD with varnish applied as final coat. Due to the rush of work in the Harbor Defense, and to the bad weather, these paints have not yet been applied. Much time appears to have been lost, but it is desired to apply these paints under the most favorable outdoor conditions.

PROJECT NO. 998—RANGE DISPERSION, SEACOAST GUNS.—No definite information has come to the Coast Artillery Board recently that anyone is giving much thought to the reduction of the dispersion of the Coast Artillery heavy cannon. Fragmentary reports on the alteration of projectiles, the re-forming of powder charges, and other modifications, indicate that a certain amount of work is being carried on along this line. Yet, the fact remains that many of our most important guns have a very large probable error, while, on the other hand, reports, as yet unsubstantiated, come to the Board that other cannon existing today shoot with a much closer pattern than do many of our guns. It is hoped that the Board can find time within the next few months to assemble sufficient information on this important subject to make specific recommendations.

SECTION III

Miscellaneous

The following subjects, not taken up as projects, but upon which the Coast Artillery Board has acted since the last publication of the JOURNAL, have been selected from the files of the Coast Artillery Board because of their general interest.

TIME-INTERVAL APPARATUS.—During the past two years Signal Corps personnel have been developing a time-interval apparatus suitable for both fixed and mobile use which provides a greater variation in time-intervals than is possible with the previous motor-driven models. This apparatus now appears to be satisfactory and sufficiently rugged for field use. There has also been received for use in connection with the time-interval apparatus, a tone source which provides power for a loud signal for firing and for plotting-car use, and a weak signal for observers' lines. In addition, "howlers," for the guns have been furnished for test. The complete apparatus will be tested in connection with the Coast Artillery School firings at Fort Story, Va.

SIGNAL LAMP.—Captain W. C. Ellis, Signal Corps, and Mr. J. W. Goodin, of the Fort Monmouth Laboratories, recently demonstrated to the Board several signal lamps. These gentlemen had just come from visits to the other service boards. As might be expected, the best lamp is the largest and heaviest. These considerations of weight and size preclude the use of the heavier lamp by some of the other services. Of those displayed, the lamp considered by the Coast Artillery Board as most suitable

for Coast Artillery purposes was one that had been previously tested by the Board and slightly modified. However, definite decision as to model of lamp has been withheld because it is understood that the Chief Signal Officer is to submit a questionnaire concerning requirements and limitations of signal lamps for Coast Artillery. The matter of signal lamps becomes a little more important just now because it is understood that the use of the Very pistol to display different-colored lights from ships and boats is to be prohibited, except as a general signal of distress. In the past, in maneuvers and night target practices, considerable use has been made of the Very pistol. If such is to be prohibited it would be necessary to put increased dependence on the signal lamp.

FOG CAMERA.—The Board was directed by the Chief of Coast Artillery to make comments on certain newspaper articles concerning a camera that is alleged to photograph fog-obscured objects at ranges in excess of normal visibility. From information available, it did not appear to the Board that development along this line should be taken up especially for the Coast Artillery at this time. It was thought that perhaps shipping interests, or others more immediately concerned, might push such development; and should they be successful to a worth-while degree, the Coast Artillery might then find it advisable to standardize some such instrument.

VISITS OF INSTRUCTION AND INSPECTION.—During the month of March, Captain H. C. Mabbott, and First Lieutenant Walter J. Wolfe, Coast Artillery Corps, visited the Signal Corps Laboratories at Fort Monmouth, New Jersey, and certain other installations in New York and vicinity. Captain Mabbott's report, on his return, included comments on the sound-power telephone, micro ray equipment (for auxiliary signaling), telephone headsets and handsets, time-interval equipment, radio equipment, reel units for mobile artillery, radio direction finders, and airplane locators. This report was forwarded to the Chief of Coast Artillery, with pertinent remarks on each subject.

Captains S. L. McCroskey and C. S. Harris, Coast Artillery Corps, visited Washington, D. C. during the first week of April to confer with the Chief of Coast Artillery and representatives of the Chief of Ordnance concerning antiaircraft directors and data transmission systems.

SLIDE RULE FOR FIRE ADJUSTMENT BOARD, M1.—The slide rule referred to in the last lines of page 122, *Coast Artillery Field Manual*, Volume I, has been made up by the Coast Artillery Board. This slide rule consists of two concentric discs of heavy photographic paper, with scale, and directions photographed thereon. These slide rules can be sent through the mails readily, and the Coast Artillery Board is prepared to issue one or more to anyone making requisition.

COAST ARTILLERY ACTIVITIES

Office of Chief of Coast Artillery

Chief of Coast Artillery
MAJOR GENERAL WILLIAM F. HASE

Executive
LIEUT. COL. G. A. WILDRICK

Personnel Section
MAJOR R. T. PENDLETON

Matériel and Finance Section
MAJOR R. E. HAINES
MAJOR O. L. SPILLER

Organization and Training Section
LIEUT. COL. E. E. BENNETT
MAJOR F. P. HARDAWAY

Plans and Projects Section
MAJOR G. R. MEYER
MAJOR R. V. CRAMER

Fort Monroe News Letter

BRIGADIER GENERAL JOS. P. TRACY, U. S. ARMY
Commanding.

COLONEL H. E. CLOKE, 2d C.A.,
Commanding Harbor Defenses of the Chesapeake Bay.

LIEUTENANT COLONEL ROBERT P. GLASSBURN, 51st C.A.,
Commanding 3d Battalion, 52d C.A.

COLONEL GEO. L. WERTENBAKER, 52d C.A.,
Commanding 1st Battalion, 51st C.A.

MAJOR NELSON DINGLEY III, 52d Coast Artillery,
Commanding 1st Battalion, 2d Coast Artillery.

By Major Joshua D. Powers, 51st C.A.

THE formal opening of the new Noncommissioned Staff Officers' Club was celebrated with a banquet and dance on April 21st. The old Noncommissioned Club, known as the "Old Point Club," was completely demolished in the hurricane of August, 1933. Plans were started for a new club and quite an argument developed in regard to its location. A site on the waterfront near the east gate, opposite the Artillery Engineer office, was finally selected. This site has the advantage of accessibility, a beautiful view over the entrance to Hampton Roads, and a beach that can be developed for swimming as soon as the new sewage disposal plant is in operation.

As soon as funds were secured to repair the storm damage, work on the new club was started under the direction of Major Nelson Dingley 3d, and Master Sergeant T. A. Lemaster, the president of the club. Under their very able direction, the work was pushed through to a rapid completion. The building is of the one-story bungalow type, built around a large central dance hall. On one side of this main room is a bar, a refreshment room, and dressing rooms. On the other side is a kitchen and a dining room, which may be used for card games. A large screened porch extends across the entire front. Parking areas, with lawns and shrubbery are to be provided later, also dressing rooms and tennis courts.

Work on the Officers' Beach Club continues, under the supervision of Lieutenant Kleinman, and it is hoped that the club will be ready for the graduation dance of the Coast Artillery School. Due to the new sea wall, the building had to be raised, and a sizable hill has been filled in around it. The new concrete open-air swimming pool should be finished about May 15th. The outdoor dance floor cannot be built until after the section of the sea wall in front of the club has been completed; in the meantime dances will be held inside. A number of windows have been cut in the walls of the main room, so that the heat and stuffiness, which made indoor dancing in the old club unpleasant, will be avoided. The refreshment bar now opens onto one end of the porch, making it much more accessible to dancers and bathers.

Another completed project is the new bandstand on the waterfront, replacing the old one that dated back to the Hotel Hygeia days. The new stand, of reinforced concrete and ornamental iron, is octagonal in shape, well proportioned, and of a very pleasing design. When the surrounding lawn comes to life, and the new shrubs are in bloom, the waterfront plaza will be one of the real show places of the peninsula.

The ten new brick double sets of NCO quarters are coming along fast, and many longing glances are being cast at them by the officers living in the old bachelor build-

ings. These quarters really have advantages over the four-family officers' apartments, as each one has the living rooms downstairs and the bedrooms upstairs. When they are completed late this summer, the last of the war-time converted barracks on the "Fill" can be torn down, and all of the noncommissioned officers of the first three grades will be adequately housed.

On April 26th commemorative exercises were held at Fort Story by the Tidewater Section of the Society for the Preservation of Virginia Antiquities. The War Department has granted this Society permission to erect a cross on a section of the Fort Story Reservation to commemorate the first landing by the English in Virginia in 1607. Some of the more literal-minded members of the garrison doubt that any sailor would anchor a sailing ship off the Cape Henry sand dunes and send ashore landing parties, when protected water areas could be found only a few miles away, but the Society insists that the first landing took place at this point.

A CCC reconditioning camp was started at Fort Monroe on April 4th. Twenty-six hundred CCC replacements were processed and sent out to the camps in the field. Colonel Wertenbaker was camp commander; his staff consisted of Captain Van Buskirk, Executive; Lieutenant Engelhart, Adjutant (just back from three months at the Sperry Gyroscope plant studying searchlights and AA Directors at his own expense); Lieutenant Wilson, Mess Officer, and Lieutenant Featherston, Supply Officer. A new system of processing was developed, by which the selectee stepped into a large room, took off all of his clothes, put his money and watch in an envelope, then went to the medicos for physical examination, vaccination and inoculation. After this he gave the data to complete his record card, was sworn in and enrolled (thus becoming an "enrollee"), was issued his clothing and individual equipment, and then received his civilian clothes which had been deloused (pardon me, "disinfected," as Colonel Wertenbaker said), and was all ready to go out to a CCC camp in the field if necessary.

The system was very efficient—it should have possibilities where any large number of new men have to be processed. So far there has only been one complaint—one man was turned down by the surgeon and before it could be stopped his clothes were in the disinfector. He waited around draped in a towel for some time, and when he got his clothes back, the trousers had shrunk, and the coat looked like it had been made for his little brother. He protested, but Lieutenant Fritz convinced him that it was a much better fit, and gave him transportation to his home. Two days later a red-hot letter came from his mother, saying that the suit was only two months old, supposed to be all-wool, and had cost him \$45.00. We wonder why a man who can afford \$45.00 suits should be in the CCC anyway. Except for the 1933 West Point graduates, no one here can remember when he had \$45.00 to spend on a civilian suit.

Our congratulations to Major Metzger and Major Hocker who have been ordered to attend the next class

at the Army War College. Fort Monroe was lucky in being well represented in the next Leavenworth class; included in this are Major Dingley, Captain Mabbott, Lieutenants Hewitt, Harriman, and Flory of the Coast Artillery, and Captain Hodges of the Air Corps. Unfortunately, some advance rumors had come down from Washington, and it was an awful drop for those who had been thinking in terms of divisions to drop back to drilling platoons. The school orders are coming through for this year's class, and it looks as if Lieutenant Forest French will be the only lieutenant to remain at Fort Monroe. Even a number of the Harbor Defense officers are being sent away: Lieutenant Klienman to the University of Pittsburgh, Lieutenant Goodall to H. G. Wright, Lieutenant Kreuger to Key West Barracks, Lieutenant Jaccard to 14th Coast Artillery, Fort Worden, Washington; Lieutenant Thrums to 13th Coast Artillery, Fort Barrancas, Florida, and Lieutenant Fuller to the Brooklyn Army Base as ADC to General Gulick.

Lieutenant Wheatley of the 1932 West Point Class is asking for a transfer to the Cavalry—cannot understand why anyone should want to attend "stables" every day for the next fourteen years, but maybe he prefers it to the ten-ton tractors. Lieutenant McGraw has left for the Signal Corps and Fort Monmouth, taking his motorboat with him on a trailer behind his car, and Lieutenant Trichel is being detailed to the Ordnance Department.

We hear that the Marine Corps authorities desire to send twenty-two Marine officers to the next year's class at the Coast Artillery School. The four who attended this year's class must have sent in glowing accounts, in spite of the equitation. The Marines are organizing two "Base Defense Regiments" directly under the command of the C-in-C, U. S. Fleet; these regiments are to be armed with the new 6-inch mobile guns and with antiaircraft machine guns, hence the sudden interest by the soldiers of the sea in the Coast Artillery School. If the advance reports on this mobile 6-inch gun are correct, we might turn some of our GPF's in on them. It is supposed to be the same type of gun now installed on the light cruisers (except shorter), fires armor-piercing projectiles, has a range of about 27,000 yards, and *all-around fire*. It has three outriggers, something like those on the spider-mount antiaircraft guns. The weight is slightly more than that of the GPF. The Marines say that they will have one of these guns at Monroe next October when two Marine Batteries come down from Quantico for target practice.

As a result of the weddings at Fort Monroe, the bachelor building is practically deserted, and this at a time when six new two-room apartments are being built. The Harbor Defense officers now buy wedding presents in dozen lots, and the excitement has even spread to the nurses in the station hospital. Lieutenant Elizabeth Black has just announced her marriage to Lieutenant Roy D. Butler of the Air Corps, and we hear rumors that her chum is to be married to a Coast Artillery Lieutenant of the 1934 Class. If this marrying continues, Hampton may displace San Antonio as the "mother-in-law of the Army."

Hawaiian Separate Coast Artillery Brigade

News Letter

BRIGADIER GENERAL R. S. ABERNETHY, *Commanding*
CHIEF OF STAFF, LIEUT. COL. F. Q. C. GARDNER, C.A.C.

S-1, LIEUT. COL. W. V. CARTER, A.G.D.

S-2, CAPTAIN WILLIAM F. LA FRENZ, C.A.C.

S-3, LIEUT. COL. A. G. CAMPBELL, C.A.C.

S-4, MAJOR FREDERICK A. MOUNTFORD, C.A.C.

By Lieut. J. R. Lovell, C.A.C.

HELLO Everybody! Things seem to be coming back to the "good old days," with target practice preparations being made, and 10 per cent of our pay being restored. Both were badly needed.

The Third Battalion, 27th Infantry, recently conducted a tactical problem to test the effectiveness of small-arms fire from small boats against land targets. All officers in the Department, not actually on duty, attended.

Two small tugs were used as small boats which approached the shore, firing against a machine gun emplacement and a 75-mm. emplacement. Silhouettes were used for members of the crew.

