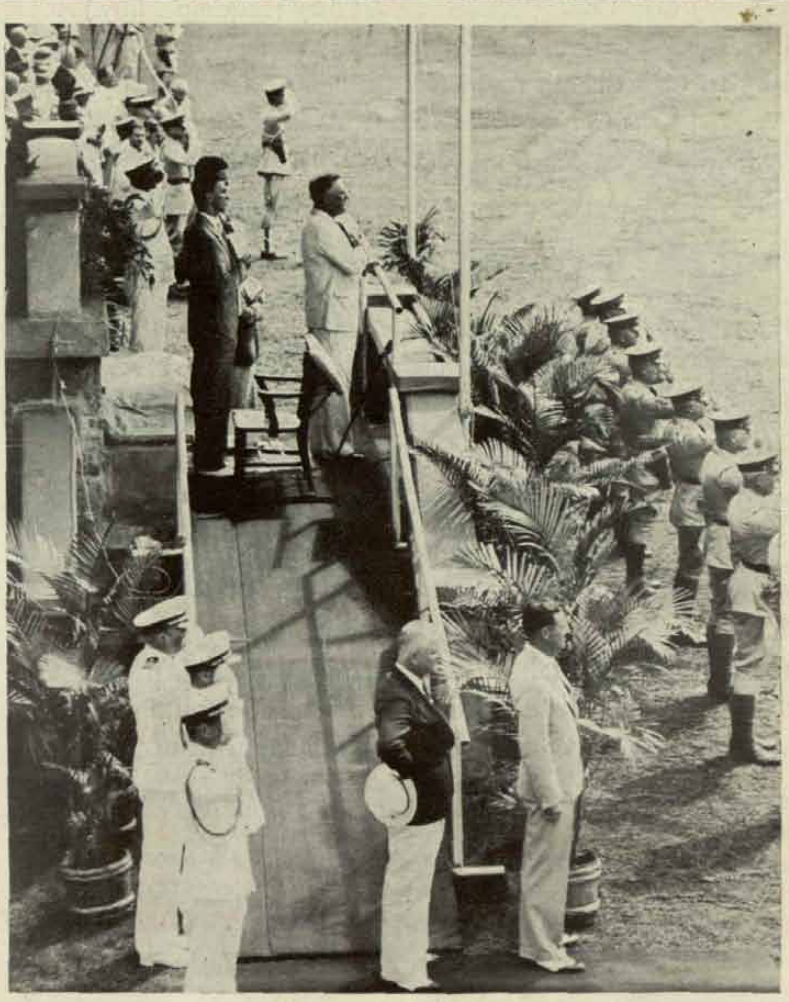
COAST ARTILLERY JOURNAL



THE PRESIDENT REVIEWING THE TROOPS OF THE HAWAIIAN DEPARTMENT

SEPTEMBER-OCTOBER, 1934

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LIEUT. COL. E. E. BENNETT, C.A.C., *Editor*

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THE UNITED STATES COAST ARTILLERY ASSOCIATION

TROPHY WINNERS

THE UNITED STATES COAST ARTILLERY ASSOCIATION TROPHY AWARDED FOR OUTSTANDING PERFORMANCE IN THE COAST ARTILLERY CORPS

YEAR	REGULAR ARMY			NATIONAL GUARD			ORGANIZED RESERVES		
	ORGANIZATION AND ARMAMENT	COMMANDING OFFICER	LOCATION	ORGANIZATION AND ARMAMENT	COMMANDING OFFICER	LOCATION	ORGANIZATION	COMMANDING OFFICER	LOCATION
1932	15th C.A. (HD)	Col. H.B. Grant	Ft. Kamehameha	243rd C.A. (HD)	Col. J.J. Collins	Providence, R.I.	955th C.A. (AA)	Lt. Col. J.R. Sweitzer	Duluth, Minn.
1933	51st C.A. (TD)	Lt. Col. R.P. Glassburn	Ft. Monroe	249th C.A. (HD)	Lt. Col. C.M. Irwin	Portland, Ore.	529th C.A. (AA)	Lt. Col. M.V. Hawkins	Portland, Ore.
1934							507th C.A. (AA)	Lt. Col. H.E. Pride	Des Moines, Ia.

The Hall of Fame to Date.

TROPHIES

IT seems to us that the life of an Editor is, to paraphrase a well known quotation, "just one trophy after another." Almost each issue of the JOURNAL contains an announcement of an award of some kind. We are not complaining. This is as it should be and we are glad of the opportunity to announce to the world at large and to make of permanent record so that future generations may have an example of meritorious performance and know what reserve officers have accomplished. Perhaps 50 years from now some doting grandfather can conjure up stories for his grandchildren as to how he won his spurs (and his sabre) in the hard fought battles of Cemetery Ridge by the light of a flickering lamp.

Perhaps our readers are well aware that we award annually three regimental trophies, and in addition a special trophy for individual accomplishment. The question has been raised, "why all these trophies?" In answer we will state that they are all necessary and play an important part in stimulating interest, developing friendly competition and building morale. Recently it has been proposed that the number of trophies be increased. It is difficult to devise any additional basis of award that will be fair to all; also, multiplying trophies beyond a certain number would tend to cheapen them in the eyes of recipients; therefore it is probably advisable to adhere to the trophies now authorized until there has been demonstrated the necessity for making a change

This time it is our pleasure to announce the award of two trophies, or more properly speaking, of a trophy awarded to the reserve regiment for accumulating the greatest average number of credit hours during the last fiscal year and the individual trophy awarded to a Coast Artillery Reserve officer in each corps area. We will comment upon these separately.

ASSOCIATION TROPHY AWARDED TO THE 507TH C.A. (AA)

To the 507th C.A. (AA) goes the signal honor of being the winner of the trophy awarded to a reserve regiment. This regiment hails from the great open spaces of the middle west now suffering from an unprecedented drought. This calamity has not dried up the ardor, initiative and energy of the Reserve officers who make up its membership. Perhaps the absence of moisture in the atmosphere accentuated their thirst for knowledge. Whether or not this be true we will leave to others to conjecture, while we will stick to facts which can be substantiated from the reports submitted by the responsible authorities.

The personnel of the regiment consists of 25 Reserve officers, scattered throughout the States of Iowa, Colorado, and Minnesota. This condition makes the accomplishment all the more noteworthy for the reason that it is impossible to assemble the personnel for conferences or to develop that interest and inspiration which comes from personal contact. Neither the regimental commander nor the unit instructor have an opportunity to exercise their influence except through correspondence. This naturally is detached and impersonal, hence we venture the assumption that the will to work and the determination to succeed spring from within and are not the result of external pressure.

The regimental commander is Lieutenant Colonel Harold E. Pride, whose address is Iowa State College, Ames, Iowa, while the headquarters of the regiment is in Des Moines. For the past several years the unit has been under the able tutelage of Captain Thomas R. Phillips, C.A.C. It will be recalled that this regiment was the runner-up in the competition last year and was nosed out of first place only because of the assignment of three en-

listed reservists, which fact had not been reported to either the regimental commander or the unit instructor, consequently they contributed nothing to the number of completed sub-courses while their assignment figured in the strength of the regiment.

To stand second in the entire United States one year and first the following year is an unusual accomplishment. It immediately dispels any idea that the trophy was won because of a spurt at the finish or because of what might be termed chicanery by transferring from a particular unit all those except the most active and interested. This then is clearly an effort sustained over a period of at least two years, and we believe that like a mass moving down grade it will gain momentum as it goes.

In computing the *average* number of credit hours the strength of all units as of December 31, 1933, was used as a factor. As previously explained, some date had to be adopted, and the end of the calendar year is believed to be the fairest to all concerned for the reason that at this time of year the fewest changes normally take place among reserve personnel; also, newly assigned officers have had an opportunity to gain an idea as to what is expected and required of them.

The trophy to be awarded to the 507th will be a replica of that awarded in previous years except for a change in regimental designation. Suitable presentation ceremonies will be worked out as soon as possible.

From the tabulation appearing below it will be noted that the 507th accumulated 3,399 credit hours, an average of 135.96 hours per individual. Compared to this, the record for the previous year was 80.27 hours, or an increase of 55.69 hours per member during the past year. This increase without reference to any other figures would be considered a very creditable performance, and would put the regiment in fourth place among all Coast Artillery units. In announcing the award last year we ventured the opinion that it would be a long time before the record established then would be equalled or exceeded. Our guess was wrong; for this we have no apology. Having no clairvoyant powers we could not anticipate that Colonel Pride and his band of stalwart extension school shock troops could defeat the enemy so decisively and capture the heights hitherto considered impregnable. We reckoned without knowledge of the indomitable spirit, the perseverance and the will to win of this group of officers. We salute them with the profound respect to which their record of accomplishment entitles them. Undaunted by one bad guess we will hazard the opinion that the 507th has this time hung up a record which even it cannot equal or exceed and which will not be closely approached by any other regiment. We hope we are wrong again—time will tell.

It is especially worthy of note that second, third, fourth and fifth honors in that order go to organizations in the IX Corps Area, mostly in the great State of California. To again paraphrase a familiar quotation "We wonder upon what meat these soldiers feed that they have grown so great." It must be the invigorating climate of California; aided and abetted by a certain amount of pressure and persuasion applied where it will do the most good by the regimental commanders and the unit instructors. The regiments are the 976th C.A. (AA), 519th C.A. (AA), 57th R.A. (inactive), and the 509th C.A. (AA). The total and average number of credit hours, together with

Standing of Regiments

	Regt.	Corps Area	Strength	Total No. of Credit Hours	Average No. of Hours	Regt. Commander	Executive
1	507	VII	25	3,399	135.96	Lt. Col. H. E. Pride	Capt. T. R. Phillips
2	976	IX	35	3,171	90.60	Lt. Col. G. W. Fisher	Col. M. S. Crissy
3	519	IX	57	3,466	60.81	Lt. Col. D. K. Smyth	Maj. E. P. Noyes
4	57	IX	35	1,883	53.80	Maj. W. W. Breite	Lt. Col. R. H. Fenner
5	509	IX	36	1,918	53.28	Col. W. S. Pollitz	Maj. W. K. Richards
6	533	II	37	1,672	45.19	Col. F. R. Stoddard	Lt. Col. W. M. Colvin
7	514	II	71	3,182	44.82	Maj. N. E. Deveraux	Maj. J. C. Haw

Standing of Corps Area

(Considering only C.A. Res.)

	C.A.	No. of Unit	Average Strength of Unit	Total No. of Credit Hours	Average No. of Credit Hours Per Unit	Average No. of Credit Hours Per Individual
1	IX	15	44.27	25,153	1,676.86	37.88
2	II	13	48.69	20,184	1,553.61	31.88
3	VIII	5	42.00	4,705	941.00	22.45
4	VII	8	87.87	15,427	1,928.37	21.94
5	I	14	55.42	14,243	1,017.35	18.35
6	VI	7	49.00	5,933	847.57	17.30
7	III	11	79.18	14,460	1,314.54	16.60
8	V	8	45.37	4,461	557.62	12.29
9	IV	10	90.20	9,137	913.70	10.13

the names of the regimental commanders and unit instructors, appear in the accompanying tabulation. We congratulate and salute all of these We are sorry that the rules of the game prevent us from awarding a trophy to each. We hope that they will have a battle royal for first place next year and may the best man win.

The tabulations will be of interest to all Reserve personnel. It is regretted that space does not permit us to make the tables more complete. An analysis of these figures will prove illuminating, and we are constrained to wonder if some means can be devised by which the award of the trophy for the year 1935 will be made to a regiment in the eastern part of the United States. Perhaps we are thinking of the shipping charges. We hope for a reduction in this item of expense but we fear the worst.

FIRST THREE COAST ARTILLERY REGIMENTS IN EACH CORPS AREA

Regiment	Strength	Total Credit Hours	Average Hours Per Member
	First Corps Area		
903	73	3,216	44.05
901	34	757	22.26
543	112	2,441	21.79
	Second Corps Area		
533	37	1,672	45.19
514	71	3,182	44.82
513	53	2,155	40.66
	Third Corps Area		
508	116	3,488	30.07
510	62	1,535	24.74
523	91	1,848	20.31
	Fourth Corps Area		
524	124	1,911	15.41
922	62	719	11.60
545	145	1,675	11.55
	Fifth Corps Area		
932	19	593	31.21
535	43	783	18.21
933	25	440	17.60
	Sixth Corps Area		
945	67	1,456	21.73
526	53	1,052	19.85
532	34	657	19.32
	Seventh Corps Area		
507	25	3,399	135.96
955	98	3,349	34.17
960	92	1,890	20.54
	Eighth Corps Area		
973	29	1,021	35.21
969	35	965	27.57
972	47	1,171	24.91
	Ninth Corps Area		
976	35	3,171	90.60
519	57	3,466	60.81
57	35	1,883	53.80

In making the announcement of this award the President of the United States Coast Artillery Association, Major General William F. Hase, addressed the following letter to Lieutenant Colonel H. E. Pride, the regimental commander:

Lt. Col. H. E. Pride
Iowa State College
Ames, Iowa

(Through Commanding General VII Corps Area, Omaha, Neb.)

My dear Colonel Pride:

I take great pleasure in informing you that the Executive Council of the United States Coast Artillery Association has designated the 507th C.A. (AA) as the winner of the trophy awarded for outstanding performance during the training year ending June 30, 1934.

The official report shows that during the past training year the personnel of the 507th C.A. (AA) accumulated 3,399 credit hours by means of completed extension school sub-courses. The strength of the regiment as of December 31, 1933, was 25, therefore, the average number of credit hours per individual is 135.96. This I consider a remarkable accomplishment, one that never has been closely approached by any Coast Artillery organization, and I doubt if it ever has been equalled or exceeded by any organization. I desire to extend to you and through you to all the personnel of your regiment, my personal congratulations and the felicitations of the Association on this enviable record.

It is recalled that your regiment stood number two among all the Coast Artillery organizations for the year ending June 30, 1933. During that year the average for the regiment was 80.27, therefore it is evident that the 507th C.A. has put forth a sustained effort with an average of 107.11 credit hours per individual over a period of two years.

I cannot too strongly voice my approbation of this excellent manifestation of interest, zeal and patriotism of which the members of your regiment, under your leadership, has given positive proof. You have established a mark which will be difficult for others to equal; I hope it will prove an incentive for others to emulate.

The Secretary of the Association has been instructed to place an order for the fabrication of the trophy. In the near future plans will be formulated for suitable presentation ceremonies.

Sincerely yours,
(Sgd.) W. F. Hase,
Major General,
President.

The Trophy for Individual Accomplishment

THE first award of this trophy was made last year based on the work accomplished during the training year ending June 30, 1933. The trophy was made possible because of a donation by a former Coast Artillery Reserve officer to be set up as an endowment; the proceeds of this is to be used by the Coast Artillery Association in any manner deemed appropriate. After giving this serious consideration the Council decided to award annually a suitable prize 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 preceding year.

The award created considerable interest and we feel sure that it has been the cause of stimulating activity on the part of a very large number of officers. This is borne out by the fact that the records established this year are uniformly in excess of the records established in previous years. For example, the highest score this year is 858

credit hours as compared to 611 last year. Increase of hours in the case of the red ribbon winner is no less marked, being 654 hours as compared to 514 last year. On this basis the award has amply justified itself and we hope that it will continue to stimulate friendly competition among all Reserve officers.

Some of the replies received from the winners may be of interest. For example, one of them stated as follows: "To be surprised is never justifiable in war but to be pleasantly surprised and delighted is justifiable when The United States Coast Artillery Association awards you a trophy. . . . It is a privilege to study extension courses. When I think of the vast—almost incredible—amount of work which army officers have done to improve fire control and position finding methods since the days of smoothbores; when I realize that the doctrines taught are not mere theories but are the collective results of actual wartime experience of the hundreds of officers who have defended this nation since its birth, I begin to have a new respect for their painfully acquired information which is offered to me without cost by the extension courses. By encouraging officers to benefit from the privilege of extension course study, the United States Coast Artillery Association is not only rendering a service to the extension schools but also to the officers themselves."

Another officer commented as follows:

"In doing this work it was not all for the glory in it for I am anxious at all times to try to further my knowledge along military lines, especially those of my particular branch. I am very proud to have won the trophy —more so than I can express."

A third officer stated:

"There are two side lights on the work I did to earn this award that would perhaps interest you. To begin with, over three hundred hours were done under conditions approaching those of real warfare, except that in place of a dugout I had a little office down in a mine, and in place of H.E. shells, the explosives we use in mining operations furnished the war effect. The other is that I have planned a trip with my family this fall, and hope to spend several days in the vicinity of Gettysburg, where the locations of the problems in the extension course of the C. & G. S. School were centered. I feel as though I were a native of that part of the country. My wife and youngster have heard so much of it that they also are familiar with the names, ridges and streams and they are anxiously looking forward to seeing them."

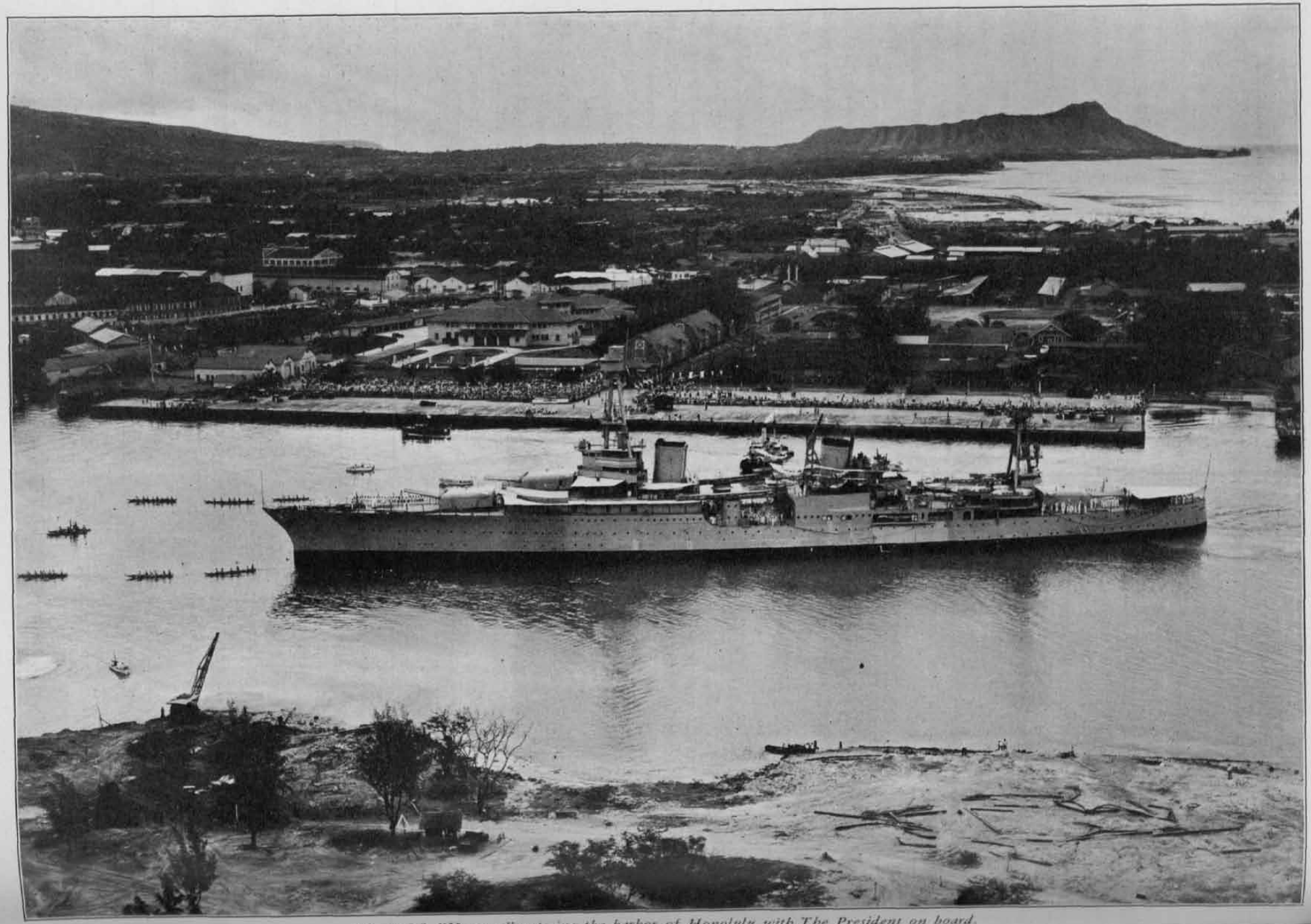
The following tabulation speaks for itself. Anything the Editor might write will neither add to, nor detract from the cold figures. While there is a considerable difference in the number of credit hours earned by the winners, all are deserving of unstinted praise and commendation for their energy and perseverance.