It was an ideal day, with perfect lighting and a very smooth sea. During the night-firing, searchlights and airplane flares were used for illumination. Rifles, automatic rifles, machine guns, and one-pounders were used during the demonstration. Following is a table indicating the results:

Day Run	Weapon	Rounds fired	Hits on Matériel	Hits on Personnel
1	10 Rifles	280	1	0
2	10 Automatic Rifles	756	3	2
3	4 Machine Guns	1,110	3	2
4	2 37-mm Guns	34	0	0
Night Run	Weapon	Rounds fired	Hits on Matériel	Hits on Personnel
1. Searchlight	5 Rifles	180	0	0
2. Dark	5 Rifles	165	0	0
3. Searchlight	5 Auto Rifles	480	2	0
4. Dark	5 Auto Rifles	600	1	1
5. Searchlight	2 Machine Guns	850	2	0
6. Dark	2 Machine Guns	542	1	0
7. Flares	1 37-mm Guns	16	0	0
8. Flares	1 37-mm Guns	19	0	0

Governor Poindexter receiving the honors at Fort De Russy

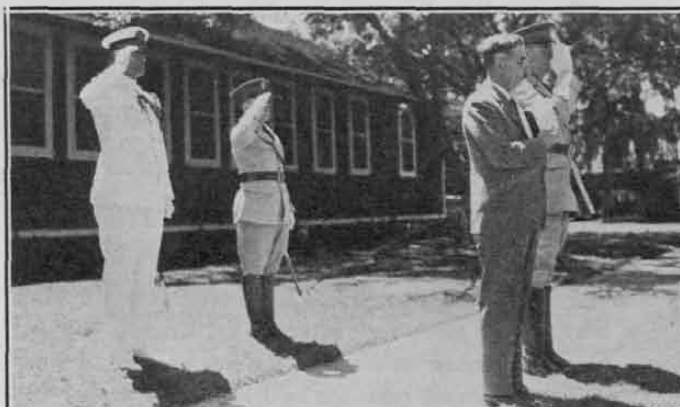
The Governor inspecting the Guard of Honor commanded by Captain Rodney C. Jones

Officers and cadets of the German Training Cruiser "Karlsruhe" receiving a review of the 64th C. A. at Fort Shafter

Colonels Peace and Cooper inspecting troops of the Harbor Defenses of Honolulu

Officers observing fire of troops in small boats against land targets

General Abernethy receives review of the 64th C.A. Front row, left to right: Colonel Willis G. Peace and General Abernethy. Rear row: Major L. C. Mitchell, Lieutenant Colonel W. W. Hicks, Captain J. G. Devine, Captain J. R. Townsend, Chaplain P. J. Ryan, Lieutenant L. R. Bullene, Lieutenant Colonel A. G. Campbell



A few important facts were developed during the demonstration, which might be of interest to all officers of our Corps. The visibility of the targets on the shore at night in the searchlight beams and in the light of the airplane flares was better than during the daytime. The best method of obtaining the initial range is by observation of fire, and by use of tracers. It was necessary to build up rests and mounts on the boats for all weapons. In spite of the smooth sea, the rolling and pitching of the boats was the greatest hindrance encountered in obtaining the initial range, and in firing effectively.

It is believed that our beach emplacements would be comparatively safe from the fire of detachments in small boats approaching the shore in an attempt to land. Such boats are excellent targets, and it appears that they would be very much at a disadvantage in any exchange of fire. It does not appear that their fire will reduce the effectiveness of the fire of shore installations to any great extent.

ATHLETICS

For the past two months the personnel of the Honolulu Sector have been very active in athletics.

The interpost track season has just been concluded. This season has easily been the best in the history of the competition. New records were established in practically all events, and a splendid lot of new material has been developed. Large crowds of people have witnessed the six interpost dual meets held this year, and enthusiasm and rivalry have been keen.

The Fort Shafter track and field team, coached by Lieutenant Sanford J. Goodman, won the championship of the Honolulu Sector. Following is the final standing of the teams:

Fort Shafter	258 $\frac{1}{4}$
Fort Kamehameha	255 $\frac{5}{6}$
Luke Field	175
H.D. of Honolulu	144 $\frac{11}{12}$

The Honolulu Sector swimming team recently attracted wide attention by winning the indoor swimming championship against a very strong field which included the University of Hawaii. Our swimming teams have won all tournaments held in Hawaii during the past year, and in addition, the team coached by Captain Rodney C. Jones and First Sergeant Everett C. Corn, of the Harbor Defenses of Honolulu, won the National Y. M. C. A. Swimming Trophy, which is competed for by service teams from all over the United States and its possessions.

DIVISION REVIEW

Major General Albert J. Bowley, until recently in command of the Hawaiian Division, was honored by a review of his command, which is the largest in the United States Army. The ceremony was witnessed by ten thousand spectators.

Approximately twelve thousand soldiers passed in review, including the 21st and 22nd Infantry Brigades, the 11th Field Artillery Brigade, and Division troops including Engineers, Chemical Warfare, Ordnance, Signal

Corps, and Infantry Tanks. The 18th Wing of the Air Corps, commanded by Lieutenant Colonel Jerry Brant, furnished a fitting climax when their squadrons flew by the reviewing stand in formation. All branches of aviation were included. The entire affair was very well handled throughout.

ARMY DAY

Army Day in Hawaii was celebrated with considerable pomp and ceremony. Through the courtesy of the Honolulu Chamber of Commerce practically everyone in the Army was entertained during the day. The members of the Honolulu Chamber of Commerce, with fifty or more officers as their guests, entertained at a luncheon at the Royal Hawaiian Hotel. Mr. Harold Dillingham, President of the Chamber of Commerce, said some very nice things about the Army, and Major General Bryant H. Wells delivered an excellent address reminding the citizens of their duties and responsibilities with reference to national defense.

Entertainments for the enlisted men were conducted at the Civic Auditorium in Honolulu, and in the immense boxing bowl at Schofield Barracks.

The Army prepared an exhibit in the Palace Grounds in Honolulu which many civilians visited. Much favorable comment was heard.

A dance and reception was held at the Royal Hawaiian Hotel during the afternoon. It was attended by hundreds of officers and their ladies, and many prominent civilians in Honolulu. The 1934 Army Day was one of the most successful that has ever been celebrated in Hawaii.

EX-CALIBER FIRING

Coast Artillery troops are very fortunate this year in their ex-caliber firing. A large quantity of 75-mm. gas shell has become surplus and the Department Commander has made it available for target practice. This is a fine break for the Brigade, because it makes our ex-caliber practices much more realistic. The obvious advantages are that we are able to fire at greater ranges, the spotting section is able to get excellent practice. Naturally, every one in the vicinity of the guns wears gas masks, and no difficulty has been experienced, as yet, in firing this ammunition. Each battery has an allowance of 250 rounds.

REGIMENTAL REVIEW

The Harbor Defenses of Honolulu, commanded by Colonel Harry L. Steele, recently honored Colonels Willis G. Peace and Avery J. Cooper, the new commanding officers at Fort Shafter and Fort Kamehameha, respectively, with a review. It was a beautiful ceremony, conducted under the very shade of the old volcanic crater, "Diamond Head," one of the landmarks of Hawaii. Tea was served on the parade ground immediately following the ceremony, and the social hour was enjoyed by all.

TARGET PRACTICE

While still engaged in the more pleasant activities of track and interbattery baseball games, the Brigade is

buckling down to the more serious affairs of target practice under the reduced allowances for this year.

To Fort Kamehameha and Battery B, 15th Coast Artillery (HD) was given the honor of firing the first practice of the season on March 30, and what a practice it turned out to be. It looks as if Captain V. P. Foster and his men have hung up a record for the 12-inch barbette guns by attaining a score of 237.

This battery obtained nine hits, two "broadside" and seven "bow-on," out of nine record shots at a range of about 17,000 yards. This record was made possible primarily by Battery B's excellent spotting section, which spotted the splashes within an average of nine yards of actual point of impact. Major Ira B. Hill's 41st Coast Artillery Battalion of 12-inch railway mortars, consisting of Battery A, 41st C.A., Captain Edmund Stillman commanding, and Battery B, 41st C.A., Captain Frederick H. Koerbel, went out on April 13th to better that record. Friday, the thirteenth, meant nothing to them, and while the results of these practices have not been turned into this office, from appearances, Friday, April 13th, was a lucky day for the 41st Coast Artillery.

OVERS AND SHORTS

Dr. James Rowland Angell, the President of Yale University, passed through Honolulu recently. He was the guest of the Army for one day, and General Wells and General Abernethy conducted him on an inspection tour of the activities of the various posts in the Brigade.

Dr. Angell and the party unexpectedly appeared at the firing position for the 75-mm. ex-caliber guns. After the necessary explanations were made, General Abernethy asked Lieutenant John F. Cassidy, the executive officer, if he would fire a few rounds at a drifting target at 5,000 yards range for demonstration purposes. Cassidy naturally replied, "Yes Sir," and informed the Battery Commander, Captain James A. Ryan. The Battery Commander ordered a ranging salvo before the inspecting party had a chance to focus their glasses on the target. By the time the distinguished visitors had their glasses focused on the target, Cassidy had given the command to fire another ranging salvo, this landed almost directly on the target. General Abernethy remarked, "That will be all, Mr. Cassidy. Thank you very much." And our distinguished visitors walked off very much satisfied with the demonstration. Our friend Cassidy came in for considerable horseshoe razzing later in the day.

Captain Edward W. Timberlake met the party at Fort Shafter and explained the functioning of antiaircraft matériel. Dr. Angell seemed very much impressed with the equipment. One of the questions he asked was, "How long will it take to put these three-inch antiaircraft guns in travelling position?" Upon being told that it would require about six minutes, General Wells remarked, "Let's see you do it," and much to the surprise of everyone Captain Timberlake and his gun crew from Battery G, 64th C. A., had the guns ready to move in a little less than nine minutes. Of course, the personnel were not ex-

pecting a request of this nature, and were not prepared to execute such a command; their performance under these circumstances was quite remarkable.

Captain Arnold D. Amoroso surprised his many friends by joining the "benedicts" just before the transport left Hawaii, on April 5. The bride is the sister of Lieutenant Logan O. Shutt, of Fort Kamehameha. Congratulations, Captain, and best wishes to you, Mrs. Amoroso.

The German cruiser *Karlsruhe* visited Hawaii for three weeks during February and March. There were approximately 300 cadets aboard, and they apparently enjoyed their stay in Hawaiian waters very much. There were many social functions held in their honor, including a Regimental Review by the 64th at Fort Shafter.

At the suggestion of Colonel Willis G. Peace, the Brigade Headquarters had just composed a letter of information to be sent to all officers assigned to the Hawaiian Separate Coast Artillery Brigade. This information will supplement that sent out by the Hawaiian Department, and it applies more particularly to customs and regulations in the Brigade and Honolulu Sector.

President Roosevelt is planning to visit Hawaii some time during the month of June. The Army personnel is looking forward with a great deal of anticipation to this event. We are very glad to have this opportunity to honor our Commander-in-Chief. It is expected that a review of all troops will be conducted in his honor. This Brigade hopes to have all mobile artillery pass in review, with our Harbor Defense Artillerymen marching as Infantry.

This writer has noted the wisecrack about press agent stuff made by the Panama correspondent, several issues back. This news letter is being written at the request of the COAST ARTILLERY JOURNAL in an effort to make our branch publication our family magazine, so we will take more interest in it, and incidentally to bolster up the subscription list. We were requested to write this news letter, and when the subscription list is large enough, perhaps the JOURNAL will be able to make some remuneration, then the Hawaiian Coast Artillery Brigade news hounds will show the Panama correspondent some real press-agent stuff. Incidentally, the Panama Canal Department news letter is fine, and makes very interesting reading. We take this opportunity to compliment Major Joshua D. Powers on his Fort Monroe News Letter.

A new theater has been constructed at Fort Ruger. This accomplishment has been the result of several years of careful economy and planning on the part of the commanding officer, Colonel Harry L. Steele. The new structure is very attractive, and is marked by its simplicity of design. The sound reproduction is excellent, the theater being designed so that its interior will have the proper acoustics for talkies.

Fort MacArthur Notes

By Lieut. Lee A. Denson, C.A.C.

THE fourth anniversary of Army Day in the Ninth Corps Area and the seventeenth anniversary of the entrance of the United States into the World War were signalized at Fort MacArthur this year by a comprehensive display of armament and an interesting program of exhibition drills. Virtually all armament of the 63rd Coast Artillery and the Harbor Defenses of Los Angeles were displayed to an interested public.

On the Lower Reservation, the barracks of the 63rd Coast Artillery and the Quartermaster Bakery were thrown open to inspection. The 14-inch railway guns, manned by a maneuvering crew of the 3rd Coast Artillery, were put through their paces.

The huge Fort MacArthur District CCC supply warehouse, from which more than 7,000 men in the 36 camps of the District are supplied, was a unique feature.

The principal portion of the program was held on the Upper Reservation. Batteries Barlow and Saxton, 12-inch seacoast mortar batteries, and Batteries Merriam and Leary, 14-inch disappearing seacoast rifles, drew their full share of attention. The entire antiaircraft armament of the 63rd Coast Artillery, fully manned, was on display and proved the center of interest.

The feature of the afternoon program was the mimic aircraft versus antiaircraft battle. Due to the flying of the airmail, regular army planes could not take part, but the gap was ably filled by reserve planes from the Long Beach Army Airport. An "O-19," flown by Captain Frank H.

Barber of the 479th Pursuit Squadron, Air Reserve, thrilled the crowds with a bang-up exhibition of ground-strafting and hedge-hopping attacks on their very heads. High overhead, Lieutenant John L. Magden, also of the 479th Pursuit Squadron, Air Reserve, represented with his plane a flight of bombers. Antiaircraft machine guns and guns of the 63rd Coast Artillery met the attack in realistic fashion. At the conclusion of the attack, the two pilots thrilled the crowds with a daring aerial circus.

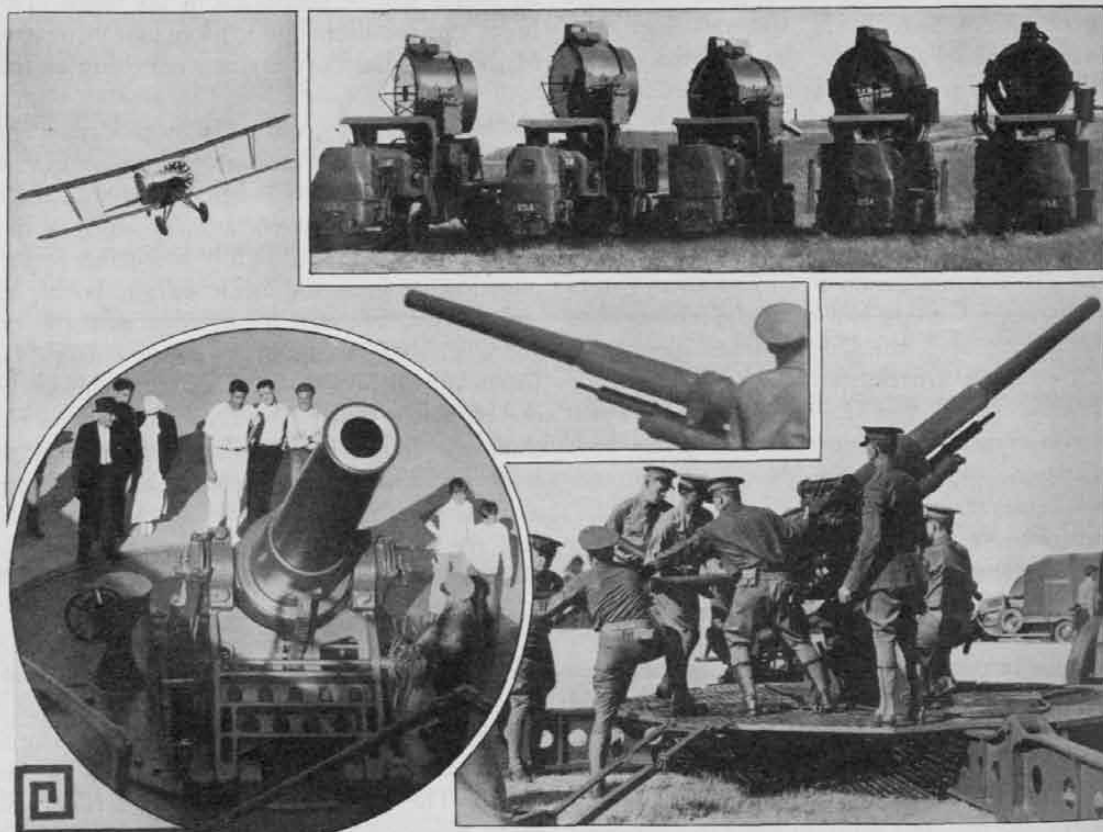
Following the mimic battle, the 63rd Coast Artillery band, under the direction of Band Leader Robert Resta, entertained with an hour's concert.