In making the award the President of the Coast Artillery Association, Major General William F. Hase, has addressed the following letter to each recipient: "On behalf of the U. S. Coast Artillery Association it gives me great pleasure to inform you that you have been designated the winner of the sabre awarded by the Association to the Coast Artillery Reserve officer in each corps area who accumulated the greatest number of credit hours during the past fiscal year by means of extension school work. The sabre with your name etched on the blade is being forwarded to you by express. For your fine record of accomplishment I desire to extend my personal congratulations and the felicitations of the entire Coast Artillery Association. In winning this trophy you have fully demonstrated your interest in your avocation and your high sense of duty to the Government which has honored you with a commission. The fact that you have given so unstintingly of your time to better prepare yourself for the duties which will devolve upon you, if and when the Government finds it necessary to call you into active service, is conclusive evidence of your high ideals and loyalty to the Coast Artillery Corps. It marks you as an outstanding Reserve officer. It is my hope that you will continue to be actuated by the same lofty motives and that your interest in Coast Artillery matériel and technique will continue and increase. I hope your example will point the way for others to follow and that it will react to the benefit of the entire reserve corps.

Sincerely,
(Sgd.) W. F. HASE,
Major General,
President."

See "News and Comment" for sketch of high scorer in individual competition, page 377.

Corps Area	Name	Grade	Organization	Address	Lessons	Sub-Courses	Credit Hours
First	Toivo T. Kauppinen	2nd Lieut.	903d	163 Washington St., Gardner, Mass.	259	32	654
Second	George W. Johnston	Colonel	619th	7721 Ridge Blvd., Brooklyn, N. Y.	47	6	500
Third	Clark R. Nickerson	Captain	916th	c/o Sears Roebuck & Co., Auburn, N. Y.	156	18	367
Fourth	Frank S. Harris	2nd Lieut.	13th	3927 Clairmont Ave., Birmingham, Ala.	80	11	233
Fifth	Harold C. Graham	2nd Lieut.	511th	244 Norwood Ave., Youngstown, Ohio	61	9	180
Sixth	Hal P. Crane	Captain	532d	Lock Box 177, Utica, Ill.	42	5	364
Seventh	Vernon S. Okerlund	2nd Lieut.	955th	R. R. No 3, Fergus Falls, Minn.	144	18	338
Eighth	Lewis O. Vogelsang	Captain	969th	2002 W. Huisache St., San Antonio, Texas	62	9	187
Ninth	Gwyn P. Rees	1st Lieut.	6th	Ft. Winfield Scott, California	325	49	858



The U.S.S. "Houston" entering the harbor of Honolulu with The President on board.

The English Attack on Zeebrugge

EDITOR'S NOTE: *This article was translated by Captain W. D. Hohenthal, C.A.C., who obtained it through Commander Degenhardt of the German Cruiser Kalsruhe. Commander Degenhardt took part in the action at Zeebrügge and while at Fort Monroe gave a graphic description of this Navy-Coast Artillery classic. The* JOURNAL *has published a number of articles on this subject—most of them written from the naval viewpoint. It is believed that this article is the first written from the Coast Artillery side.*

BY CAPTAIN KARL SCHULTZ, German Navy (Retired)

ON the morning of April 23, 1918, after the night attack on Zeebrügge, His Majesty the Kaiser inspected the Mole of Zeebrügge. The captured Captain P—— of the Royal Light Infantry was brought before him. When His Majesty remarked on the failure of the enterprise, this officer answered, "I took a sporting chance but the fortunes of war were against me." This answer is typical of the English idea of war and military education, and it was also characteristic of the plan and the execution of that assault.

I place our old Prussian discipline, coupled with a strong sense of duty, military reputation, loyalty to King and love of Fatherland as well as the spirit of aggression, bred through the generations, at a much higher value than dressed up sport. But even so, I am convinced that a healthy mixture of sport in military training is not only of the highest value to the individual soldier but also to the efficiency of the military machine. Among troops the sporting spirit indicates aggressive men and in the final consideration, the spirit of aggression is the soul of all military success, great or small.

The attack on the Mole and harbor of Zeebrügge, which was carried out in a gallant and cold-blooded manner by a picked group of men, was, without doubt, a pure example of the sporting idea. It is true that military success was denied them. Their plans were frustrated by the iron discipline and calm determination of our brave Mole defenders.

The dressing up of this ill-advised attack as a victorious event served not only as an explanation of the unusual high losses incurred, but also as a means of quieting the English people over the submarine activities along the nearby Flanders coast. It also raised the morale of the idle fleet in Scapa Flow, the fleet from which volunteers for the attack had been taken. All exaggerations of performances can be readily understood in war. In war time, propaganda serves both political and military purposes.

The following lines are dedicated to the memory of the brave defenders of the Mole of Zeebrügge whose deeds have always been overshadowed by the various British legends.

* * *

THE ATTACK OF THE MOLE

The Mole of Zeebrügge extends in an easy curve from the flat coast of Flanders, eastward into the North Sea. It shuts in the harbor and locks of Zeebrügge and protects them on the north and west from the storms of the sea. This Mole was occupied in September, 1914, by our Marine Corps troops. The harbor is connected by means of a canal with Brügge, which at the time was the principal lying-in-harbor of the German sea fighters and also the General Headquarters of the Marine Corps. A wider canal led from Brügge to Ostend. After the Ostend canal had been made available by damming up the water to sufficient depth for torpedo boat destroyers and submarines, this somewhat shallower canal was made use of by German ships whenever the naval situation required. It was able to accommodate the entire commerce with Ostend. Thus Brügge had two entirely independent tactical exits to the harbor.

For the immediate protection of the harbor of Zeebrügge a battery of six 88 mm. naval guns was installed on the outer end of the Mole, close to the lighthouse. Four of these guns were replaced in 1916 by three 105 mm. naval guns. Somewhat in rear of this Mole battery stood two 37 mm. antiaircraft machine guns. West of the base of the Mole was Battery *Würtemberg,* with four 105 mm. naval guns, and somewhat east of the canal entrance, was Battery *Friedrichsort,* with four 170 mm. naval guns. Both of these batteries were emplaced as land batteries.

During the long years of the war the Mole Battery was under the command of Captain-Lieutenant M. A. Schutte of the reserve. Due to his long continued service on the Mole, and his unruffled calm and friendliness throughout that entire period, he remains in the fond memory of all visitors to the Mole and fighters in Flanders as "The Pope of the Mole."

For three and a half years "The Pope of the Mole" and members of his battery had remained out there on the Mole, through summer and winter, cold and heat, storm and rain, keeping watch, drilling and firing target practice, their routine interrupted now and then by the inspections and visits of higher and lower commanders. A close friendship bound the Mole Battery with all submarine crews that visited in the harbor of Zeebrügge. Enemy planes and monitors had sent to the battery their iron greetings and many comrades had been killed. The fight was always a one-sided affair. The enemy remained beyond reach of the small caliber guns of the Mole Battery. At last after three and a half years "Der Tag," or more accurately "Die Nacht," came for the Mole Battery.

Since the night bombardment of Ostend on the 11th and 12th of April, during which a plan for attack on the coast had been found in a captured English motor boat, the suspense felt by all had resulted in the order for greater watchfulness throughout the entire coast defense. The defeat of the English on the land front, recent English naval demonstrations along the coast, and reports that the English intended landing operations, pointed to an early attack.

On the night of April 22-23 there was a light land breeze. High water was expected at 45 minutes after midnight. This was a favorable time for an attack. Considering these circumstances, such an attack or attempt to blockade the harbor could not be a surprise to us; the method of execution only remained in doubt. The alarm gun was prepared, posts at the batteries were manned, and everything put in readiness for combat. The crews were given to understand that shortly after midnight the first motor sounds would be heard from the sea. In the light of star shells that were fired no vessel could be seen, but on the other hand a smoke cloud was observed approaching slowly from the sea. It was recognized as an artificial smoke and soon enveloped the whole Mole and harbor.

With the alarm of the battery, the signal "Protect the Mole" was given to the other harbor batteries, and immediately afterwards the whole coast was warned. By this time the firing of the Ostend Batteries from land and sea had bugun. Soon thereafter the first heavy shell bursts were observed in the neighborhood of Zeebrügge harbor. This long range firing by the two monitors *Erebus* and *Terror* was shifted after the first few shots to the neighborhood in rear of the locks, "Heyst" and "Dunbergen," where during the entire duration of the firing from 1:00 a. m. to 2:45 a. m., it fell wide of all targets of military value. It apparently was intended to silence the seacoast battery east of Zeebrügge. The shells passed over this battery and fell a safe distance in rear of it. After the alarm the light seacoast batteries had laid an illuminating girdle (star-shells), in front of the coast and especially in front of the harbor of Zeebrügge. But the artificial smoke aided by the condition of the atmosphere was so dense that only seldom were targets seen that could be brought under the direct fire of the seacoast batteries. These batteries, during the continuation of the attack, were useful principally in barrier and starshell firing, while the heavy Batteries, *Kaiser Wilhelm II, Schleswig Holstein* and *Freya* fired upon the two monitors with data supplied by the sound ranging section until these vessels ceased their ineffectual fire.

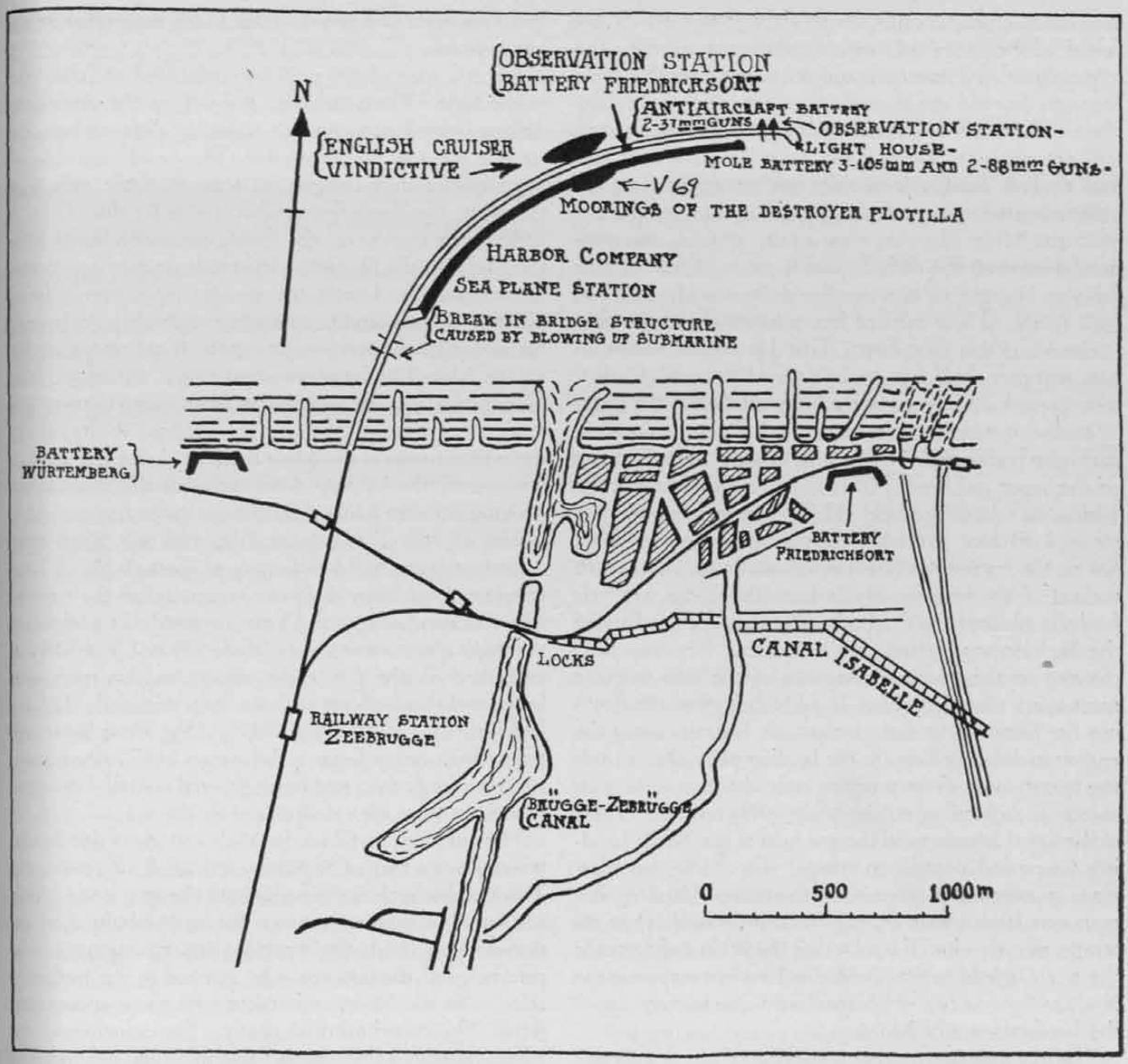
As the motor boat sounds from the sea became stronger, the Mole Battery scattered six salvos into the fog. Suddenly at 12:50 a. m., a small cruiser of about 20 hm. rating came into view through the smoke. Lighted to the brightness of day by the starshells, she approached from a northwesterly direction, heading directly for the Mole head. As she sighted the Mole, the *Vindictive* turned towards the outerside of the Mole, and passed in front of the battery at a range of about 500 meters. Salvo after salvo crashed out. A great number of bursts were observed against the hull, on the deck and upon the superstructure. Captain Carpenter, who commanded the *Vindictive* and who described the assault in his book *The Blocking of Zeebrügge,* commented on the Mole Battery in the following manner: "One can imagine the thoughts that were uppermost in their minds, 'Hit her!' 'Smash her!' 'Pump it in!' 'Curse those guns of hers!' 'Don't lose a second of time!' 'Blow her to bits!' " One cannot blame those gunners. To use a war time expression, "They had their wind up,"—and in another place he said, "In about five minutes we had reached the Mole, but not before the ship had suffered a great amount of damage to both matériel and personnel." The personnel loss was very heavy. A greater part of the storm troops and naturally their commanding officers had come on deck ready to land. Both Colonel Elliot, who commanded the Royal Marines, and Captain (Navy) Halahan, who commanded the naval contingent, fell as did also a great number of officers and men. In addition to this, twelve of the fourteen landing stages, which had been specially built on the cruiser for landing on the Mole, were shot down. As a result, the rapid disembarkation of the four companies of Royal Marines, 750 men, and the Naval Landing Corps and demolition troops of 500 men, so vitally important for successful assault, was renderd impossible.

After the *Vindictive* had passed the battery running eastward, she came into the dead angle of the battery caused by the curving form of the Mole, and was then lost sight of in the smoke. The two 37 mm. machine guns of the antiaircraft battery, under command of Chief Gunner's Mate Scheidt, had fired upon the *Vindictive* as she passed, and now were able to continue this fire on that part of the cruiser projecting above the Mole. They brought the cruiser's high bridge and fighting top, both of which were firing upon the Mole with machine guns of heavy and light caliber, under fire until these were finally silenced.

With the help of the two tugs *Iris* and *Daffodil,* on which a part of the storm troops had been embarked, the *Vindictive* made the outside of the Mole around 1:00 a. m. She came alongside just west of the observation station of Battery *Friedrichsort* fighting a strong tide. The tug *Iris* then attempted to tie up to the Mole somewhat west of the *Vindictive.* A number of men from this ship jumped on the Mole in an effort to make her fast, but were shot down by the harbor company, and so the steamer drifted away. Lieutenant M. A. Zimmerman of the reserve, who had been ordered to the observation station of Battery *Friedrichsort,* sent his observations to that battery by telephone. He also informed the gunboat *Westphal,* the Mole Battery, and the destroyers lying in the harbor, of the progress of the disembarkation which was invisible to them in the fog.

Captain-Lieutenant Benecke commanded the torpedo boat destroyer *V-69* which was moored to the quay, on the inner edge of the Mole. With the assistance of Ensign Klintzasch, he cleared the only gun of the destroyer whose line of fire to the mooring place of the *Vindictive* was not defiladed by the Mole structure, and opened fire on the mooring place, the bridge and tops of the *Vindictive.*

The crews of the torpedo boats, lying in the harbor, had been sent to the Mole shelters upon hearing the air raid alarm. These were now assembled and hurried into the fight with their hand weapons. In the meantime the



commander of the Mole Battery, anticipating a landing action on the Mole, organized assault troops from the supernumeraries of his battery, 3 mates and 20 men, and sent them under First Lieutenant of the Reserve M. A. Rodewald to a previously selected infantry position to prevent the landing party from flanking the battery. At the same time the crew of Battery *Friedrichsort* observation station fell back and joined these assault troops in their defensive position on the upper runway, just east of the antiaircraft machine-gun battery. The men were so disposed here as to be able to keep the upper runway and the enclosed position of the Mole under rifle fire. Lieutenant Zimmerman had to retreat from his position in the *Friedrichsort* observation station. This position was close to the cruiser and could no longer be defended. For its normal artillery function, this observation station was of little value.

Due to the close proximity of our torpedo boat, firing on the cruiser by any of the batteries was out of the question. Zimmerman had observed that the coming alongside, the mooring of the cruiser in the strong tide stream, and the disembarkation of troops with the two remaining landing stages, progressed very slowly and with great loss of life, under the organized fire of the defenders. The English troops who had landed moved cautiously towards both ends of the upper Mole runway, some descending to the platform below by means of ladders. After the first half hour, hand grenades were used which resulted in greatly reducing. the visibility in the area. Then the English troops attacked, running along the upper Moleway towards the antiaircraft battery and the Mole Battery flank defense position. They were supported by machine guns and light artillery fire from the tops and high bridge of the cruiser. These troops were met with the combined fire of 37 mm. guns, hand grenades, and rifles, and were destroyed. It was the only attack of any consequence which was to proceed from the assault on the Mole. The remaining English troops which had landed moved along the Mole in the

opposite direction towards the seaplane station on the innerside of the Mole, the sheds of the destroyer flotilla, the torpedo boats and destroyers moored to the quay, but they never got beyond the immediate vicinity of their landing place. Since each command and organization seemed to fail, one must assume that the great loss of officers and men made it impossible to order further attacks.