The afternoon program was concluded with a colorful parade by the 63rd Coast Artillery under command of Lt. Col. Homer R. Oldfield.

The evening program from 7:00 to 9:00 p.m. was marked by a special searchlight display by ten 60-inch antiaircraft and harbor defense searchlights. The weather was favorable, and the intricate and beautiful sky patterns executed by these lights were visible for many miles.

More than forty uniformed boy scouts from Wilmington, California, ably assisted Military Police, under Captain J. E. Adamson, Q.M.C., in directing and controlling traffic. They were guests of the 63rd for supper.

It is conservatively estimated that more than 8,000 persons from Southern California visited Fort MacArthur for the program. It is safe to say from the intense interest displayed that they went away with an awakened interest in, and a much clearer conception of, the functions and training of their Coast Artillery today.



Scenes from the Army Day Demonstration at Fort MacArthur

Panama Canal Department News Letter

Department Artillery Officer
COLONEL PERCY M. KESSLER, C.A.C.

Fort Amador
COLONEL RUSSELL P. REEDER,
4th C.A. (AA)

Fort Sherman
COLONEL CLARENCE G. BUNKER,
1st C.A.

Fort Randolph
COLONEL RICHARD I. MCKENNEY,
1st C.A.

IF this letter gets into the Editor's office in time to be included in the proper issue of the COAST ARTILLERY JOURNAL, I shall be very much surprised. The reason for the delay (and I think it's a perfectly reasonable alibi) may be gleaned from the following newspaper headlines: "Reds suffer defeat at hands of sector troops on Air Field," "Sector Troops still engaged at Clayton," "Red-Blue conflict ends Sector warfare," "All troops of the Isthmus Defend the Atlantic entrance," "Second Field Artillery starts march from Ocean to Ocean," "Army Maneuvers end with review for Governor Schley."

Let's see, when did this thing begin? It seems that we have been on maneuvers ever since I can remember. About March 5th the troops of the Pacific Sector were concentrated at Albrook Field and from then on, for about ten or twelve days we didn't know where we would be during the next hour. Our previous training as doughboys put us in good form and during the daily "critiques" it appeared to the casual observer that the Coast Artillery fared better than average from the pertinent remarks of the brass hats.

One of the most interesting phases of the exercise was the concentration at night for an attack at daybreak. Assembly areas were assigned and reconnoitered during the previous afternoon. The march was started about midnight, and all troops arrived at the appointed places with little confusion. A large portion of residents of the exclusive north slope of Ancon Hill were awakened during the wee sma' hours by the popping of Springfields in the vast open spaces adjacent to Albrook Field. The rat-tat-tat, only sporadic at first, later developed into a drum-fire of musketry that most effectually prevented the startled populace from returning to its slumbers. As an embellishment to the sanguinary conflict that, incidentally, raged hither and yon across the landscape of the big airport, the defending force resorted to the use of rockets and airplane flares that lent a most realistic atmosphere.

The appearance of enemy combat patrols between the battalion assembly areas and the line of departure caused such a stir as has not been aroused since the advent of the 15% pay cut. It was an overt act, a breach of the conventions of true sporting warfare. On the other hand, there were warriors who found within their zone of action the most villainous assortment of drainage ditches ever devised by the hand of man. Most of these appeared to have some connection with an ancient cow pasture, or worse; at any rate some of the beseigers leaped gaily in—but not so gaily out, and so the battle raged.

The Fourth Coast Artillery held the right of the line, and as such, started the old bean to work. Naturally, the first thing that occurred to us, was to start a flanking movement around the enemy (managed by the brass hats.) The enemy had not planned on such an unusual display of initiative and a few energetic sergeants accompanied by a few energetic privates nearly spoiled the beautiful plans of the enemy defending forces, who were without flank protection. The umpires seemed to have an unlimited supply of signal flags (each flag representing a company of infantry or a machine gun platoon) which they produced apparently from their sleeves or from inside their manly chests. The mere display of these signal flags was the protection of the enemy against the flank and rear raids of the energetic section leaders—so goes the war of a peace time maneuver!

Another interesting phase was the actual construction of a destructive position, including trenches, machine-gun nests and wire—there were no "theoretical" constructions. After this defensive sector was constructed, the entire command was divided, the 4th Coast Artillery defending, and the Infantry, Engineers and the Field Artillery making the attack through the jungle. It used to be the theory that the jungle was impenetrable. This theory has been amply exploded. The jungle forms a natural obstacle, through which it is difficult to penetrate, but not impossible. Ask any member of the Panama Canal Department.

At the conclusion of the Pacific Side maneuvers, the troops were returned to their respective Posts for a few days rest. This period of rest corresponded in a large measure, to the rest(?) periods given the troops in France. It was not long before we were on the move again—this time, by train for the Atlantic Side—and this time, to act in our natural capacity as Coast Artillery troops, manning Coast Artillery installations. We did not find many people at home when we arrived, as the garrisons of the Atlantic Side had moved to their war positions, both as antiaircraft and sea coast defenders. The only battery of the Pacific Side that manned its normal armament was Battery G of the Fourth. This battery is getting pretty used to traveling now with their big railway guns. They comprised the last train to cross the continent, arriving at Fort Randolph about 7 p.m. At 9:40 p.m. the battery was emplaced, communications to the base end station were tested and the battery was ready to open fire.

A unique combination of fire was tried out with this

battery during this phase. The Infantry, Engineer and Field Artillery regiments had their hands full in repulsing the theoretical landing of enemy forces. One gun of the railroad battery supported these troops, by firing on river crossings, landing beaches and other points of concentration, using map coördinates for obtaining firing data and supported by airplane spotting. The other gun continued to fire on the enemy war vessels, using visual spotting. All fire was controlled from the single plotting car.

The maneuver was concluded with a review for the Governor General, with all troops of the Panama Canal Department participating. The sight was indeed a "most impressive one"—to quote the words of Governor Schley as he left the reviewing stand on the termination of the review.

All the troops were returned within a few days to the Pacific Side with exception of Battery G of the 4th Coast Artillery and the 2nd Field Artillery. For the first time since 1852 a body of armed troops marched across the Isthmus. The trail was reconnoitered and cleared by the 11th Engineers and the Second Field (mountain artillery) commanded by Lieut. Col. E. L. Gruber. Many heartbreaking experiences were encountered by the Engineers—the desertion of native carriers, the running short of food, the manhandling of all rations and the weakening effects of working in the dank jungle. This feat was first accomplished by the Spanish Conquistadores, in the days of Morgan and his raiders, the next time was the crossing by the Fourth U. S. Infantry in 1852. Incidentally one of the officers who arranged for the supplies and transportation of this latter trip was one Captain Grant, later to become famous during the Civil War.

Crossing Panama in 1852

THE writer is indebted to Mr. C. T. Lindsay and to the *Panama Star and Herald* for the following excerpts of the record of this trip of 1852, as written in the report of the Surgeon for that trip:

"The occurrence of malignant cholera in the Fourth regiment of infantry, which I accompanied from New York to California, seemed to me that I should make a special report. The regiment was concentrated at Fort Columbus, New York. On the 5th of July eight companies were embarked on the United States mail steamer *Ohio*, bound for Aspinwall, New Granada (now Colon, Panama). We reached Aspinwall on the 16th of July.

ON the voyage I had endeavored to impress upon the commanding officer the necessity of preventing the men from eating the fruits of the country and from indulging in any of the liquors they would meet on the march. A very judicious order, embracing these views was issued previous to our debarkation. I was sorry to say, however, that it was not observed on march. (We still have our troubles down here along this line). Had it been strictly obeyed, I think, we should have been spared much suffering. It being the height of the rainy

season when we reached the Isthmus, we were much embarrassed by the state of the roads, by rains every day, by extreme heat and by the epidemic influences prevailing.

"Cholera existed at Aspinwall when we landed. It had been very fatal a short time previously among the laborers on the railroad, in consequence of which they had very generally abandoned their work. Notwithstanding all this, the men had no sooner been permitted to land to procure water, than numbers of them sought the first tavern they could find, to indulge their fatal craving for liquor. Many were brought back on board that night intoxicated and drenched with rain (Does that sound familiar to the many who have passed through here on a transport?). Fruits were also eaten with avidity whenever they could be procured.

"As we did not reach Aspinwall until after the departure of the daily train of cars we were obliged to remain there until the next morning. Colonel Bonneville informed me that it was determined to march the main body of men from Gorgona to Panama; that the sick, the women, the baggage and one company would proceed to Cruces, where mule transportation would be provided, whence they would proceed to Panama. I was ordered to accompany this last detachment. Colonel Bonneville then proceeded at once in boats to Gorgona. Colonel Wright was to follow when the baggage came up. Colonel Wright went on with his battalion leaving me, a subaltern, and a small guard, with the sick.

"I proceeded up the river to Cruces, a distance of twelve miles, against a rapid and dangerous current, in a small boat propelled by setting-poles only and by dint of great exertion and determination succeeded in reaching that point at about 9:30 that night. At Cruces, much to my surprise, I found the regimental quartermaster, about seventy men, and all women and children. The detachment was camped on the river at the landing place. In the morning we were again disappointed in transportation. Due to cholera having broken out, I thought it prudent to urge the quartermaster to as speedy a movement from the place as possible; and by my advice he determined that if the requisite transportation was not furnished by the next morning, to procure it himself from anybody, at any price, and require the contracting parties to pay for it.

"The next morning we were no better off and Captain Grant then went into the market and succeeded in completing a contract before night with a responsible person. In the meantime several cases of cholera occurred and we had four more deaths. I recommended under the circumstances that the whole detachment should be furnished with mules, lest the fatigue of marching over so desperate a road should excite the disease in men predisposed to it, and they should perish, without the possibility of my aiding them. In compliance with Captain Grant's contract a large number of mules, both saddle and pack, were brought up in the morning. By 1:00 p.m. about

half of the men and baggage was dispatched. The usual rain then coming on, operations were necessarily suspended for the day.

"I must remark here, that the preservation of anything like order or organization in the forwarding of troops on mules across the Isthmus is altogether out of the question. The moment a rider or a cargo is placed on a mule's back that moment he must set out, or the muleteer strips his mule and carries him off. (Apparently the Engineers were deserted recently by their hired muleteers). Our movement was therefore, a straggling one, each man making his way to Panama as best he could.

"I reached Panama before dark, but too late to go to the ship. I learned that she was lying off Taboga, 12 miles down the bay, that cholera had broken out on board and carried off a number of men. The disease having reappeared, it was determined to land the troops. There being shelter for the sick upon the island of Flamenco, (now a part of Fort Amador) about six miles from Panama, the debarkation was effected; the sick were placed in huts and the well in a few tents and under sails stretched over poles. On the 3d of August, the *Golden Gate* determined to go to sea the next day, but refused to take on board more than 450, and expressly declared that they would receive not a single sick man. To this extraordinary demand we were forced to submit, and I was accordingly ordered to remain on the island with the sick, most of the women and children, and one company of troops to act as nurses."

Having completed what we had considered the annual run of maneuvers we came back to Amador prepared to

enjoy ourselves during a short respite, before the target practice season sets in. However, those of us who have been stationed here for some time realize that during no time of the year can one count on having even a small breathing spell. The Fleet starts to arrive next week and that means a combined Army and Navy maneuver. However, we get the breaks, this time, and the Atlantic Side troops have to pull up stakes and come over here. More about this in the next letter.

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On April 28th the Navy discovered Fort Sherman. This charming little post had the entire Battle Fleet right out in its front yard—Cristobal Bay. The officers and men of the Fleet were immediately enamoured of its fine bathing facilities, its long, well-kept trails into the jungle, its adequate Beer Garden, and its air of quiet, though active normality. The privileges of the tennis courts and golf course were extended to the Officers; and many of the ships' teams made use of our diamond and gymnasium for practice. Captain Jimmie Hogan's baseball team made a clean sweep in its series with Navy teams, including a victory over the crack Omaha nine. Our battery basketball teams dropped only one game out of five to the Fleet cagemen. Many of the visitors declared Fort Sherman to be the most beautiful of all foreign stations. Incidentally, the garrison cannot too strongly express its admiration for the fine state of discipline indicated by the conduct of the men while ashore; within eight days at least ten thousand men visited our post, and, despite the absence of M.P.'s, not a single incident of discord or disorder occurred.



INVESTIGATION SHOWS that whenever two nations have become engaged in warfare they have been for decades, and perhaps centuries, advancing on converging lines of self-interest and aggrandizement. When the contact takes place, the struggle for supremacy, or even survival, is at hand. As these lines approach one another, difficulties due to increasing proximity of interests arise between the countries and result in disagreements, the seriousness and frequency of which stand in inverse ratio to the distance at which they take place from the point of contact. When these lines meet, war ensues. No two nations or tribes of men move on parallel lines, though they may for centuries have the appearance of so doing.—HOMER LEA.

COAST ARTILLERY ORDERS

Colonel A. S. Conklin, from 62d, Ft. Totten, to member of General Staff Corps, assigned to General Staff with Troops and Chief of Staff, Third Corps Area, Sept. 2.

Colonel W. F. Hase, appointed Major General, Chief of Coast Artillery, March 22.

Colonel W. H. Monroe, report to President Army retiring board, Letterman General Hospital.

Lieutenant Colonel C. W. Baird, from student, Naval War College, Newport, to 62d, Ft. Totten, June 20.

Lieutenant Colonel M. S. Crissy promoted colonel March 26.

Lieutenant Colonel Richard Donovan, from Panama, to 69th, Ft. McClellan.

Lieutenant Colonel R. C. Garrett, from 6th, Ft. Winfield Scott, to student, Army War College, Washington, D. C.

Lieutenant Colonel R. E. Guthrie, from detail General Staff Corps, General Staff, Panama, to 1st C. A. Dist., Boston, Aug. 4.

Lieutenant Colonel L. P. Horsfall, from instructor, C. & G. S. School, Ft. Leavenworth, to 5th, Ft. Wadsworth, June 20.

Lieutenant Colonel Allen Kimberly, from student, Army War College, Washington, D. C., to 6th, Ft. Winfield Scott.

Lieutenant Colonel W. C. Knight, report to Army retiring board, Walter Reed General Hospital.

Lieutenant Colonel O. H. Longino, from Georgia School of Technology, Atlanta, to student, Army War College, Washington, D. C.

Lieutenant Colonel Gilbert Marshall, from 5th, Ft. Wadsworth, to Org. Res., 4th Corps Area, Atlanta, Aug. 1.

Lieutenant Colonel J. S. Pratt, from student, Army War College, Washington, D. C., to instructor, Army War College.

Lieutenant Colonel R. H. Smith, from member, General Staff Corps, War Department General Staff, Washington, D. C., report to Commanding General, Second Corps Area, Governor's Island.