Shortly after the attack the tug *Iris* again attempted to reach the Mole, this time close to the 37 mm. gun position. However, she drifted quickly away. Effective rifle fire was brought to bear on her decks thickly crowded with troops. These suffered heavy losses. Even the man at the wheel was shot down. First Lieutenant Rodewald now sent part of his men back to their battery where they were needed, on account of the long duration of the fight. With the men he had left, including Lieutenant Zimmerman who had joined the party, he made a counter attack on the upper and lower Moleways, in the direction of the *Vindictive's* landing place. This put him in position to set up a machine gun where he was able to deliver direct fire on the enemy machine cannon platform. This, with the aid of the bursting shells from the *V-69,* very effectively silenced the machine guns and light artillery in the high superstructure of the cruiser. Fire was then directed on the troops coming out of the ship where a great many were shot down. In addition to this, the flanking fire from the 37 mm. antiaircraft battery caused the enemy such heavy losses at the landing place that according to statements from prisoners only about 50 or 60 men succeeded in landing on the Mole—this out of 750 men of the Royal Marines and the 500 men of the Naval Landing Corps and demolition troops. The Mole defenders place an even lower estimate on the number landed. No men were landed from the tug *Iris* which failed in two attempts to come alongside. During the entire engagement the tug *Daffodil* had to hold the *Vindictive* against the Mole and only a few of her men were able to come across the *Vindictive* to the Mole.

The direct or indirect bombardment of the *Vindictive* by the land batteries was impossible, in the first place due to the heavy fog which covered everything during the entire engagement, and in the second place due to the fact that our own men were on the Mole at the time. The hull of the cruiser and the two tugs could not be fired upon by either the Mole Battery or the *V-69* as long as they remained in the shelter of the high Mole. However the cleaning up of the Mole proceeded smoothly in spite of this.

In addition to the above mentioned Mole defense, the harbor company stationed on the Mole and the crews of destroyers and torpedo boats did their share in a creditable manner. They shot down with rifle fire the English troops that appeared on the high ledge of the Mole, and attacked and destroyed those few who had descended on the lower platform. They set up two flame throwers and a machine gun. Here an isolated and bitter hand to hand fight took place, in which Seaman Kunne of the *S-53* and an English Lieutenant-Commander fought to the death with boarding knife and pistol. They killed each other at the same instant.

The 200 men of the seaplane station did not take part in the fight. They had been assigned to the immediate defense of their station which was some distance from the landing point of the *Vindictive.* They could not risk going far from their hangars on account of the very poor visibility. No English troops were seen by them.

At about 1:40 a. m. the *Vindictive* was released from the Mole by the *Daffodil.* She made no further attempt to land troops. Under the strong and vigorous firing directed on her landing place she cast off in a hurried manner, without even waiting until those troops landed on the Mole had come on board again. After the *Vindictive* had cast off, one officer and thirteen men surrendered as prisoners of war to the gunboat *Westphal* and the assault troops of the Mole Battery. According to their statements, the landing order included the plan of destroying both the Mole and the ships in the harbor. After casting off, the *Vindictive* and her two tugs again came under fire from the Mole Battery at short range. A large number of hits were observed especially on the tug *Iris* where heavy damages and losses occurred. In addition to the ship's commander and the leader of the Royal Marines embarked on the *Iris,* eight officers and 69 men were killed and three officers and 102 men wounded. The *Iris* had little luck in this undertaking. She went home suffering from heavy losses and damages after having failed to land a single man and having served no useful purpose. The three ships then disappeared in the fog

The attempt to land on the Mole was given up. In this undertaking a total of 82 officers and 1,698 men took part. This number includes those on both the attack and blockade ships. When one considers the losses admitted by the British—214 dead, 383 wounded and 19 captured—the percentage of the losses may be ascribed to the foolhardy attempt on the Mole, undertaken with three unprotected ships. This cost the British dearly. The defenders of the Mole carried out their mission in a most efficient manner. Our losses at Zeebrügge were eight men killed and 14 wounded.

Blowing Up of the Bridge Leading to the Mole

A steel bridge structure led from the shore to the stone Mole allowing the strong ebb and flood tides to pass freely through the Mole. The enemy blew up the bridge at 1:19 a. m., apparently to prevent the Mole crews from getting reinforcements from the shore. The part blown away was about 40 meters wide. The demolition was carried out by bringing a submarine filled with heavy explosives to a point under the bridge and detonating it there. This was accomplished under cover of smoke. The explosion severed every connection with the Mole including telephone communication. The Mole was thus turned into an island which the British, from their airplane observers and intelligence reports, considered to be weakly held. As a matter of fact the Mole crew was quite insignificant when compared with four companies of Royal Marines (750 men) and the composite naval landing

force of 500 men. Our defense consisted of 70 men in the Harbor Company, about 200 men from the seaplane station, about 60 men from the Mole Battery, and the crews of the torpedo boats lying in the harbor. The various elements were widely scattered. However, under the tactical situation they were sufficient to force the decision against the British. No lives were lost in blowing up the bridge. Aside from the obviously annoying situation, it had no influence on the course of events. An officers' patrol, sent from shore, passed the wreck shortly after the explosion, but took no action since the *Vindictive* had already cast off. As a matter of fact, telephone communication was reestablished during the fight. An emergency bridge, completed less than 10 hours after the attack, proved to be sufficient for the immediate requirements. It was later replaced by a foot bridge procured in Brügge.

The Blockade Attack on the Harbor

A short time after the *Vindictive* had passed the Mole Battery and had moored on the outer edge of the Mole, three torpedo motorboats were seen for a short time in front of the harbor entrance. Illuminated by star shells, these boats were brought under fire of the two 88 mm. guns of the Mole Battery. The nearest one was sunk by this effective fire. Soon thereafter, at 1:10 a. m., a cruiser appeared at very short range. Under the light of the many star shells fired by the land batteries, she was seen emerging from the smoke, with course set on the harbor entrance. Since the *Vindictive* lay in the dead angle of the battery and was no longer being fired upon, all five guns of the Mole Battery were turned on this cruiser. On account of the artificial smoke this blockade ship was first seen at such a short range that only two salvos could be fired on her while outside of the lighthouse. After she had passed the lighthouse, this blockade ship, the cruiser *Thetis,* drew salvo after salvo at shortest range. With disabled rudder she fouled the net barrier and missed the canal entrance. She ran aground and was sunk in the harbor. At 1:20 a. m. two additional blockade ships, the *Iphigenie* and the *Intrepid,* came in sight. They were in close column and so well hidden by the smoke that it was possible to see only their superstructures. These ships ran in through the fire of the harbor barrier, rounded the lighthouse on the Mole in a sharp curve, even under the fire of the Mole Battery and light artillery placed on a lighter that had been moored on the inner edge of the lighthouse. Our torpedo boats lying in the harbor opened fire on these ships and the last ship in line was also fired upon by Battery *Friedrichsort.* However, after breaking through our boat and net barrier, and receiving numerous hits at short range, they reached the canal entrance and were sunk there. Soon thereafter the Mole Battery fired upon a torpedo motorboat and sunk it in flames. The Mole Battery also fired upon an enemy destroyer which neared the harbor entrance. A number of torpedoes were discharged from these destroyers and motorboats but in the smoke all of them missed their targets. One detonated against the Mole without doing any damage and another sank a dredger. Finally our lighter, which carried light artillery, was hit and sunk by the enemy. The crew saved themselves on the Mole. At 2:10 a. m. an English destroyer came in sight close to shore. We could make out on her bow the designation *F-53.* In quick succession she was fired upon by Batteries *Augusta, Freya, Canal, Friedrichsort* and then by the Mole Battery and sunk. This was the destroyer *North Star* whose wreck was later visible at low-water. An additional ship was sunk by Battery *Augusta* and at daybreak a motorboat was fired upon by both Battery *Würtemberg* and the Mole Battery, and sunk.

The objective of this blockade attempt was the blocking of the narrow Zeebrügge entrance of the Zeebrügge-Brügge Canal. It was hoped thereby to bottle up the German torpedo-boat-destroyers, submarines and torpedo boats lying in Brügge and thus to effectively stop the German submarine warfare, which, based on the strongest and most threatening harbors of the Flanders coast, had been closing in on England through the English channel. The simultaneous attack on the Mole of Zeebrügge was intended to divert the attention of the coast defenders from the blockade undertaking. The Mole attack was also expected to accomplish the destruction of the military forces on the Mole, the batteries and observation stations, the submarines and torpedo boats lying in the harbor, and especially the German seaplane station and its seaplanes. This statement of the English intention is based on the information found in captured English papers and the actual conduct of the attack that followed. These plans failed in spite of several months' careful preparation. They were frustrated by the attention to duty and the resolute conduct of those in charge of the principal positions of the defense. In Ostend the simultaneous attempt of two blockade ships failed also. Under the fire of the coast artillery they missed the harbor entrance and piled up on the beach. The English attack on the Mole at Zeebrügge was beaten off with heavy losses to them before they could accomplish any destruction on the Mole. This attempt of a small cruiser and two unprotected steamers, which together carried over 1,200 landing troops, to moor on the outer edge of the Mole in the artificial smoke and to carry it by storm, was intended to be a surprise. It was based on luck and on the weak defense of the enemy. The surprise attack in the smoke did not succeed.

In summary: The batteries had been alarmed by the first artillery firing. The short and effective shelling by the Mole Battery which was opened on the cruiser as soon as she came in sight caused heavy losses to the officers and men in the English landing corps. It also robbed the ship almost entirely of her means of rapidly landing large troop masses on the Mole which was so important to the success of the landing operations. The landing was then entirely frustrated in the actual attempt. The fire of the 37 mm. guns, the shells of the torpedo destroyer *V-69,* and the rifle fire of the defenders caused such additional heavy losses that the organization and command of the

landing corps was broken up. Only between 50 and 60 men succeeded in setting foot on the Mole. Of these, 19 were taken prisoner, some were shot down by our Mole defenders, some sprang over the parapet of the Mole into the water, and some succeeded in reaching their ship again under cover of the smoke.

As a diversion, the attack on the Mole was, generally speaking, not effective, since the coast defense batteries did not fire upon the *Vindictive* while she remained alongside the Mole. They withheld their fire out of regard for our own fighting men on the Mole and on account of the impossibility of observing the fall of shots in the smoke. Since the Mole Battery was unable to fire on the *Vindictive* except for the brief period in which that vessel was in her field of fire, she turned her guns on the other targets engaged in the attempted blockade. In this attempt, the first ship went ashore outside of the Canal entrance to Zeebrügge and was sunk. The two following blockade ships were successful in reaching the narrow canal entrance and sinking themselves there. *But no blockade ship reached the canal locks, whose destruction would have effected a complete blockade of the canal. These locks were 500 meters from the nearest sunken blockade ship.*

The positions of the blockade ships in the channel of the canal was not such as to effect the complete blockade that some photographs apparently showed. These photographs were calculated to deceive. The passage at high water was, as a matter of fact, effected the following day. On April 24, 1918, at high water, the boats of the II Flanders torpedo boat flotilla passed through the channel, narrowed now by the sunken ships. On April 25 the first submarine *UB-15* went out through the channel. Dredging operations with three dredges started immediately. This work, together with the washing effect of the water dammed up in the Zeebrügge Canal, enlarged the westerly channel which passed by the sterns of the two sunken cruisers. By the 15th of May the channel had a depth of 3.5 meters at low water. This was sufficient for all of our torpedo boats and submarines. After the guns and munitions had been salvaged from the three sunken ships they were left where they had sunk. The submarine warfare operating from the harbors on the Flanders Coast had suffered no interruption through the attempted blockade, since the harbor of Ostend had remained completely free. During dredging operations traffic was dispatched unmolested through the Brügge-Ostend Canal.

The ships taking part in the attack, the bombardment and the rescue work in the attempt against Zeebrügge and Ostend on May 23rd and 24th, 1918, were; 9 monitors, 7 small cruisers, 28 destroyers, 5 blockade ships, 2 tugs, 2 squadrons of seaplanes, 1 scout, 57 motor-launches, 24 motorboats and 2 old submarines filled with explosives. In addition, the following were held in reserve; 3 French destroyers, 4 French torpedo boats and 4 French motorboats. The English sacrificed 5 blockade cruisers, and the old submarine which they blew up. They lost through our artillery fire the modern destroyer *North Star* which had been built during the war, 2 torpedo motorboats and a number of smaller craft. On the following morning the II Flanders torpedo boat flotilla rescued five survivors from the *North Star*. The destroyer *Phoebe* was greatly damaged. On the German side, one lighter and a dredger were sunk.

The English personnel losses among the 82 officers and 1,698 men taking part were as follows:

ROYAL MARINES *(Royal Navy)*

	Officers	Men
Killed	11	79
Missing	..	21
Wounded	17	150
Total	28	250

ROYAL MARINE INFANTRY *(Royal Marines)*

	Officers	Men
Killed	9	96
Missing	2	13
Wounded	11	205
Captured	..	2
Total	22	316

The above list given out by the English is incorrect in that the listed number of prisoners, 2 men, actually amounted to 1 officer and 18 men. Those remaining, of the 19 listed as missing, may be added to the list of killed.

Thus the English losses were 214 killed, 383 wounded and 19 prisoners.

The German losses incurred on April 23, 1918, amounted to the following:

	Killed	Wounded
Ostend	2	2
II Destroyer Flotilla	5	11
Zeebrügge (Mole Battery)	2	2
II Torpedo Flotilla	1	1
Total	10	16

The main advantage and the principal glory of that night may be credited to the superior work and conduct of the Mole Battery. The single gun of the *V-69* also did very effective work.

As long as we kept the principal channels free from mines for our own traffic, it was possible for enemy ships to pass through the harbor defense barrier fire. On the other hand, it is very difficult for an enemy to carry through such a blockading operation as this attempt was, in the face of seacoast batteries. In this war, no such operation has ever been successful.

The brave defense of the Mole of Zeebrügge will always be a glorious page in the history of the German Navy. It is a shining example of the resolute determination of a small troop of brave men who remained to drive back to his ship a greatly superior enemy who had attempted a surprise attack under cover of darkness and smoke.

Bombardment Aviation and Its Relation to Antiaircraft Defense

By Major H. A. Dargue, A.C.

IT is axiomatic that if an objective is worthy of antiaircraft defense it is worthy of attack from the air. Antiaircraft troops must expect to secure hits and bombardment aviation must expect to suffer losses when an attack is made within range of an efficiently defended objective. Likewise, the aviator must expect to push on and to drop at least a fair proportion of his bombs on the target. The two services, therefore, should be acquainted with each other's capabilities and limitations and the methods of operation; they should take advantage of every opportunity in time of peace to coöperate in the development of each other's weaknesses that these may be strengthened to the point of maintaining the highest efficiency in operation.

The problems confronting the development of the proper tactics for bombardment aviation and the proper defense against bombardment attacks are of vital interest to both the Air Corps and the Coast Artillery and must be solved by coöperative and not by competitive means.

The difficulties of simulating service conditions have to a large extent prevented the establishment of suitable standards by which to judge the relative efficiency of these two branches when engaged in the prosecution of training exercises and the execution of field problems. These standards are in large measure standards of marksmanship. The provision of a suitable radio controlled target against which service ammunition might be used, while the target maneuvers in the antiaircraft area in much the same manner as a loaded bomber approaching its objective, would undoubtedly furnish information of very great value. And also, the further dropping of bombs, especially at the higher altitudes and with sights and mechanisms much improved over those used years ago, would provide tables of bombing probabilities not now available.

The mission of the bomber involves putting his "eggs" in the "nest" for which they are intended; the mission of the defenders on the ground contemplates keeping the aviator from ever reaching the point where the "eggs" are proposed to be laid. In accomplishing these missions how much simpler it would be if a good G-2 could tell exactly what the enemy would do. But this is not possible and therefore each service must develop an understanding of the problems and tactics of the other that will enable an estimate of the situation to be made upon the appearance of the first airplane or the sight of the first gun flash.

To the man in the air it would be of great help to know from just what points around the objective gunfire might be expected, how many batteries there are, and perhaps some information with regard to the efficiency of the particular unit operating them. These factors may soon become fairly well known in an active campaign and some of them involve matters of simple probability. For instance, the normal location of gun batteries might be plotted fairly accurately from the G-2 information obtained, and when one battery opens fire the areas in which the others are probably located may at once be reasonably known. Dummy guns and camouflage may confuse the G-2 estimate, but with a limited number of guns to defend an objective from all approaches the well-trained air officer should estimate the situation in the air and be able to modify the lines of approach and withdrawal as soon as one battery has opened fire so as to be in range of supporting batteries for a minimum length of time. The best approach appears to be directly over the firing battery unless the supporting batteries are so widely separated as to leave gaps in the defense.

Moving batteries from day to day or even changing positions between day and night will result in a degree of uncertainty, but the elevated position of the aviator and his training (and after a few attacks his experience) are such that he should be able to take in the whole defensive gun lay-out and plot in his own mind the probable positions of those not firing.

The machine gun defense, due to the far greater number of guns available, is of course not so easy to picture. The normal lay-out may present a fairly regular diagram on paper but when applied to the accidents of the terrain the pilot may have a difficult time in picking his course so as to come within range of the minimum number. On the other hand the vulnerable area of the airplane is so small and its travel at such a high rate of speed that perhaps it is not so essential to study the possible locations of machine guns as it is to determine the gun battery positions. At least this is the case with the bomber who will only resort to low altitude attacks when forced by weather to do so or when special conditions favor this action. Such a case might be that of a naval target or a seacoast fort that has been surrounded by or smothered in smoke and the bomber can approach over water or through an undefended area.

Data and firing experience have largely been gained against targets flying at greatly reduced speeds and without the maneuver both in direction and altitude normal to aircraft. With airplanes traveling at the very high speeds now available, at altitudes not heretofore attainable with a large load of bombs, and with easy maneuverability even in the heavy bomber, the aviator can readily appreciate there is considerable difficulty confronting the personnel who are endeavoring to predict the future position of the airplane; who must always overcome that ever present obstacle—time of flight of the projectile—and who possibly

are contending with a large number of planes and bad visibility. The aviator does know that the problem is difficult and is sincere in his desire to know the best that can be done in order that he may reckon with what he might have to meet in time of emergency.

Then at night there is the problem of sound locators and searchlights which the Air Corps is always endeavoring to make more difficult by silencing its equipment and by camouflage. It is a great sight to the aviator to see a mass of searchlights illuminate the sky as his formation of bombers winds a tortuous course among them. To the flyer who missed his way those searchlights become beacons showing the approximate location of the objective.

The idea on the part of the Air Corps, if its planes are to be detected, is to proceed by various routes and altitudes within a reasonably limited sector so as to confuse the sound locators to the maximum. Furthermore, dispersion of aircraft within this sector during a night attack tends to limit very materially the number that may be illuminated. Some day there may be developed a much better instrument than the present sound locator which will dispel that feeling of security which the high flying bomber now enjoys in the blackness of the night. Here is a fine opportunity for development through coöperative training of Air Corps and Coast Artillery units.

Nor does the Air Corps have an easy time. There is a certain sense of security from the great wide open spaces of the air and flyers cast aside fear and approach the objective with a determination to get there. But the problems of navigation and possible combat are ever present and at the target the marksmanship of the personnel, while dodging the antiaircraft fire, is put to a severe test.

One important factor always favors the attack and this is the selection within reasonable limits of the time. Night attacks will probably be favored over day attacks because of the greater security obtained by darkness. Then too, weather conditions often favor an attack. A Coast Artillery observer at a recent exercise remarked, "Of course, some Air Corps clouds were present—you fellows get all the breaks!" Clouds form generally in layers, above which it is wholly practicable to fly and very often an occasional glimpse of the ground and the target gives a check on the course sufficient for precision bombing. Of course if the sky is completely overcast a dip below the clouds may be necessary for the very short time required to perform the sighting operation. Stormy weather and even fog will not be insurmountable barriers in another emergency. Navigation is becoming less of a problem; special schools with improved instruments are teaching the accuracy of flight under the most adverse conditions; flyers have repeatedly demonstrated the practicability of blind flight. The robot flyer has already guided the airplane more accurately than human hands.