Lieutenant Colonel G. A. Wildrick, detailed member decoration board vice Major General W. F. Hase.

Lieutenant Colonel W. K. Wilson promoted colonel March 26.

Major H. R. Behrens, from the Philippines, to 63d, Ft. MacArthur.

Major R. D. Brown, from office Chief of Staff, Washington, D. C., to 63d, Ft. MacArthur, sailing New York, July 17.

Major C. W. Bundy, from student, Army War College, Washington, D. C., to office, Chief of Coast Artillery, Washington, D. C.

Major A. H. Campbell, from University of California, Berkeley, to student, C. & G. S. School, Ft. Leavenworth.

Major W. McD. Chapin, from student, C. & G. S. School, Ft. Leavenworth, to 14th, Ft. Worden, June 30.

Major J. F. Cottrell, from student, Army Industrial College, Washington, D. C., to 69th, Ft. McClellan, June 30.

Major R. V. Cramer, from office Chief of Coast Artillery, Washington, D. C., to instructor, C. A. School, Ft. Monroe, August 10.

Major Nelson Dingley, 3d, from 52d, Ft. Monroe, to student, C. & G. S. School, Ft. Leavenworth, August 27.

Major C. R. Finley, from member of

General Staff Corps, Panama, to instructor, C. & G. S. School, Ft. Leavenworth, July 8.

Major A. J. French, from 63d, Ft. MacArthur, to Org. Reserves, 9th Corps Area, Los Angeles, August 1.

Major A. G. Frick, from Hawaii, to Org. Reserves, Third Corps Area, Philadelphia.

Major J. C. Haw, from Org. Reserves, Second Corps Area, Schenectady, to Panama, sailing New York, Aug. 9.

Major M. J. Hickok, from Hawaii, to 11th, Ft. H. G. Wright.

Major D. D. Hinman, from student, Army War College, Washington, D. C., to Hq. Eighth Corps Area, Ft. Sam Houston.

Major C. E. Hocker, from 2d, Ft. Monroe, to student, Army War College, Washington, D. C., Aug. 1.

Major J. C. Hutson, from student, C. A. School, Ft. Monroe, to 61st, Ft. Sheridan, June 20.

Major H. R. Jackson, from student, C. & G. S. School, Ft. Leavenworth, to instructor, C. A. School, Ft. Monroe.

Major T. H. Jones, from the Philippines to Georgia School of Technology, Atlanta.

Major E. L. Kelly promoted to Lieutenant Colonel, March 1.

Major Franklin Kemble, from instructor, North Carolina National Guard, Wilmington, to 52d, Ft. Monroe, Sept. 1.

Major M. M. Kimmel, Jr., from instructor, Va. National Guard, Richmond, to Panama, sailing New York, June 21.

Major D. S. Lenzner, from student, C. & G. S. School, Ft. Leavenworth, to student, Army Industrial College, Washington, D. C., Aug. 15.

Major LeRoy Lutes, from Hawaii to student, Army War College, Washington, D. C., Aug. 15.

Major C. F. Maguire, from student, C. A. School, Ft. Monroe, to 13th, Ft. Barrancas, June 20.

Major E. H. Metzger, from 3d C. A. Dist., Ft. Monroe, to student, Army War College, Washington, D. C., Aug. 1.

Major C. B. Meyer promoted to Lieutenant Colonel, March 26.

Major G. R. Meyer, from office of Chief of Coast Artillery, Washington, D. C., to student, Army War College, Aug. 1.

Major G. F. Moore, from student, Army War College, Washington, D. C., to 3d, Ft. Monroe.

Major H. R. Oldfield promoted Lieutenant Colonel, January 11.

Major R. M. Perkins, from 62d, Ft. Totten, to student, Army War College, Washington, D. C., Aug. 1.

Major C. J. Schaefer, Jr., CA-Res. to Washington, D. C. on active duty, May 13.

Major C. M. S. Skene, from instructor, C. A. School, Ft. Monroe, to office Chief of Coast Artillery, Washington, D. C., June 30.

Major J. S. Smylie, from student, Army Industrial College, Washington, D. C., to instructor, C. A. North Carolina National Guard, Wilmington, June 30.

Major H. W. Stark, from instructor, C. A. School, Ft. Monroe, to instructor, C. A. Delaware National Guard, Wilmington, June 30.

Major A. G. Strong, from student, Naval War College, Newport, to Org. Reserves, Second Corps Area, New York, June 15.

Major Charles Thomas-Stable, from Michigan State College, East Lansing, to 62d, Ft. Totten, June 30.

Captain C. H. Ainsworth, from 63d, Ft. MacArthur, to 11th, Ft. H. G. Wright.

Captain H. G. Archibald, from Hawaii, to 69th, Ft. McClellan.

Captain H. C. Barnes, Jr., from U. S. Military Academy, West Point, to student, C. & G. S. School, Ft. Leavenworth, Aug. 27.

Captain R. T. Barrett, from student, C. A. School, Ft. Monroe, to 2d Ft. Monroe.

Captain H. H. Blackwell, from the Philippines, to 62d, Ft. Totten.

Captain George Blaney, from 9th, Ft. Banks, to instructor, C. A. Maine National Guard, Rockland, June 15.

Captain Benjamin Bowering promoted major March 9.

Captain A. F. Cameron, from Philippines, to 62d, Ft. Totten.

Captain H. D. Cassard, from student, C. A. School, Ft. Monroe, to 51st, Ft. Monroe.

Captain F. R. Chamberlain, Jr., from student, C. A. School, Ft. Monroe, to 52d, Ft. Monroe.

Captain F. G. Epling, from 62d, Ft. Totten, to Panama, sailing New York, June 21.

Captain J. K. Freeman, from 11th, Ft. H. G. Wright, to Walter Reed General Hospital, Washington, D. C., for observation and treatment.

Captain R. E. Hill, from student, C. A. School, Ft. Monroe, to 51st, Ft. Monroe.

Captain J. L. Hogan, from Panama, to 8th, Ft. Preble.

Captain W. D. Hohenthal, from 52d, Ft. Monroe, to report to Commanding General, Second Corp Area, Governor's Island.

Captain Creighton Kerr promoted major, March 26.

Captain E. W. King, from Panama, to 13th, Ft. Barrancas.

Captain H. C. Mabbott, from Coast Artillery Board, Ft. Monroe, to student, C. & G. S. School, Ft. Leavenworth, Aug. 27.

Captain F. J. McSherry, from student, C. & G. S. School, Ft. Leavenworth to Hawaii, sailing New York, July 17.

Captain R. M. Mackin, Jr., from student, C. & G. S. School, Ft. Leavenworth, to instructor, C. A. School, Ft. Monroe.

Captain Maurice Morgan, from student, C. A. School, Ft. Monroe, to 6th, Ft. Winfield Scott, sailing New York, July 17.

Captain J. G. Murphy, from 62d, Ft. Totten, to student, C. & G. S. School, Ft. Leavenworth, Aug. 27.

Captain G. A. Patrick, from student, C. A. School, Ft. Monroe, to 52d, Ft. Monroe.

Captain T. R. Phillips, from Org. Reserves, 7th Corps Area, Minneapolis, to student, C. & G. S. School, Ft. Leavenworth, Aug. 27.

Captain Frank Richards, from 61st, Ft. Sheridan, to 13th, Ft. Barrancas.

Captain Kenneth Rowntree promoted major, March 1.

Captain P. W. Rutledge, from student, C. A. School, Ft. Monroe, to 2d, Ft. Monroe.

Captain W. W. Scott, from student, C. A. School, Ft. Monroe, to 6th, Ft. Winfield Scott, sailing New York, July 17.

Captain A. P. Sullivan, from 61st, Ft. Sheridan, to student, C. & G. S. School, Ft. Leavenworth, Aug. 27.

Captain F. S. Swett, from 61st, Ft. Sheridan, to 13th, Ft. Barrancas.

Captain J. R. Townsend, from Hawaii, to instructor, C. A. School, Ft. Monroe.

Captain J. E. Troupe, to Panama, sailing New York August 9. Previous orders revoked.

Captain S. E. Willard, from instructor, Maine National Guard, Rockland, to 11th, Ft. H. G. Wright, August 1.

Captain Ellsworth Young, from Kansas State College, Manhattan, to Panama, sailing New York, Aug. 9.

First Lieutenant Granger Anderson, from Panama to student, C. A. School, Ft. Monroe, Aug. 27.

First Lieutenant G. M. Badger, from U. S. Military Academy, West Point, to student, C. & G. S. School, Ft. Leavenworth, Aug. 27.

First Lieutenant L. W. Bartlett, from student, C. A. School, Ft. Monroe, to instructor, C. A. School, June 20.

First Lieutenant A. H. Bender, from 69th, Ft. McClellan to student, C. A. School, Ft. Monroe, Aug. 27.

First Lieutenant H. T. Benz, from 2d, Ft. Monroe, to Hawaii, sailing New York, May 4.

First Lieutenant W. I. Brady, from Hawaii, to University of Kansas, Lawrence.

First Lieutenant R. C. Broadhurst, will report to Army retiring board, Hq. Eighth Corps Area.

First Lieutenant B. E. Cordell, from 6th, Ft. Winfield Scott, to student, C. A. School, Ft. Monroe, Aug. 27.

First Lieutenant P. W. Edwards, from student, C. A. School, Ft. Monroe, to 11th, Ft. H. G. Wright, June 20.

First Lieutenant L. D. Flory, from 2d, Ft. Monroe, to student, C. & G. S. School, Ft. Leavenworth, Aug. 27.

First Lieutenant G. A. Ford, from 13th, Key West Barracks, to 69th, Ft. McClellan, June 10.

First Lieutenant F. J. French, from student, C. A. School, Ft. Monroe, to 2d, Ft. Monroe.

First Lieutenant J. R. Goodall, from 52d, Ft. Monroe, to 11th, Ft. H. G. Wright, June 20.

First Lieutenant J. E. Harriman, from submarine mine depot, C. A. School, Ft. Monroe, to student, C. & G. S. School, Ft. Leavenworth, Aug. 27.

First Lieutenant R. R. Hendrix, from student, C. A. School, Ft. Monroe, to 6th, Ft. Winfield Scott.

First Lieutenant Hobart Hewett, from instructor, C. A. School, Ft. Monroe, to student, C. & G. S. School, Ft. Leavenworth, Aug. 27.

First Lieutenant J. J. Holst, from student, C. A. School, Ft. Monroe, to 13th, Ft. Barrancas, June 30.

First Lieutenant David Hottenstein, from the Philippines to 52d, Ft. Hancock.

First Lieutenant P. A. Jaccard, from 52d, Ft. Monroe, to 14th, Ft. Worden, sailing

New York, May 4.

First Lieutenant F. B. Kane, from Panama, to student, C. A. School, Ft. Monroe, Aug. 27.

First Lieutenant W. H. Kendall, from 51st, Ft. Monroe, to 13th, Ft. Crockett.

First Lieutenant E. A. Kleinman, from 51st, Ft. Monroe, to University of Pittsburgh, Pittsburgh, July 26.

First Lieutenant R. H. Krueger, from 51st, Ft. Monroe, to 13th, Key West Barracks, June 10.

First Lieutenant D. B. Latimer, from 2d, Ft. Monroe, to U. S. Military Academy, West Point.

First Lieutenant W. C. McFadden, from Panama, to 52d, Ft. Hancock.

First Lieutenant C. W. McGeehan, from student, C. A. School, Ft. Monroe, to 10th, Ft. Adams, June 30.

First Lieutenant J. E. McGraw, from 2d, Ft. Monroe, to Signal Corps, and assigned to 51st Signal Battalion, Ft. Monmouth, April 3.

First Lieutenant Donald McLean, from 51st, Ft. Monroe, to student, C. A. School, Ft. Monroe, Aug. 27.

First Lieutenant W. L. McNamee, from 63d, Ft. MacArthur, to student, C. A. School, Ft. Monroe, Aug. 27.

First Lieutenant H. E. Magnuson, from student, C. A. School, Ft. Monroe, to Quartermaster Corps, student, Quartermaster Corps Motor Transport School, Baltimore, June 18.

First Lieutenant J. E. Mortimer, from student, C. A. School, Ft. Monroe, to 61st, Ft. Sheridan, June 20.

First Lieutenant R. J. Moulton, from student, C. A. School, Ft. Monroe, to Quartermaster Corps, Ft. Monmouth, June 18.

First Lieutenant P. B. Nelson, from student, C. A. School, Ft. Monroe, to Panama, sailing New York, Aug. 9.

First Lieutenant F. N. Parsons, Station Hospital, Ft. McPherson, to President, Army retiring board.

First Lieutenant J. G. Renno, from Hawaii, to 51st, Ft. Monroe.

First Lieutenant W. L. Richardson, 2d, Ft. Monroe, is placed on flying status for the period of May and June, 1934.

First Lieutenant I. H. Ritchie, from Ordnance Department, Ordnance School, Aberdeen Proving Ground, Md., to 14th, Ft. Worden.

First Lieutenant G. H. Seitz, Jr., CA-Res. promoted captain, CA-Res., March 15.

First Lieutenant L. E. Shaw, from 6th, Ft. Winfield Scott, to student, C. A. School, Ft. Monroe, Aug. 27.

First Lieutenant N. B. Simmonds, from 6th, Ft. Winfield Scott, to Panama, sailing San Francisco, June 19.

First Lieutenant E. C. Smallwood, from student, C. A. School, Ft. Monroe, to 63d, Ft. MacArthur.

First Lieutenant A. P. Sullivan promoted captain January 7.

First Lieutenant G. E. Thrans, from 2d,

Ft. Monroe, to 13th, Ft. Barrancas, June 15.

First Lieutenant G. W. Trichel, from instructor, C. A. School, Ft. Monroe, to Ordnance Department, Watertown Arsenal, Watertown, June 15.

First Lieutenant C. M. Wolff, from Hawaii, to 7th, Ft. Hancock.

First Lieutenant G. E. Young, from student, C. A. School, Ft. Monroe, to 69th Ft. McClellan, June 20.

First Lieutenant L. A. Zimmer, from student, C. A. School, Ft. Monroe, to 61st, Ft. Sheridan, June 20.

Second Lieutenant L. A. Bosworth, from Panama, to 51st, Ft. Monroe.

Second Lieutenant I. J. Brokaw, CA-Res., transferred to Inf.-Res., March 26.

Second Lieutenant J. H. Cunningham, Jr., from Coast Artillery Corps to Air Corps, Feb. 16.

Second Lieutenant T. J. Dayharsh promoted first lieutenant, March 10.

Second Lieutenant J. J. Earle, Jr., promoted first lieutenant, Feb. 23.

Second Lieutenant N. R. Ford, resigned, April 1.

Second Lieutenant A. L. Fuller, Jr., from U. S. A. mine planter, *Gen. John M. Schofield*, Ft. Monroe, to Commanding General, port of embarkation, Brooklyn, June 15.

Second Lieutenant E. B. Hempstead, from student, C. A. School, Ft. Monroe, to 6th, Ft. Winfield Scott, sailing New York, July 17.

Second Lieutenant W. H. Hennig promoted first lieutenant, February 1.

Second Lieutenant J. J. Hutchison, transferred to Air Corps, April 6.

Second Lieutenant G. E. Keeler, Jr., from student, C. A. School, Ft. Monroe, to 69th, Ft. McClellan.

Second Lieutenant A. M. Lazar, from Panama, to 62d, Ft. Totten.

Second Lieutenant P. A. Leahy, from 62d, Ft. Totten, to 9th, Ft. Banks, June 1.

Second Lieutenant E. D. Peddicord to New York, sailing San Francisco, June 19. Previous orders amended.

Second Lieutenant P. D. Perry promoted first lieutenant March 1.

Second Lieutenant L. G. Ross promoted first lieutenant April 1.

Second Lieutenant W. M. Vestal, from student, C. A. School, Ft. Monroe, to 63d, Ft. MacArthur, sailing New York, July 17.

Second Lieutenant D. M. Wilson promoted first lieutenant March 1.

Master Sergeant, C. W. Byers, 15th, Hawaii, retired, March 31.

Master Sergeant H. N. Carpenter, 7th, Ft. Hancock, retired, April 30.

First Sergeant B. S. Blough, 6th, Ft. Winfield Scott, retired, April 30.

First Sergeant Thomas Farley, 51st, Ft. Monroe, retired, April 30.

First Sergeant William Lynch, 64th, Ft. Shafter, retired, March 31.

First Sergeant Neil Mason, 4th, Ft. Amador, retired, April 30.



THE NATION *that cannot resist aggression is constantly exposed to it.*—GROVER CLEVELAND.

NATIONAL GUARD NOTES

The Act of June 15, 1933

BY LIEUTENANT COLONEL HEROLD J. WEILER,
Field Artillery, N.G.U.S.

THE amendment to the National Defense Act passed by the Congress on June 15, 1933 has four main provisions:

1. It creates a new reserve component of the Army called the *National Guard of the United States*.
2. It creates a reserve for the National Guard of the United States called the *Inactive National Guard*.
3. It provides that henceforth, insofar as is practicable, the units of the National Guard shall be used intact in a war.
4. It provides that these units shall be returned intact to the states after the war.

The law does not change in any respect the President's power to call forth the militia to repel invasion, suppress disorders, or maintain the laws; it merely clarifies and simplifies the method by which this is done. Henceforth, instead of having to draft or call the National Guard into the service of the United States, with all the delays attending these complicated and cumbersome processes, organizations will be subject to the orders of the President *in the same way as those of the Regular Army*.

In 1917 part of the delay in mobilizing the Guard was due to the need of organizing it into higher units, but much of it was due to impediments in the law. This confusion will no longer be necessary. The higher units are formed, and the new law provides that they shall not be tampered with, unless imperative need exists, and shall be available for service at once. Hitherto demobilization destroyed the Guard, and it had to be created afresh in every state and territory. This brought on a period of the Dark Ages in the Guard. Useful men and valuable experience were lost. The damage to its efficiency could be repaired only slowly. This will be changed by the new law. No longer will National Guard officers be commissioned in the Reserve Corps, but instead will bear commissions in the National Guard of the United States. The Inactive National Guard is merely a new name for the National Guard Reserve. The change is in name only, to prevent the possibility of confusing it with the Organized Reserve, and does not affect policies regarding assigned reservists.

In approaching a study of this Act, it is necessary to go behind the law itself and delve into its history and to ascertain what was intended to be accomplished by those who were responsible for this legislation. First, we should know what the National Guard itself intended when they

A review of the amendment to the National Defense Act.

proposed the amendments, and secondly, we should know what Congress in its wisdom decided to do and what it intended should be accomplished when the proposed legislation was enacted into law.

The National Guard of today represents the growth of the ideas of the United States as to the trained citizen-soldier. Its period of development has been coincident with that of the American nation itself. The origin of the National Guard is found in the earliest militia bands of colonial days. Very little was done to make an effective force of this militia until after the Spanish-American War. Prior to that time it was pretty much an orphan and depended upon the patriotism and military inclinations of the individuals in various communities. In time of peace men bought their own uniforms and drilled when the spirit moved them, the principal object in reaching perfection being to win competitive drills which were held by various organizations throughout the country.

After the Spanish-American War more definite steps were taken to bring these forces into a state that would make them of value in times of emergency. A great deal of progress was made between 1900 and 1916, when these troops were called out and sent to the border under the Constitutional provision giving the President power to call forth the Militia. This mobilization showed that there was still much to be desired before the National Guard could be considered an effective force ready for use in times of national emergency. The National Guard was organized into combat divisions and many of these divisions went overseas. The history of operations of these divisions in France gave an indication of what might be accomplished if adequate support were given to their organization and training in time of peace.

In 1920 steps were taken to amend the National Defense Act which had been passed in 1916. The amendment of 1920 provided a definite program for the development of the civilian components of the Army of the United States. It was realized at that time that the National Guard could be made into an effective military force ready for at least limited service in the beginning of any emergency. The reorganization of the National Guard after the war resulted in the formation of eighteen infantry divisions, four cavalry divisions, and certain auxiliary troops, including antiaircraft and harbor defense. The National Guard was still not a part of the

Army of the United States except when called to active duty, and the old provisions of law, that required a draft of the National Guard into federal service, were still in force. It was felt that additional legislation should be sought in order to eliminate the necessity for the drafting of the National Guard in time of emergency and to take in time of peace as many as possible of the steps necessary to bring the National Guard into federal service in time of war.

HISTORY OF THE ACT OF JUNE 15, 1933

In 1926, the National Guard Association, in convention assembled at Louisville, Kentucky, adopted the following resolution:

“* * * That we hereby reaffirm our position heretofore declared with regard to our status, and that we favor appropriate amendments of the National Defense Act so that the federally recognized National Guard shall at all times, whether in peace or war, be a component of the Army of the United States, its status under the Constitution being preserved, so that its government when not in the service of the United States shall be left to the respective States, and that all federally recognized officers thereof shall be duly appointed and commissioned therein.”

From the above it will be seen that it was the definite intention of the National Guard that the *federally recognized National Guard* shall at all times, both in peace and war, be a component of the Army of the United States; that the government or administration of the National Guard, when not in the service of the United States shall remain with the states; and that *all federally recognized officers of the National Guard* shall be duly appointed and commissioned in the component of the Army of the United States which was to be created by the new legislation; that is, the National Guard of the United States.

Further very careful study was given to the subject by the National Guard through committees appointed for that specific purpose by proper authority, and definite conclusions were reached, which conclusions were as follows: that a new federal reserve component could be legally created; that there was no legal objection to amendments to the National Defense Act to provide that the officers and men of the new federal reserve force should consist of the *federally recognized members of the National Guard*; that there was no legal objection to providing that such officers shall be appointed by the President; that service under the Presidential appointment in the new federal reserve force would take effect in the future; that such amendments would make it clear that the administration and control of the National Guard would remain unimpaired to the States, except during active service as a part of the Army of the United States; that in event of a national emergency, such reserve *or any part thereof* may be ordered into active federal service without change of organization or personnel; that when

the Federal Government had no further use for this federal reserve force, it could be returned to the States and revert from such active federal service to its former reserve status and its state status; that the “call” of the federally recognized National Guard under the Militia Clause of the Constitution would not be disturbed; and that the draft provisions of the National Defense Act insofar as they relate to members of the National Guard should be eliminated by repeal.

Having reached the above conclusions, conferences were held between representatives of the National Guard, officers representing the National Guard Bureau of the War Department, and officers representing the Reserve Officers' Association. The latter Association was brought into the conferences because of the fact that a number of suggested amendments would, if enacted into law, affect sections of the National Defense Act which sections dealt with the Officers' Reserve Corps.

Following these conferences, a bill was prepared and presented to the Congress by Representative Speaks of Ohio. Embodied within the provisions of this bill were all the principles enunciated above. The bill in substantially the same form was before Congress for a period of approximately five years, during which time it was fully discussed by the committees of Congress and was carefully and repeatedly studied within the War Department.

It was definitely understood by all concerned that the new reserve force created by the bill was to be based upon those officers and the men who were in a *federally recognized status*, and in the future, officers and men receiving federal recognition would automatically be placed in the new federal reserve known as the National Guard of the United States.

So much for the history of the law. Now let us see what the practical results of its operation will be.

War Department General Orders No. 3 dated April 4, 1934, puts into effect the provisions of the Act. It appoints in the National Guard of the United States all officers and warrant officers of the National Guard and makes provision for the enlistment for the unexpired portion of their term of all present enlisted men of the National Guard. It also tenders an appointment as officers of the National Guard of the United States to all enlisted men of the National Guard now holding commissions in the Officers' Reserve Corps.

THE NATIONAL GUARD OF THE UNITED STATES

The question is often asked, “What is the National Guard of the United States?” It can best be answered in the language used in the bill.

“‘National Guard of the United States’ means a reserve component of the Army of the United States composed of those federally recognized units and organizations and persons duly appointed and commissioned in the active and inactive National Guard of the several States, Territories, and the District of Columbia, who have taken and subscribed to the oath of of-

fice prescribed in Section 73 of this Act, and of those officers and warrant officers appointed as prescribed in Sections 75 and 111 of this Act, and of those persons duly enlisted in the National Guard of the United States and of the several States, Territories, and the District of Columbia, who have taken and subscribed to the oath of enlistment prescribed in Section 70 of this Act."

Its officers are reserve officers and the law so states. The enlisted men are members of a reserve force and the law is also clear on that.

By making of the National Guard this reserve force called the National Guard of the United States, there are taken, in time of peace, all of the steps necessary in time of war to bring the National Guard into the service of the United States except that the Congress must declare an emergency and authorize the use of armed forces other than the Regular Army and the President must order the National Guard into active service. The law does away with the previous necessity of National Guard officers having reserve commissions and consequently none will be issued in the future.

The examination provided for officers and warrant officers may be held prior to the original appointment or promotion of any individual as an officer or warrant officer and if the applicant has been found qualified, he may be issued a certificate of eligibility by the Chief of the National Guard Bureau, which certificate, in the event of appointment or promotion within two years to the office for which he was found qualified, shall entitle the holder to federal recognition without further examination, except as to his physical condition. This will provide an eligibility list of men for whom vacancies do not now exist. This eligibility will cease when a man severs his connection in the National Guard.

The creation of the National Guard of the United States not only does away with the need for a coterminous commission in the Officers' Reserve Corps by creating a National Guard status of equal availability for officers, but this new National Guard status called the National Guard of the United States includes warrant officers and enlisted men, thereby making the entire National Guard as available for entry into federal service as were formerly only those officers holding commissions in the Officers' Reserve Corps.

The law does not contemplate that there will be any officers in the National Guard except those who also hold commissions in the National Guard of the United States.

THE INACTIVE NATIONAL GUARD

The Inactive National Guard replaces the National Guard Reserve insofar as the Federal Government is concerned. It consists of officers, warrant officers and enlisted men. To allow for expansion to war strength, it is provided that an officer who for business reasons is forced to separate himself from the active National Guard, may, if he so requests, retain his commission in the National Guard of the United States and for

commissioning in time of peace, enlisted men in the National Guard of the United States. It also provides for enlistment in the active National Guard and for transfers between the active and inactive National Guard.

Standards of efficiency for officers of the Inactive National Guard who are part of the National Guard of the United States will require the performance of at least the same amount of inactive duty required of members of the Officers' Reserve Corps. In addition to this, they should be given an opportunity for active duty training whenever there is a vacancy during the field training period to which they can be assigned.

Annual physical examinations will be required, based on the same standards as those for active duty officers.

This Inactive National Guard is a reservoir to provide officers and enlisted men for expansion of the National Guard for war service. This expansion will require approximately 15,000 officers and the ideal situation will be for each state to have commissioned in the Inactive National Guard sufficient qualified officers to fill all war vacancies for that state.

The policy has been adopted of commissioning enlisted men of the National Guard only in the National Guard of the United States, thereby discontinuing the practice of giving them commissions in the Officers' Reserve Corps.

The result of this is to reserve to the National Guard priority on the services of all members of the National Guard.

The practice in some states, of transferring to the National Guard Reserve officers who did not meet the required standards for remaining active, resulted in many officers being retained in the National Guard Reserve who would be worthless for use in an emergency. Officers of this type will be eliminated from the National Guard. The standards for remaining in the Inactive National Guard will insure that only those officers who can step in and take their places in an emergency will be so retained.

NATIONAL GUARD UNITS MAINTAINED INTACT IN EMERGENCY

The law provides that in time of emergency the National Guard shall be maintained intact insofar as possible and that, in expansion to war strength, officer personnel will be taken from the National Guard.

This should act to prevent the breaking up of combat units for use as replacements as was done in some cases in the World War. Many of us remember the confusion resulting from throwing together units from different states and sending to them hastily gathered staffs completely unknown to the troops and knowing nothing of the troops whose organization and training they were to direct. Surely having a carefully trained staff known to and knowing the troops they are to serve with will result in a vast improvement. The results already achieved give an indication of what we may expect on mobilization. The National Guard in 1917 could furnish only a heter-

ogenous hodge podge of units which it took many months to organize into even the semblance of fighting divisions. Now the National Guard can put in the field eighteen infantry divisions completely organized as to headquarters and staffs. The troops composing these divisions know each other and the commanding officers and staffs know the capabilities and possibilities of the troops.

The knowledge that the National Guard divisions will be used as now constituted and that no wholesale breaking-up and reorganization is contemplated on the outbreak of war should be the greatest inspiration to improvement possible. It should raise morale as no other single thing could do.

RETURN TO STATES AS ORGANIZATIONS WHEN EMERGENCY IS ENDED

The law provides that when the emergency is past, the National Guard will be returned to the States as organizations. Those who had a part in the post-war organization of the National Guard know how much this means. At least one lesson of the World War has been learned.

Knowing that the heritage of their service will continue to be an inspiration in the years to come should cause all to make the most of their opportunities. This is assured by the policy of returning the National Guard to the states as organizations when the emergency ceases instead of discharging and scattering them to all parts of the country as was done on the termination of the World War.

Several years were lost in this reorganization before the Guard was again sufficiently organized to take full advantage of training opportunities. Much time and effort were necessary to do what would have been unnecessary if this law had then been in force.

CONCLUSIONS

In conclusion, we may sum up the results of this legislation as follows:

It has increased the readiness of the National Guard for war by doing away with the necessity for drafting it into the service of the United States. It has not increased the power of the Federal Government over the Guard. It has, however, facilitated the exercise of that power. It has not decreased the power of the states over the National Guard.

It provides for the National Guard a reserve of its own. The Inactive National Guard stands in the same relation to the active National Guard as the Organized Reserves do to the Regular Army.

It insures to as great an extent as possible the use of the National Guard as units and organizations to and including divisions.

It insures the return to the states of the National Guard when the emergency is past, thereby eliminating consequent reorganization by the states.

This law has greatly strengthened the National Guard by requiring an increased readiness for emergency. It was

a necessary supplement to the National Defense Act of 1920.

Delay has been experienced in putting the law into effect due to the differences of interpretation placed upon some of its provisions by those responsible for carrying them out. A decision by the Attorney General of the United States was necessary on a few questions. Many changes in regulations are necessary to put the law into operation. These are now in course of preparation.

The National Guard is today, without question, the finest body of non-professional troops in the history of the world. The progress which has been made in a few years is nothing short of phenomenal and gives an indication of what we may look forward to in the years to come under a continuing policy of improvement.