The bombardment crew realize they are the principal target for hostile pursuit and their greatest defense is gained in mass formation. Excellent formations have been developed for air defense but when the antiaircraft area is reached a certain amount of dispersion to avoid the ground fire is necessary. It would therefore appear that a nice coordination between defensive air and ground action might keep the bombers in mass long enough to make highly effective the first antiaircraft shell bursts These are the ones that the flyer considers may be most effective; he figures he can dodge the rest.

The marksmanship of the bomber is rapidly improving. Mechanical developments in sighting and the dropping of bombs are removing most of the personal errors. Even mechanical flight for the few seconds necessary to start the bombs on an accurate course is available. But all this does not eliminate misses; their number will be reduced. Let it not be forgotten by any service that in time of war it has taken tens of thousands of rifle and machine gun bullets to produce one casualty; it took thousands of antiaircraft shells to bring down one airplane; and under the duress of war there will be plenty of bombs that might just as well be duds.

So far but a few technical and tactical aspects of the air attack and the antiaircraft defense have been very briefly discussed. The larger picture is of interest. The flyer must realize that the antiaircraft regiment is a self-contained unit—guns, machine guns, range finders and data computers, searchlights, sound locators and an intelligence net. It can operate without other assistance.

The matériel of greatest interest to the bomber are the three or four gun batteries which are located, or should normally be located, in a band some two or three thousand yards wide and at an average distance of not more than six thousand yards from the target. For mutually supporting fire the batteries are expected to be found approximately equal distances apart in the battery band. The machine guns, except for the low altitude attacks, can be avoided. Searchlights are not a hindrance to flight but may interfere with the accuracy of bombing; with camouflage, however, they have been successfully avoided at the higher altitude. The regimental intelligence net may extend outward to fifteen miles and cover the whole circumference of the target. But this is not all. Defensive observation aviation may keep the bombardment airdromes under surveillance and even trail the bombers hoping radio reports may result in a pursuit interception and combat. And ground communication agencies may be organized into an intelligence net behind the lines which may give information of the approaching bombardment formation, its size and course, so that all defensive arrangements may be alerted to thwart the purpose of the attack from the air.

On the attacker's side, the picture is equally comprehensive. The bombers are but a part of a larger air force embracing attack and observation aviation and possibly pursuit. They are scattered by squadrons or even flights on many landing fields; the communications net is intricate. Preparation for an attack and the attack itself are deliberate and require careful coördination.

The observers secure all possible information, including photographs, of the target and its defensive installations. During the approach of the attack they broadcast weather,

act as advance and flank guards to ward off enemy aircraft, and at night may drop an occasional beacon at check points and furnish illumination at the target by flare or incendiary bomb.

The rôle of the attack aviation is highly important. At very low altitude and preceding the bomber by a few minutes they harass and destroy the antiaircraft defensive arrangements in the sector over which the bombers will deliver the main attack. They lay smoke, attack with bombs and machine guns the antiaircraft gun positions, searchlights and personnel and by their noise (using unsilenced engines) may seriously interfere with sound locators.

Pursuit aviation may furnish protection for the bombardment formation through certain sectors known to be especially active or to designated points behind the hostile lines. Likewise they may escort the formation through certain active zones on the return.

Meteorological information, weather predictions, and route forecasts are becoming increasingly accurate and this service will play a most important part in future operations. Weather is very often an ally of the birdman and attacks will many times be made with weather deciding the time. In some cases the carefully prepared detailed plans for the supporting units may be cast aside as bombardment proceeds alone under cover of weather. Two high ranking observers were overheard to remark at a recent exercise, "The bombers are already fifteen minutes late—wonder what's happened." Nothing had happened except an accurate estimate of the weather had been made, the bombers using the cover of the clouds and making the attack on time as advantage was taken of holes sufficiently large to permit accurate sighting to be performed. The clouds had smothered the remaining noise of the partially silenced motors.

So these are the highlights of air attack and antiaircraft defense. For the bombers, silenced motors, special navigation lights, camouflage, speed, altitude, robot pilots—maybe some day a whole flock of bombs on wings with radio control from a mother ship that can guide its children unerringly on their deadly mission. For the defenders, detectors that surpass the sound locator, a high rate of gun fire with plenty of bursts right "on the nose," greater effective range, plenty of powerful searchlights. And for both, a target plane, radio controlled, at which to fire so that the services may see what it's all about; and to top all these, a steady improvement in tactical methods. Cooperative training is needed. Each service must put forth its best that the other may be fully prepared for the emergency test.

Fire Adjustment

By Captain Leonard L. Davis, C.A.C.

Note: Following is the first of a series of articles on this subject. This article deals with thoughts on the subject prior to the World War. Succeeding articles will continue with more recent ideas and will be accompanied by typical adjustment problems and solutions.

Adjustment of fire may be defined as the process of applying corrections to the firing data to bring the center of dispersion of fire of the battery to the desired point with reference to the target. A review of the matter published in the Coast Artillery Journal and *Coast Artillery Memoranda on Target Practice* reveals a difference of opinion as to the necessity for adjustment of fire and also a variety of opinions as to procedure among those who consider adjustment of fire as a necessary process. Quotations from these publications are of interest in tracing the development of ideas on the subject. Many of these quotations, no matter how long ago they were published, have a very familiar ring and are as pertinent today as the day they were published. Following are a few quotations published prior to the World War:

"A Few Thoughts on Practical Artillery," by First Lieutenant G. N. Whistler, 5th Artillery. C.A.J., January, 1893, page 22:

> "The true soldier is one who always tries to obtain the best results possible with the means at hand. It is true that our guns are antiquated, our powder old and deteriorated, our projectiles poor, our sighting devices crude and inaccurate; nevertheless there must be a maximum of efficiency obtainable from a given gun, even under these adverse conditions. What reason have we to assume that an officer who can obtain but 60 per cent of this maximum efficiency, from our present armament, will be able to reach a higher percentage with the modern armament? It is true that 60 per cent of the maximum efficiency of the modern high power 8" BL rifle may far exceed in practical value 100 per cent of the efficiency of the present 8" M.L. rifle. And, therefore, the practical efficiency of the entire service will be increased by a mere improvement in the weapon; but is this enough, will this satisfy our Corps? Are we contented to rest our reputation for accurate artillery work upon the mere improvement in our armament? I think not—and therefore maintain that the question: *How to obtain the most efficient service from a given gun,* is the most important artillery question of today. I further maintain that the officer who is unable to obtain over 50 per cent of efficiency from the old 10-inch Rodman with mammoth powder, will not be likely to obtain more than 50 per cent of efficiency from any modern high power BL rifle with brown prismatic or smokeless powder. Inefficient service, and by this I mean a low percentage of the maximum obtainable from any given gun, is due in the first place to *inattention to details;* secondly, to crude instruments and careless and inaccurate use of them; and thirdly, to a lack of knowledge of the fundamental principles of ballistics."

"Artillery Target Practice," by First Lieutenant G. N. Whistler, 5th Artillery. C.A.J., January, 1894, page 67:

> "Unless a man is familiar with the many causes of error, which continually multiply as he proceeds in his work, unless he has learned how to allow for them, and how to

correct for the varying conditions of his environment, his work will be utterly valueless."

"Report of C. A. School Target Practice, 1901. C.A.J. for Jan.-Feb., 1902, pages 10 and 11:

a. "Gunners timed the rate at which the target crossed the field of the telescope, in terms of the smallest division of the deflection scale, and were thereby able to make allowances on this scale for the motion of the target across the field during the time of flight. Gunners were given or committed to memory the times of flight *for the even thousand and half-thousand yards.* The range being constantly in evidence before them, enabled them to keep the deflection scale set for motion of target during time of flight across the field; to this was added or subtracted the corrections due to other causes (drift and wind).

"The results of the firing led to the conclusion that the problem of deviation is not so difficult as has been supposed.

b. "It should be kept in mind that this firing took place for the first time with a time-limit firing interval of two minutes; that no information was given to the battery commanders as to the error of range after the first two shots; that the powder was not uniform in pressure, and that it was the first time that most of the officers and men had fired at moving targets.

"The ranges varied from 3,000 to 7,000 yards."

"The Tactics of Fire Direction," by Major G. N. Whistler, Artilery Corps. C.A.J. for November-December, 1902, page 251:

"Certain facts must always be kept in mind. The errors due to deviation observed with our guns are slight; there is generally no difficulty in doing good line work at any range. There should be no difficulty with reasonable care in locating and relocating, in keeping on the target in the D.P. zone, so far as deviation is concerned, whether the vessel is 'head or broadside on.'

"The great trouble is variation in range, due to errors in range determination, variation in the powder, and inability to determine the atmospheric conditions over the entire range, and to make corrections therefor.

"Error in range determination can be reduced to the minimum by the use of the horizontal method, and by great care in plotting, locating and relocating.

"Atmospheric conditions and the corrections to be made therefore can best be made by firing a trial shot before the enemy enters the field of fire. Batteries should be furnished with cast-iron projectiles for this purpose.

"Powder variations and sudden changes in wind or other atmospheric conditions are beyond our control except to a limited extent. Every B.C. should endeavor to observe the fall of the projectiles from his own battery and correct thereby. This may not generally be possible, as he cannot distinguish his own projectiles, but every effort should be made to do so. In stations where the B.C. is furnished with a D.P.F. in addition to the Type "A" as recommended by the Wadsworth Board, which is decidedly preferable to the instrument for observation of fire provided by the Drill Regulations, the following plan is suggested:

"The B.C. when he sets his instrument on the setback point will note the time of flight for the range, a table of times of flight being conveniently posted near his instrument. As soon as the guns are fired he follows the target, counting seconds. The shots falling near the target at the expiration of the time of flight, will probably be those from his own battery."