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National Guard Appropriations

THE following discussion of the War Department Appropriations Bill as it affects the National Guard is extracted from the remarks of the Honorable Ross A. Collins, Chairman of the Sub-committee on Military Appropriations, from *The Congressional Record* for March 27, 1934 (pp. 4004-4016):

"Now, with regard to the increases elsewhere, this bill carries 42 drills for the National Guard. For the present year the National Guard has been restricted to 36 drills. This bill puts the number of drills up to 42. The law provides for 48. Even though we could, I do not know that we would have put the drills up to 48, the amount prescribed in the National Defense Act. As a matter of truth, England has an organization comparable to the National Guard; and the English officers believe that 42 drills is a sufficient number for their organization. Personally, I have talked with quite a number of very prominent men in the National Guard. I could not well give their names because it might not be a popular thing for them to say, but most of the men with whom I have talked believe that 42 is a better number than 48.

"Besides increasing the number of drills, the committee has provided in this bill apparently \$1,500,000 to complete the motorization of the National Guard. As a matter of truth, the bill contemplates an expenditure of \$3,000,000. The Guard is getting \$865,000 from P.W.A. for motorization. This bill really gives them \$3,000,000 additional. This is true, and yet it is not true. They are going to be able through savings, to find \$1,500,000. They have testified that much of the savings will result from being freed of the cost of repairing the old equipment that will be displaced. The National Guard authorities agree, furthermore, to amortize this \$3,000,000 over a period of two years.

"The National Guard has a membership of 190,000 men. By changing the National Guard from an organization that is able to travel at the rate of 3 miles an hour to one that is able to travel at the rate of 25 or

30 miles an hour, in the event of an emergency, these 190,000 men can be taken to any part of the United States *in 4 days*. Not only that, but we have 190,000 men in the National Guard now available for combat duty. All of these men, every one of them, are effective. We have twice as many effectives in the National Guard today as we had three years ago without having increased their number by a single man. At the same time we have reduced the appropriations for the National Guard from around \$35,000,000 to \$27,500,000, yet we have more than doubled its effectiveness.

"These added drills cost approximately \$250,000 apiece. You will notice that \$968,000 is recommended for this purpose. In other words, the National Guard says it will be able to provide out of savings for two of the six additional drills.

"You will observe with respect to this particular appropriation that \$500,000 of the ammunition item has been eliminated. This is because of the fact that the Guard has gotten \$1,304,000 on ammunition from the P.W.A. of which \$1,129,000 will be available for expenditures in 1935. This together with the ammunition they have on hand will be more than sufficient to take care of their needs during the fiscal year 1935.

"We have reduced the estimated by \$271,579 for motor transportation. Possibly we should have cut it more. The new equipment that the Army will have, to be procured out of P.W.A. funds, should reflect lesser expenditures for maintenance and operation if the old equipment is gotten rid of, which we require them to do.

"Of 8,309 vehicles on hand as of January 1, 1934, 5,894 are classed as World War procurements and 596 as older than 5 years. Literally hundreds of thousands of dollars have been squandered in trying to keep this old equipment operating.

"To what extent, if any, old equipment would be discarded upon delivery of the new, there seemed to be considerable uncertainty on the part of the Department's representatives. The committee was unable to get any definite information. Therefore, it has inserted in the bill a provision prohibiting expenditures other than for salvaging or scrapping on any vehicle procured prior to January 1, 1920, except tractors. The Department is left to exercise its discretion as to these.

"The committee has repeated the provision in the current appropriations act authorizing the purchase of light trucks out of savings that would accrue from their substitution for animals of their use instead of commercial transportation."

In publishing this information to the Guard, the National Guard Bureau commented also on that position of Mr. Collins' speech in which he discussed age as a factor in military leadership:

"While Mr. Collins' indictment of age as a bar to military program did not mention specifically the National Guard, that does not mean that the Guard can afford to neglect his injunction 'let us eradicate "age"

now and fill vacant positions with officers possessing vigor, stamina and leadership,' since,

'The only real successes of the last war were achieved when the strongest attributes of youth were utilized most fully. Those military attributes are mobility and surprise. Surprise was achieved through vigor and dissembling. Age possesses neither of these characteristics and cannot manufacture them by prayer nor by army orders and regulations.'

"General MacArthur's article which appeared in the Hearst papers recently in connection with the National Defense Week was cited, and the statement of Brig. Gen. G. H. Estes before the Tank School at Fort Benning (quoted in the Annual Report of the Chief of Staff): 'What we must have is a swift, smashing military machine full of pep and vigor.'

"The motorization of the National Guard will make possible such a machine if the Guard keeps to the ideals of a youthful army with a keen appetite for professional culture."

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Notes of the 197th C.A. (AA)

THE 197th Coast Artillery (AA) New Hampshire National Guard, has discovered the correct answer to the question "How can we get the most benefit out of a terrain exercise?"

There has been issued and distributed to each officer of the regiment and to each attached reserve officer, an approved solution of the exercise held during the last annual encampment. This is a voluminous document consisting of 45 mimeograph sheets and 8 blueprints of special maps and overlays. An appropriate cover sheet bearing the regimental insignia, completes the job.

Colonel C. E. Rexford, commanding the 197th C.A. (AA), proposed the issuing of an approved solution. He, realizing the great amount of effort associated with moving the entire regiment into the field for an overnight tactical exercise, and noting that on the return from the problem everybody was too busy making up target practice reports, performing special escorts, and many other duties, to give much thought to the critique of the problem, decided to make his critiques short and snappy, criticizing the main features and promising the officers an approved solution later. Having the solution in their possession, the officers can then take their time in digesting every phase of the work and can learn thoroughly the orders and actions of all commanders.

The idea has received favorable comment from all concerned. The solution contains an estimate of the situation, warning orders, all field orders to include the individual battery, all administrative plans, an intelligence summary, and a very thorough discussion in which all phases of the problem are covered. A graphic march table is included in the document. In fact the solution presents a liberal education in the tactical handling of an antiaircraft regiment in the defense of harbor establishments and a naval base.

Captain Thomas K. Fisher, Plans and Training Officer of the 197th Coast Artillery (AA) is responsible for the solution and has been highly complimented on the excellence of the work. The original problem was worked out by Lieut. Colonel Charles A. French, the regimental executive. All officers of the regiment have expressed themselves as being much interested in this method of obtaining thorough instruction in actual terrain exercises.

248th C.A. Bn. (HD) Gets Insignia and Colors

THE First Provisional Battalion, 248th C.A. (HD), has had its designation changed to the 248th C.A. Battalion (HD) and, under the new designation, has received approval from the Office of the Quartermaster General and from the Chief, National Guard Bureau of a design for a Coat-of-Arms and crest. As a result insignia are now in the process of manufacture and should soon be available to the battalion, as should the new colors which have been requisitioned.

Although this organization has been in being since 1921, it has never been able to get approval of an organizational insignia due to the fact that as the 1st provisional battalion it did not contain or represent a majority of the 248th C.A. Regiment.

Unless there is some delay in the manufacture and supply the battalion should go to camp this summer with its own colors flying and a consequent boost in the morale of the personnel.

Notes from Coast Artillery Brigade, NYNG.

SEVERAL reviews were held in the Brigade during the past few months. Major General Lucius Holbrook, accompanied by his Aide, Captain Lockett, reviewed the 245th CA. NYNG, on April 27th. Brigadier General Wm. E. Cole, commanding the 2d Coast Artillery District, reviewed the 212th CA. NYNG, on April 17th. General Cole was accompanied by Colonel Conklin, commanding 62d CA. AA, and his staff, and Colonel Frank K. Fergusson. On April 10th, Brigadier General John J. Byrne, commanding the New York Coast Artillery Brigade, reviewed his old regiment, the 244th CA. NYNG. General Byrne commanded the 244th for many years before attaining his present rank. Many distinguished Regular Army and National Guard officers attended the review, among whom were Major General Lucius Holbrook; Colonel Conklin, commanding the 62d CA. AA.; and Colonel McNab, senior instructor of the New York National Guard. Also present was Brigadier General Hervey of the Canadian Army.

Of interest to all Guardsmen is the appointment of Private John Hopson, Battery G, 212th CA. NYNG, to West Point. Private Hopson is the first man appointed to West Point from 212th CA. NYNG. It was a matter of great pride to the regiment that he placed first in the competitive examination in New York State.

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NEWS AND COMMENT

Preparation of Efficiency Reports

EDITOR'S NOTE: Circular 12, Headquarters V Corps Area, issued October 21, 1933, by Major General George Van Horn Moseley, is of such importance that its contents should be indelibly impressed upon the minds of all officers charged with the preparation of efficiency reports.

"1. There seems to be a very widespread lack of uniformity on the part of officers called upon to make out efficiency reports, and to grade officers in the various classes, superior, excellent, satisfactory, etc. When the word 'average' was used instead of 'satisfactory,' certain reporting officers with a limited technical point of view, went to Webster's dictionary to determine definitely what the word 'average' meant, thereafter believing that half their officers only could be above average and half must necessarily be below. This was never the intention of the War Department in using the word and it resulted in much unfairness.

"2. The words 'superior, excellent, satisfactory, etc.' are not used strictly in their dictionary sense, but rather to indicate different strata into which military human beings are to be grouped. The word 'superior' was selected to represent the top stratum, and in this group we put our best officers. Then there is another group of officers, not quite up to our top notches, that we grade in a class which we call for convenience 'excellent.' Then there is a group of officers, fine fellows, all of them, who carry a great load and carry it well, but not brilliantly; and those officers we grade as 'satisfactory.' Then there are certain officers throughout the service who do not quite measure up in certain traits, and in these traits we grade them 'unsatisfactory' or perhaps even 'inferior.' However, when they definitely get in the unsatisfactory class we keep them under rather close observation, because we cannot afford to keep officers who remain for any great length of time below the grade of 'satisfactory.'

"3. Older officers who are called upon to make out efficiency reports should bear these things in mind, especially in making out reports on the youngsters. It is pathetic to look at the chart and see how very few second lieutenants are reported as 'superior,' but, as you view these wonderful youngsters joining the Army, you will find that most of them are of the very finest type. They should be encouraged by receiving the best report they deserve. If we feel that they are the best youngsters that we have ever seen, they should be rated as 'superior,' meaning that we put them in the highest class, forgetting entirely all dictionary definitions.

"4. All human beings make mistakes. Generally these should be corrected on the spot and forgotten in connection with the routine of the day. They should not be noted on efficiency reports unless they are observed to such an

extent and so frequently as to represent a fundamental weakness or deficiency, in which case the weakness rather than the incidents should be frankly reported.

"5. I find that the officer who fails to give full credit to the fine officer is often the same fellow who lacks the moral courage to picture clearly the deficiencies of the fundamentally poor officer. In this way he fails to give us the evidence upon which such an inferior officer could be eliminated. It is just as important to state the real defects of an inferior officer frankly as it is to state the accomplishments of a fine officer fairly.

"6. Complaint is made against the War Department because so few officers are eliminated. But what do we find when we examine the records of these officers? Too often their immediate commanders have failed to give the War Department the proper evidence on which to act in order to eliminate the officer under existing law.

"7. The Regular Army officer is a very wonderful citizen. The standards governing him are becoming higher every day. Great problems are going to fall to his lot for solution, and officers charged with the sacred duty of reporting upon these officers must equally bear in mind the encouragement of the fit whom we have in such great proportions and the elimination of the unfit who here and there appear among our ranks.

GEO. VAN HORN MOSELEY,
Major General, U. S. Army,
Commanding.

What Is It?

THE last issue of the JOURNAL carried an article which we hoped would result in locating the owner of a vanity case which had long reposed in the safe of the Fort Monroe Casemate Club. This time we have a different problem to solve. There is in the Fort Monroe Club a box containing the articles shown in the picture. No descriptive card can be found nor is any one now at Fort Monroe able to give the history of this box and its contents. Perhaps it has great historical significance. Undoubtedly it has played an important part in some accident or engagement. It may be a part of a German airplane or a Zeppelin. The bits of wood are apparently parts of a propeller. One section indicates that it was hit by



a one-pounder shell. We are publishing this information with the hope that someone may be able to explain the significance of the souvenir in order that it can be properly carded and preserved for posterity. Its historic value will, like wine, improve with age. Fifty years from now officers of the Army may regard it with awe and admiration, but its value depends largely upon an explanation of the part it played in the late war.

1 1 1

Activities of the 621st C.A. (HD)

HEADQUARTERS of the 621st Coast Artillery vacated its former location, room 3045 DuPont Building, and established its activities in the Old Federal Building, 6th and King Streets. The move was made on January 30th. This move will save the government \$627.00 annual rental, and provides larger space for our activities.

Thirty-two subcourses have been completed by members of this regiment for 420 credit hours. This makes a total of sixty-five subcourses for a total of 815 hours for this training season.

We are anticipating quite a number of promotions in the near future as there are some officers finishing subcourses which will make them eligible for application for examination for a certificate of capacity.

A large number of reserve officers, 621st Coast Artillery, attended the last two meetings of the Reserve Officers Associations, Dept. of Del. On January 9th, Lieutenant L. P. Hubbuch, CW-Res., gave a very interesting and instructive talk on the uses of the various chemicals and the means used to combat these weapons. On February 13th a Signal Corps training (sound) film was shown, "Tactical Employment of a Battery of 155-mm. guns." It was very interesting and instructive to all Reserve officers, especially the members of the 621st Coast Artillery.

1 1 1

Coast Artillery Target Practice

UNDER date of April 7th, 1934, the *Army and Navy Register* carried an article quoted in part as follows:

"Limitations placed on federal expenditures during the 1934 fiscal year have practically suspended target practice for coast artillery units, and it is possible that this most important training activity may be suspended during the 1935 fiscal year. If this phase of coast artillery training is partially restricted or entirely suspended during the next fiscal year it will mean that training and target practice for coast artillery units will have been interrupted in whole or in part for three consecutive fiscal periods, for this interruption in training began during the latter part of the 1933 fiscal year. War department authorities are hopeful that normal target practice of coast artillery units may be resumed during the 1935 fiscal year."

The foregoing implies a doubt as to the possibility of conducting Coast Artillery service target practice during the fiscal year 1935. War Department pronouncements already issued leave no doubt as to the resumption

of normal service target practice beginning with July 1, 1934. The allowances are now based on the calendar year in place of the fiscal year as has formerly been the practice, therefore, during the last half of the present year target practices will be on a reduced schedule with one-half of the normal allowances. Beginning with January 1, 1935, the normal target practice allowances will be available.

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1 1 1

Notes from Coast Artillery Brigade, NYNG

ON January 31, the Armory of the 245 C.A. NYNG (HD) was the scene of a review to Edward A. Hayes, National Commander of the American Legion. A banner gathering of 8,000 was present at the ceremonies and witnessed the presentation of the Purple Heart with Oak Leaf Cluster to Corporal Henry Buhler, Battery C, 245th C.A. who was wounded during the World War while serving with the 106th Infantry. The order of the Purple Heart was also conferred on Private James Cooper, 245th C.A. NYNG, who served with the 59th Coast Artillery, AEF. These presentations were made by Brigadier General Sydney Grant, C.A., NYNG, retired. Before evening parade the regimental relay race was run, the 3d Battalion being the winner.

Major General William N. Haskell, commanding the New York National Guard, reviewed the 244th C.A. NYNG (TD), on January 22, 1934, and presented State Medals for Long and Faithful Service to Captain Sylvester B. Husch, Med. Dept. Det., Captain Henry B. Hammond, 2d Bn. Hqrs., and 1st Sgt. Joseph Pospisil, Battery C, each for fifteen years' service, and to Sgt. Conrad Cardiello, Battery E, and Staff Sgt. Thomas Gamar, Battery C, for ten years' each. The "General John J. Byrne" Attendance Trophy was awarded to Service Battery for attaining a percentage of 95.2%.

RESERVE NOTES

Second Coast Artillery District

Colonel F. W. Stopford, Executive

ON April 6th—Army Day, the Coast Artillery Reserves of the Metropolitan Area turned out in full force for the parade despite the inclement weather, and a letter of commendation on the part of the Corps Area Commander, Major General D. E. Nolan, U. S. Army who was Chief Marshal of the parade was very gratifying to participants.

At the troop school meeting of the C.A. Reserves Metropolitan Area April 16th, 1934, Brigadier General W. E. Cole, Commanding 2nd Coast Artillery District delivered to a large and appreciative audience of Reserve officers, a lecture on the Artillery Defenses of the Hawaiian Islands. Preceding the meeting Colonel Azel Ames, CA-Res., Commanding Officer of the 602d C.A. (Ry) and officers of his regiment gave a dinner for General Cole. Among other guests were Colonels Fergusson and Stopford.

On April 25th General Cole was a guest at a dinner at Montclair, New Jersey, given by the officers of the 521st C.A. (AA) and the Montclair Chapter of the Reserve Officers' Association. The principal address of the evening was made by General Cole. Colonel James E. Nestor, Commanding Officer of the 521st CA (AA) was toastmaster.

The State Convention of the Reserve Officers' Association was held at the Hotel Roosevelt, New York City, May 4th and 5th with a banquet the evening of May 4th at which many Coast Artillery Reserve officers were present including among others Colonel Robert S. Allyn, CA-Res. the newly appointed Assistant Commissioner of Sanitation of the City of New York, Colonel Henry D. Cushing, CA-Res., and Lieutenant Colonel A. C. M. Azoy, CA-Res.

Promotions in the Metropolitan Area during the past month were as follows: From 2nd to 1st Lieutenant—Joseph W. Howell, 539th CA and Charles J. Beane, 521st CA while 1st Sergeant Ciro P. Mastronardy of the 521st was appointed 2nd Lieutenant, CA-Res., in that regiment. First Lieutenant John S. Dwinell, formerly a 1st Lieutenant CAC, NYNG, was appointed in the same grade CA-Res. and assigned to the 62nd CA (RA). There are 18 captains, 7 first lieutenants and 1 second lieutenant on CCC duty from this district.

The 621st C.A. (HD) with headquarters at Wilmington, Delaware showed a great deal of activity during the past month with large numbers of their members attending troop school and meetings of the ROA in that city. The month ended with a dance held by the ROA Dept. of Delaware at which Colonel A. E. Tanner, the

Commanding Officer of the 621st and Major W. M. Cravens, CAC the Unit Instructor of the regiment were present.

On March 13th Lieutenant Porter of the Navy gave a lecture on the functioning of the various departments of the Navy which proved of great value in understanding our sister service with whom we must so closely cooperate in an emergency.

Washington Conferences

THE regular Coast Artillery Reserve conferences held in Washington have been exceptionally well attended this year, the keen interest shown being in a large measure due to the interesting talks prepared.

Major George R. Meyer, C.A.C., chose for his subject, "Changes in Harbor Defense Projects," with particular reference to the harbor defenses of San Francisco. Brigadier General Charles E. Kilbourne, Chief of the War Plans Division of the General Staff, held the attention of a large audience with a timely discussion of "The Strategy of the Pacific."

At later conferences Major Frank F. Scowden, QMC, told of the problem of "Procurement and Supply of the CCC," while Major R. V. Cramer discussed the "Coast Artillery of Oahu." Brigadier General Henry J. Reilly, who accompanied the Austrian Army on the Eastern Front as a reporter for the *Chicago Tribune*, gave a graphic account of the Austro-German drive into Russia during the summer and fall of 1915.

Trenton Chapter Meets

MEMBERS of the Reserve Officers' Association, Trenton Mid-State Chapter, attended a dinner and meeting on the night of February 7, at which important matters were discussed. The dinner was held in the Hotel Hildebrecht at 6:30 p.m. and then the members went to the postoffice building to conduct the business session. President Triesch selected a nominating committee composed of Majors Freeman, Dayton and Bigelow to select the officers who will guide the affairs of the association for 1934.

On suggestion of Lieutenant G. McKinley Triesch, a motion was made by Major R. B. Dayton and seconded by Lieutenant G. E. Pierson, Jr., that Trenton Mid-State Chapter would support Lieutenant Colonel Eugene H. Valle, QM-Res., for New Jersey Department president for 1934. The motion was carried.

Following the business meeting Captain H. B. Hoyt, unit instructor to the 309th Infantry, lectured on the duties of S-4 and G-4, after which he gave two problems which every officer participated in.

BOOK REVIEWS

FAR EASTERN FRONT, By Edgar Snow. Harrison and Robert Haas, New York.

By Major General H. D. Todd, Jr., Ret.

This young author less than thirty-five years of age, has written a most interesting and instructive book—a book that will undoubtedly explain to American readers what has appeared to be a bewildering train of events.

As Shanghai correspondent of the United Press, he has spent the last five years in China. He states in his preface which he signed in Peking on September 1, 1933, that "except for brief historical synopsis, what I write is in the main concerned with what I have seen or what I know to be fact."

Also he tells us that this story is essentially that of this Sino-Japanese "War" of 1931-33 and that his reason for using the word "war" is that he does "not know any other English word which describes the armed invasion of another nation's territory, the eviction of its government, the forcible seizure of its properties, and the subjugation of the people."

At the beginning of the book, Mr. Snow places the following writings and speeches of Japanese statesmen, viz:

"The Imperial Japanese Government is determined to remain loyal to the League of Nations Covenant, the no-war treaty, other various treaties and the two resolutions adopted by the Council regarding the present (Manchurian) incident."

Foreign Minister Baron Shidehara in a note to Secretary of State Stimson
December 24, 1931.

"Japan may never withdraw her troops from Manchuria. * * * Japan will resolutely resist any attempt to apply the Nine-Power Treaty to the situation here. * * * We need not pay any attention to what the League of Nations may say, what the Soviet Union may attempt or what China may plot."

Minister of War Araki in a speech at Tokio,
April 22, 1932.

"International relations are quite unlike relations subsisting between individuals. Morality and sincerity do not govern a country's diplomacy, which is guided by selfishness, pure and simple. It is considered the secret of diplomacy to forestall rivals by every crafty means available."

Count Okuma, late Japanese Minister to China, in his published papers.

If the above are accurate quotations, the reader can more easily understand not only many of the incidents described later in the book but also the ethics and principles upon which the Japanese Government apparently bases its foreign policy.

The first part of the book is a chronicle of the events occurring in "Manchuria, Birthplace of Conquerors" and the second part describes what happened to "China, Within the Wall."

In the part on Manchuria we read under the subhead, Descent of War, "Japan could not have chosen a better time to strike." "The whole western capitalist world appeared mated with disaster." "Certainly no people desired to undertake new obligations which might further complicate the onerous tasks ahead."

In China there had occurred "the most disastrous flood in authentic history." "Between 60,000 and 70,000 square miles in six of China's richest, largest and most populous provinces were seriously inundated. Within three weeks over 600,000 people perished. Twelve million houses were destroyed and 55,000,000 people were rendered partially or wholly destitute. Crop losses in five provinces alone were estimated to exceed \$400,000,000 silver. The above figures seem unbelievable. The author, however, describes what he saw. He "cruised in a small launch over country where once green fields had glistened." He "passed whole villages submerged." He "saw dragon junks carrying 4,000 dead." "China sent out a plea for help to the whole world and the whole world responded." "Japan's contribution was as generous as that of other countries"—a fact which is most interesting considering that this "generous" contribution was immediately followed by a campaign that did not cease until Japan had conquered nearly half a million square miles of Chinese territory.

The incident considered by the Japanese to be sufficient provocation for their attack against the administrative and territorial integrity of China—an attack that continued until Manchuria and Jehol had been overrun by Japanese troops is described as follows:

"At about 10:00 p.m. on September 18, 1931, a minor explosion occurred on the tracks of the Japanese Government owned South Manchurian Railway, at a point near the Chinese North Barracks at Mukden, Capital of Manchuria. The damage was small, a piece of rail being displaced. It did not prevent the safe passage half an hour later of the southbound express from Changchun which arrived punctually at Mukden. It was not clear who had caused the explosion. However, this really trifling affair was immediately followed, according to the author, by the concentration of the Kwantung Army in Mukden and "a small force of Japanese troops throughout the area." "By midnight Japanese soldiers had occupied the North Barracks and adjacent villages; had killed 320 of the 10,000 Chinese soldiers stationed there; wounded a great many more, and dispersed the remainder."

"Simultaneously, throughout the South Manchuria Railway Zone, Japanese troops began operations in all

strategic cities." "Before dawn the Japanese occupied the Walled City and international area of Mukden."

"Before dawn they occupied the Chinese East Barracks, the Mukden Arsenal and the aerodrome and seized most of the equipment of the Chinese Northeastern Army."

"Before dawn several thousand Japanese civilian 'armed reservists' had been mobilized." "They were calmly policing the streets of Mukden when the surprised Chinese populace ventured forth after what was described in Reuter's dispatch as 'a night of terror.'"

"By daylight of the 19th, the Japanese garrison in Korea was mobilized and troops were en route to Manchuria." "Before dawn Lieutenant General Shigern Honjo, commander of the garrison of Kwantung, had transferred his headquarters to Mukden from Port Arthur, 146 miles to the south. With him went the infantry and artillery stationed at Port Arthur. Both he and his troops arrived in Mukden that morning." Finally "in Japan several brigades of infantry, cavalry and artillery were mobilized and ready to cross the Yellow Sea by midnight of the 19th." Admitting that the explosion on the railroad took the Japanese by surprise, the above schedule of operations will convince the student of logistics that a miracle had been performed.

"Japanese troops occupied more territory in a single night, and with fewer losses, than has any army in modern history."

After describing the outbreak of hostilities, the author takes us through a history of the growth of Japan in general and of its relations to China in particular. Then comes a description of what he saw of the operations as the Japanese troops drove the Chinese from Jehol. The reader cannot fail to be highly impressed with the stamina and efficiency displayed by the Japanese soldiers throughout this campaign conducted in bitterly cold weather, nor will the reader be surprised by the total lack of efficiency displayed by the troops of the invaded country when he realizes that for centuries China has placed soldiers in the lowest caste.

At the beginning of the second part of the book ("China Within the Wall") we read "Four hundred million big stiffies who won't fight for themselves," which "was the way an American editor of a pro-Japanese publication recently described to me (the author) his impression of Chinese reaction below the Wall to the Manchuria invasion." Then follows an analysis of the ideas and manner of thought of these "four hundred millions."

"Nowhere else on earth" is the heading of the author's description of Shanghai. This description is indeed a really great pen picture of that city. His chapter on Harbin is another and it is believed this statement will be concurred in by all travelers in the East.

The attack by the Japanese forces, first by the Navy and then by the Army is described in detail including the events immediately preceding. According to Mr. Shaw's vision, there was no valid excuse for the attack on Chapei and the consequent killing of thousands of civilians. In

fact the Chinese authorities had been given to understand that their reply to the Japanese demands had been satisfactory and that no action would be taken against them.

Suddenly at 11:25 p.m. on January 28, 1932, the Chinese Mayor of Chapei was informed that Admiral Shiozawa intended to take the city. The author then states that at 11:35 p.m. "I heard rifle reports and then the bark of machine guns." "Blue jackets poured into this densely populated district." About 4,000 of them participated in this initial operation in Chapei. "They wore gay looks or smiled."

Then we read "I was on the end of North Szechuen Road an hour later when suddenly a squad of men came running back, some carried no rifles; some had lost their steel helmets; and three had blood gushing from fresh wounds. They all looked badly frightened."

Thus is described the beginning of an attack that lasted 34 days before the Japanese naval force, reinforced by at least 30,000 soldiers equipped with every modern weapon and supported by the fire from naval ships, were able to overcome the resistance of the Chinese troops of the 19th Route Army lacking everything but small arms and machine guns.

For some unknown reason the extremely accurate "estimate of the situation" for which Japanese troops are noted was evidently not made in this case.

Owing to the wise gentlemen at Geneva declaring that "war" was a naughty word and should not be used, Japan did not declare war against China. This may be the reason that most of the laws of war were disregarded with the consequent appalling slaughter of civilians. Mr. Shaw witnessed an air raid that "continued for nearly an hour, the planes releasing their cargo of four or six bombs, then repeatedly returning to re-load. Incendiary bombs, carrying 50 to 100 pounds of sulphur, were dropped along with high-explosive torpedoes, and detonated over districts densely populated with Chinese civilians. Unwarned of the attack they had no chance to escape; scores were blown to bits, or incinerated in the rapidly spreading fires.

In addition to the severe loss among civilians was the destruction of valuable buildings including "the celebrated Oriental Library, where priceless manuscripts from Sung Dynasty, more than 1,000 years old, had been carefully preserved for years." It would seem that the Japanese had considered "Louvain" an excellent precedent.

"What astonished everyone was that under this terrific unexpected onslaught the Chinese lines did not waver."

"No one had seen Chinese soldiers like this before." In addition to the details of the fighting by organized troops, the author described the acts of the "rouin" a name by which in Shanghai, the Japanese press called the reservists.

They are "trained ex-soldiers who have had two or more years of army life and are organized even in time of peace as an auxiliary of the military." "Normally, they are engaged in business and commercial pursuits but when a crisis occurs, they spring suddenly to the fire." Of them the author states "outrage piled upon outrage; cases of

banditry, kidnapping, homicide, and brutality were successively reported against the rouin, and later authenticated by written testimony." Finally the landing of two new Japanese divisions on March 1st which allowed them to seriously threaten the Chinese left flank made it clear that the Chinese must retreat. This, the commander of the sturdy 19th Route Army, General Tsai, conducted with the skill he had shown throughout his battle against great odds and it was "not until dawn did the Japanese blue-jackets in Chapei realize their enemy had left. They had been shelling empty trenches and redoubts all night."

The author's description of what he saw in Chapei after the evacuation by the Chinese is not pleasant. "Bodies of civilians lie clustered in alleys." "I see a mother with her child, both of whom appear to have been pierced by a single thrust of a bayonet." In fact they are pages of what the author saw as the result of operations conducted by soldiers who apparently did not consider themselves bound by the ordinary laws of civilized warfare and, in reference to this review, it is believed that the veracity of the author is beyond question.

In addition to being a lucid writer with remarkable descriptive powers, Mr. Shaw is evidently a student of history and a logical thinker. He is of the opinion that "in Asia today are two political driving forces that are destined to be historically great."

"These two forces are Japan and Soviet Russia. Both are vital, dynamic, aggressive; both menace the international system . . . as it functions in the Orient. Eventually they must come into conflict for the dominance of Eastern Asia" and finally—"The rise of an Eastern Power great and daring and determined enough to defy the European Powers and America, probably marks the twilight of Western Mastery."

The book should be read throughout America by the statesman, the civilian, and the soldier.

BOUTELL'S MANUAL OF HERALDRY. Revised by V. Wheeler-Holohan. Frederick Warne & Co., Ltd., London and New York; 320 pp.; 32 colored plates and many line illustrations.

By Colonel Robert E. Wyllie, U. S. Army

Ever since 1863 when Charles Boutell's *Manual of Heraldry* first appeared it has been a standard English work on the subject. It passed through eleven editions in the next forty years and now Mr. Wheeler-Holohan, one of the younger school of English heraldists, has modernized and rewritten it. In fact it is Boutell's *Heraldry* in name only, as the original author would never recognize his handiwork in the present volume, so completely has it been changed.

Many may no doubt wonder how a manual of heraldry, an institution of the Middle Ages, can be "modernized." A very brief perusal of this work will show such Doubting Thomases that, mediæval though it may be, it is also very modern and is a live issue even in this twentieth century. This is strikingly manifest in the chapters and plates on military and naval heraldry, which will particu-

larly interest our armed services. Badges, "shoulder patches," and coats-of-arms of British regiments, divisions, and warships are there described and illustrated and a comparison of them with those of our own services will well repay the reader. Another interesting plate is that of the badges used by various British sporting teams.

One chapter is devoted to the arms of the new nations of Europe and those which changed since the World War, and they are numerous. Nearly all the British dominions and colonies have received new heraldic insignia since the last edition of Boutell, and there have even been changes in the arms of the Royal family.

About half the book is a clear and concise exposition of the science of heraldry. This is the "manual" and is well suited to a reader who wishes to get a good general idea of the subject without having to study a large, detailed work. It should be noted however that it applies only to the heraldry of the British Isles. While the general principles of the science are the same in all countries there are many differences in detail, even in the British Isles themselves, as the heraldry of England, Scotland, and Ireland differ from each other in some particulars. Mr. Wheeler-Holohan is especially fortunate in showing such differences but he makes no pretense of expounding continental heraldry, as shown by his remarks anent the well-known rule that metal shall not be placed on metal, nor color on color. He indicates that this rule is invariably followed, which is the case in all three components of the British Isles, but the continental nations have been more lax in enforcing the rule. The arms of Rumania, illustrated in colors in Plate IX, show two such violations. The author can hardly be blamed for this omission, as no book yet written in any language has attempted to show the differences in the heraldry of different nations, but the reader should be cautioned that such divergences exist; especially the American reader, since American heraldry although based primarily on British, is nevertheless a conglomerate, all countries contributing thereto.

The glossary, which was also a feature of the original Boutell, is specially worthy of praise. Mr. Wheeler-Holohan's treatment has made it indispensable to a reader of heraldic works. The illustrations are admirable, the plates being fine examples of color work, and the entire production is a beautiful specimen of the modern book publisher's art.

KNOTS, USEFUL AND ORNAMENTAL. By George Russell Shaw. Boston and New York; Houghton, Mifflin Company. 1933. 194 pp. \$4.00.

By Lieut. Col. Paul D. Bunker, C.A.C.

Here is a fine book for the Army—and the Navy, too! It should be in every post and company and battery and troop library. Put this book and a batch of assorted twine and rope ends in the Day room and see if the combination does not form an efficient counter-attraction to the corner speakeasy.

Here is every knot and bend you ever heard of, and many that you never imagined even when examining

Second Class Gunners. There are the knots used by seamen, stevedores, cowboys, packers—not only their everyday utility knots but also the fancy ones they use for decorative purposes, and they are all illustrated by careful line drawings with instructions written right next to the diagrams. Each of the more intricate knots is sketched at two or more successive stages and, as a result, you know just how to do it.

A pardonable exception is the famous Diamond Hitch and perhaps it is just as well. We old-time disciples of Chief Packer Daly remember his "hol' yer load" and are not surprised that Mr. Shaw contents himself with merely a sketch of the completed result, evidently realizing that the mysteries of "the Diamond" are not to be treated lightly but should be approached in humility and with prayer.

If you have a son who is a Boy Scout, or if you are on a Scout Council, you should invest in one of these books for the Troop; it belongs with the Handbook. But there, I can't spare more time for praising this book; I've always wanted to know how to make a four-thong braid and here are the diagrams, on page 76. Here's where the dog gets a new leash.

A MANUAL OF FLAGS, incorporating Flags of the World. By W. J. Gordon, revised by V. Wheeler-Holohan. Frederick Warne & Company, Ltd., London and New York; December, 1933. 279 pp.; 30 plates, mostly colored, and numerous line drawings.

By Colonel Robert E. Wyllie, U. S. Army

This is a companion work to Mr. Wheeler-Holohan's revision of *Boutell's Heraldry*, and, like it, is a sumptuous volume, well bound and beautifully illustrated. Comparisons are said to be odious, but it is impossible to avoid comparing the colored plates with those of the well-known National Geographic Flag number to the advantage of the book under review, notwithstanding the well deserved reputation of that magazine for its color work. The publishers have certainly produced a beautiful book.

Mr. Wheeler-Holohan's "review" of *Boutell's Heraldry* was in reality a new work, but little remaining of the original Boutell, but the present volume is a true revision of Mr. Gordon's, which was originally produced by the same publishers in 1915. Many new flags have appeared since that time and many have disappeared, and the work is brought up-to-date in that respect, to include the changes in the German flags made in the spring of 1933 by Chancellor Hitler. Mr. Wheeler-Holohan has also reorganized the material, especially that portion dealing with foreign flags (i.e., those not British) which was a loose and rambling narrative in the original Gordon.

The introductory chapter, which differs but little from the original, is an excellent résumé of the history of national flags and emblems from the earliest times. This is followed by descriptions of the various flags of the British Empire, including the colors of the British regiments, which will be of special interest to our service, particularly as the battle honors earned during the World

War are given. The chapters on yachting flags and house flags of ocean liners are not confined to British, but include some from America and the continent. There is an interesting chapter on signal flags, which includes a brief history of visual signalling in the Royal Navy and of the International Signal Code, and a colored plate of Nelson's famous signal at Trafalgar.

The descriptions of the flags of other nations occupy about one-third of the book. Not only are they well illustrated in color, but an excellent vignette of the coat-of-arms or badge is inserted in the text in most cases. The national flags are described, likewise those for the navy and merchant marine where they differ from the national emblem. Also the standard of the sovereign or flag of the president and other government banners.

In attempting to explain the origin of the different flags the author has merely given the popular story, which can hardly ever be verified and is generally at total variance with the historical evidence. An example is shown in his unqualified acceptance of the Betsy Ross story, without any suggestion of doubt as to its veracity. As a legend it makes good reading; as history it is incredible.

Unfortunately there are some errors in Mr. Wheeler-Holohan's account of American flags which should have been avoided. He says—and here he is merely repeating Gordon—that battle honors are placed on the national colors of our regiments. This was the practice during the Civil War, but was abandoned soon after. When Gordon wrote in 1915 he was correct in saying that our regimental colors bore the national coat-of-arms, but it is now fifteen years since the regimental coat-of-arms replaced the national, yet Mr. Wheeler-Holohan has not revised the statement.

He likewise says that our regiments carry two colors, just as the British do "in each case one of them representing the chief of the State and the other the body of men." Judged from the standpoint of feudal tradition this is probably correct so far as England is concerned, but it is certainly not true of the United States. Here the regimental color represents the "body of men," but the national color represents the State itself, not the President.

A new and unique feature of the book is the description, under each country for which it is appropriate, of aircraft markings. The symbols used by the Army and Navy on wings, fuselage, and rudder are described and illustrated in two colored plates. This does not apply to the individual squadron insignia but only to the national emblems. As might be expected, the colors of the flag predominate; and since so many national flags are red, white, and blue it is interesting to note the various geometrical designs which have been adopted for use with these three colors. It should also be remarked that the swastika is not peculiar to the Nazis of Germany, since both Latvia and Finland use it as a national aircraft symbol, the former in red, the latter in blue.

In a work covering as much ground and as many countries as does this an errorless production is doubtless an impossibility, and those made by Mr. Wheeler-Holo-

han are so few in number compared with the mass of material in the book that they hardly detract from the general excellence of the production. The volume is a necessity for any well-stocked military or naval library.

SOLDIERS—WHAT NEXT? By Katherine Mayo. Houghton Mifflin Company, Boston, 1934. 474 pages, VI Appendices. \$3.50.

By Major Fred M. Green, C.A.C.

Conviction that their government will aid the war-cripple, and provide for the dependents of those who die, is essential for the morale of any Army. Miss Mayo has studied the British, French, German, and Italian handling of this problem, and compares our methods and results with theirs. While her feminine viewpoint is manifested by the exaggerated significance which she attaches to spiritual values, in her pronounced solicitude for the widows and orphans of the war dead, in her intemperance of statement, and in her none too felicitous handling of statistics, her audacity in attacking the "pension racket" here is beyond criticism; it recalls her merciless analyses of conditions in the Philippines and in India. And while her argument might have been strengthened by a more judicial attitude, it is hard to deny the essential soundness of her thesis.

If the experience of former wars is any guide, we are still far from realizing the ultimate magnitude of the charges for our pension folly. We are still paying pensions to widows of Mexican War veterans. In the half-century that followed the Civil War, a politically aggressive faction of Union Veterans succeeded in extorting from the treasury over five billions of dollars, and in so absurdly "liberalizing" the earlier laws as to render eligible to pension so-called "widows" who were not born until the end of that period. Warned by such unsavory precedents, Congress in 1917 passed a law designed to forestall any attempt to repeat these abuses. In the next seven years, this law was "liberalized" ninety-two times, and then replaced by a wholly new law for which Miss Mayo lays the blame largely on the American Legion. This law, since "liberalized" at about the same rate as the former, made pensionable practically all infirmities, whenever and however acquired, and provided hospitalization regardless of service connection. The data show that for another quarter of a century our charges will continue to mount, whereas in Great Britain the pension cost will be practically extinguished in the same period.

Abroad, pensions are provided in general only for those whose disabilities are of service origin; in some cases the rates are low except for combat injuries or diseases contracted in the combat zone; no pension is provided for widows married or children begotten since the war; government hospitalization is restricted to cases of actual necessity; minor cases are paid off in one lump sum, thus saving administrative costs. With these economies, the genuinely war-disabled can be pensioned at rates substantially equivalent to ours, or even higher, yet the total

cost for a far greater number of veterans is but a fraction of what we spend annually.

Miss Mayo's conclusion is that in our legislative eagerness to extend benefits to the greatest possible number of voters, the truly deserving (those most gravely disabled, and the genuine dependents of those who were killed) have suffered neglect. It will be difficult for either the American Legion or for Congress to refute the bulk of her charges. The logic of her argument is unanswerable—most of our money for veterans' relief is now going to those actually none the worse for their brief period of military service. Already, a quarter of our national income is being expended on this racket. And while the cost abroad is diminishing annually, with the natural attrition of the veterans, our costs are mounting rapidly and ominously every year.

NAZI MEANS WAR. By Leland Stowe. 150 pp. Whittlesey House, New York, 1934. \$1.50.

By Major Fred M. Green, C.A.C.

A non-military writer recounts his observations in Germany, and contrasts the recent pacific utterances of Chancellor Hitler with the universal and feverish preparations for war which he saw throughout that country last autumn.

Of over a million uniformed and trained men (exclusive of the army and police), he estimates there are:

460,000 Sturmabteilung "brownshirts," a group originally organized to combat communist rioters; these, and the next group, now form a distinctly privileged class;
200,00 Schutzstaffel "blackcoats," a seemingly of higher morale and stricter discipline, and whom he designates as "the greatest disciplined uniformed political force in Europe;"

200,000 Steel-helmets, made up of war veterans and their sons, and now wholly Nazified;

230,000 Arbeitsdienst, a sort of C.C.C., with C.M.T.C. and R.O.T.C. proclivities, established in May, 1933 on a voluntary basis. Half the day is spent on labor projects, and half on military training. Membership is now obligatory for periods of two to six months for college students, diplomats, and aspirant-teachers; with the withdrawal of Germany from the League, it is expected that the liability to compulsory service will be much extended.

Of these groups, the first three are now organized into units from the squad to the brigade, with divisional and corps areas, under ex-officer leadership and general staff supervision. Area limits correspond closely with those of the regular army; S.A. "Standarten" even wear the numerals of the prewar regiment formerly stationed in the same area, and are enjoined to "preserve its traditions." Engineer, Aviation, Cavalry, Signal, and Motor Transport units are provided. There is usually one drill night a week, with long Sunday "hikes;" some of the men habitually live in barracks.

Ostensibly they are unarmed, but small bodies are beginning to appear under arms on occasions, and instances of outdoor firing with rifles and machine guns are reported with increasing frequency. Arms are apparently borrowed for the occasion from the regular units with which each unofficial unit is linked, but a clandestine stock of rifles



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adequate for three or four times their present number is believed to exist.

A covert air-training force, appropriately uniformed, has been "unofficially" organized in flagrant defiance of the Versailles treaty.

While military science is taught in the universities (contrary to the Versailles Treaty); while strategic motor highways are being built to connect industrial centers with each other and with the frontier; while private motor cars are frequently commandeered and employed for test mobilizations; and while military text books enjoy an unprecedented sale, the author finds the most sinister feature of all is the ceaseless propaganda to instill the fighting spirit.

Every means is used to inculcate martial ardor. Even though scarcely more than half the population is truly Nazi at heart, the repressive means employed and the ruthless subjugation of individual aims to purposes of the State have rendered the people morbidly susceptible to indoctrination. An extraordinarily aggressive outlook on foreign affairs has been instilled; the "Berlin to Bagdad" slogan has been revived; and attention is constantly drawn to the former African colonies now lost.

For the million and a half school children, regimentation begins at 7 years with propaganda, singing Nazi hymns, and marching drill. The older boys learn grenade-throwing; and the students in certain universities devote one full day per week to military training.

Because of the necessity for fabricating heavy artillery, tanks, and additional aircraft, it appears sure that war will be avoided for at least two years. But then, unless some foreign alliance should forestall this calamity by preventive action, or unless economic collapse (as in Russia) should postpone events, he foresees war within a few years thereafter. When that time comes, he insists that the United States must abandon its doctrine of freedom of the seas, and forego the manufacture and export of munitions to the belligerents, if it expects to preserve its neutrality.

The reviewer regrets that the author so pointedly avoided the anti-Semitic phase of Nazi policy. Except for Nazi propaganda, so little is published in this country by other than pro-Semitic writers that it would be interesting to hear something of the opposite side from a journalist who could not be suspected of pro-Nazi sympathies.

Target Practice During the Remainder of the Present Calendar Year

INSTRUCTIONS to be issued will prescribe that the 50 per cent ammunition allowances made available during the period July 1-December 31, 1934, may be used in target practices in which much latitude is allowed to local commanders in the adjustment of fire and conduct of the practice. Organizations will not be classified on the results attained in the practices fired during this period. These practices should prove of considerable value in preparation for the regular target practices to be conducted with full ammunition allowances under normal conditions in the calendar year 1935.