"Artillery Practice at Fort Monroe, Va.," C.A.J., May-June, 1903, page 331:

"The 13th Company and the 35th Company, upon a day previous to the actual practice, fired each two trial shots corrected for drift and atmospheric conditions to test the powder. In the practice, the charges for the first three shots of each of these companies were of the same lot of powder as that used in the trial shots; the last two charges of each were of a different lot. In both cases the last two shots of each of these two companies went far beyond the target and were misses; the new powder evidently gave higher velocities than the older lot.

"All companies firing, except the 118th and those using mortars, relied on the corrections determined by the trial shots, taking the proper elevations for the predicted ranges from the range table.

"The 35th Company used the chamber sponge after each round. This gun required 15 seconds to run into battery after tripping.

"In the case of the mortars Brown Prismatic powder was used. No trial shots for velocity were fired, the performance of preceding year being the only guide."

The following quotation contains ideas similar to those now used in connection with fire control by means of aerial observation:

"System of Fire Direction," C.A.J., July-August, 1903, p. 105.

"An observation on the splash is taken and plotted. The B.C. assumes an auxiliary point over or short and right or left of the new predicted point according to whether the splash is plotted short or over and left or right of the *last predicted point.* The plotter determines the elevation and corrected azimuth for this *auxiliary point.* Care must however be taken in correcting shots after the first correction has been made to increase or decrease the *previous correction* according to the fall of the shot, and after the mortars are on the target to continue with the same relative auxiliary point. In case no observation of the splash is plotted the B.C. determines the error of the shot with reference to the actual position of the target at the splash. Care must be taken in assuming any error of fire and in determining the auxiliary point to see that the target passed over the last predicted point on the plotting board and that the apparent error was not due to a change in the course of the target. It will assist if the plotting board is practically oriented in the field of fire."

"Notes on 3-inch Practice," Captain Robert E. Wyllie, C.A.C., C.A.J. for September-October, 1910, page 131:

"It is a mistake to imagine that corrections should not be made during the firing of a series. The conditions are not the same as at a large caliber battery. There the range is accurately known; atmosphere, velocity and travel of target corrections, etc., can be scientifically applied; the range is very much greater, vastly increasing the difficulties of estimating the corrections, and lastly the number of shots fired at practice is too small to give any accurate basis for corrections. At a 3-inch battery the above conditions are reversed and corrections should unquestionably be made when necessary. Some admit that it should be done, but question its possibility on the ground that the overs or shorts cannot be estimated with sufficient accuracy, and if they could that there is not enough time during the firing of a series to make corrections. If the B.C. has no knowledge of the matter, and no system, that is perfectly true, but that is where his training comes in. He can learn to make fairly accurate estimates, and there is time if he is prompt in his decisions. He must not have to think about it, he must know instinctively and that he can do by a proper system combined with experience."

Jungle Warfare

by Ingram Cary

Part III

WHAT HAS GONE BEFORE: *Captain Cochrane, Lieutenant Hazzard, and a company of Macabebe Constabulary have been set ashore at San Ramon, Samar, with ten days' rations, to hold that town and operate against the insurgent Pulajantes. Upon landing it is found that the town has been burned and that the inhabitants have either fled or been killed. A stockade is erected and Captain Cochrane awaits supplies before taking the offensive. After two months these have failed to arrive, the men living on bats, snakes, fish, and other jungle edibles, so Cochrane takes half the company and marches inland. Crossing a trail of hundreds of Pulajantes moving towards the coast, he makes a forced march back to the fort, just in time to help repel an attack by the fanatics.*

The food situation now being precarious, Cochrane, Hazzard, and sixty of the men in best condition, move south to obtain supplies. In an exhausted condition they arrive at the Oras river, and are fired on by American soldiers in a launch. Now go on with the story.

RESTRAINING an intense desire to race along the bank after the launch, to shake his fist at it and to curse the men on board for dirty cowards, Cochrane arose and assembled his men. Fortunately the mud in which they lay had protected them and no one was injured. He spoke comfortingly to the Macabebes, although his voice was shaking with rage. He told them that they had been taken by the officer on the launch for Pulajans, a natural mistake because ragged and muddy as they were, they were unrecognizable as soldiers; also that no other soldiers besides themselves being brave enough to march through the interior, their presence on that river was unexpected and consequently caused fear; finally that the passage of the launch with soldiers on it was conclusive evidence that there was a military post somewhere down stream to which he proposed to proceed by means of raft, the construction of which would be started at once.

With their habitual submission to his will the men started to work. It was difficult to find any vegetation not covered with an armor of spines, but eventually several smooth-trunked trees of the proper size were found. The men started to work to fell them but when Cochrane saw that the wood was of compact fiber and very tough, he concentrated efforts upon one tree. With infinite labor this tree was hacked down, trimmed and the trunk carried to the stream. The log was astonishingly heavy for its size. When it was thrown into the water, it sank like a stone. At this the exhausted men flung themselves on the ground in despair.

Meanwhile there had come a change in the moist sticky atmosphere that during the day had seemed to bear down upon the men as though it were a crushing weight, making even the slightest movement an effort which brought the perspiration streaming from every pore.

Oblivious for the moment of what was taking place around him, Cochrane stood in the midst of the prostrate men racking his brain in the endeavor to think of some expedient that would apply to the situation. He was an ardent reader of military history and often quoted to himself the statement credited to Napoleon that "In war the happiest inspiration is often but a recollection." But in this case the recollection of the cowskins stuffed with straw used by Cæsar as floats for transporting men across streams brought no inspiration whatever.

Hazzard moaned when the rain began to fall and the sound brought the Captain's thoughts back to the present. The sight of the sick Lieutenant suggested shelter, and as his eyes roved about the jungle in search of suitable material with which to construct it, they fell upon the broad leaves of a cluster of wild hemp plants growing on the bank a few hundred yards up stream. Then the inspiration came. The plant called by scientists *Musa Textilis,* from which Manila hemp is produced, belongs to the same family as the banana, for which it is sometimes mistaken. The trunk or stalk is often a foot in diameter

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The story set forth in "Jungle Warfare" is historically correct. It depicts incidents which occurred on the Island of Samar, P. I., in 1903-1904. The "General" was the late Major General Henry T. Allen, who commanded the 90th Division during the World War, and later was in command of the U. S. Forces on the Rhine.

Captain Cochrane is now a field officer in the Regular Army.

Lieutenant Hazzard was a Constabulary Officer of that name.

First Sergeant Bustos and various other men of the company belonged to the company of Macabebe Scouts that took part in the expedition under General Funston which resulted in the capture of Aguinaldo.

but it can be felled easily with one slash of a *bolo,* and although it has the appearance of being water-logged it contains innumerable air cells that give it buoyance. Here was something far better for a raft than inflated cowskins. The Macabebes took to the idea with zest; in fact many of them had utilized the plant before in crossing wide streams by swimming, one or two stalks having sufficient buoyance to support a rifle and set of equipment. Nevertheless in their worn out and apathetic condition, none had thought of the expedient at this time.

—it sank like a stone.

Within two hours a raft of double thickness of stalks over a hundred feet long and thirty feet wide had been completed. The stalks were fastened together by cross pieces, tied somewhat precariously with strips of raw fiber. The Company was about to embark, when to the Captain's consternation he saw that the entire river seemed to be flowing up stream. A moment's reflection, however, brought the realization that the river was tidal and would again flow in the desired direction after a lapse of about six hours. The embarkation was stopped, therefore, and the men lay down in the rain to await the turn of the tide, the mere cessation of mental and physical effort being a delicious luxury. At about midnight the expected change in the current was reported by the sentinels. The Company then got on board the strange craft and set out upon what it was hoped would be the last and easiest stage of the journey to the sea.

The first night on the raft would have been relatively comfortable had there been food and shelter. Only a few times was it necessary for the sentinels to arouse the men to push the raft away from the bank or to warn them of the danger of being swept overboard by overhanging boughs. At daybreak the raft was made fast to the bank and the men went on shore in search of edible plants and roots. A few small birds were seen but as there were not enough to feed everyone the Captain would not permit the men to disclose their presence by firing at them. The river was simply alive with crocodiles, some over twenty feet in length. The famished men looked hungrily at them and Cochrane promised to let them shoot one if food of a less repulsive nature was not found by the following day. Attempts to make a fire with flint and steel and the powder from a cartridge were unsuccessful, all the wood in the vicinity being too damp to ignite, so the few handfuls of rice carried by the Captain were soaked in water and given raw to the sick men.

The journey was resumed in the afternoon when the tide began to ebb and was continued until nightfall. The river had become more winding and the character of the banks had changed greatly. Instead of the usual jungle-covered flats on either side there were now high cliffs of solid rock that formed a canon through which the pent up waters flowed with increased rapidity. On the re-entrant side of the river at each sharp bend the action of the water had worn deep fissures extending far under the precipice, and in these caverns the seams of harder rock, less susceptible to erosion, remained as jagged splinters which projected like monstrous teeth, both from the bottom and from the low hanging roof. To the soldiers lounging comfortably under the awning on the powerful launch these places presented, no doubt, merely a curious spectacle, but to the starving and exhausted Constabulary drifting at the mercy of the current on an unwieldy mass of vegetable pulp held together only by frail lashings fast coming apart, they were places of horror.

Fortunately the first cavern was encountered when the tide had almost ceased to ebb. The raft drifted into the orifice and the men on it could do nothing except to push against the roof in order to keep from being scraped overboard. They managed to extricate the raft in this way, although a large portion of it was torn off by the tooth-like rocks under water. The finishing touch to the horror of the place was added by the immense crocodiles which infested it.

This experience taught Cochrane a lesson. He tied up the raft before the next bend was reached and obtained a number of long poles during the six hour period of waiting. He was disinclined to continue the journey on the raft, but there appeared to be no other alternative so the order was given after midnight to push off, and once again they were adrift in darkness at the mercy of the current.

Cochrane declared afterwards that of all the varied experiences of his life that night was the most harrowing. The proximity of a cavern could be determined by the lapping noise of the water against the roof and by the rank, musty odor emanating from the crocodiles. The poles were called into play again and again to fend the raft away from these dreadful places. The darkness and rain added to the danger. Several times large pieces of the fragile craft were torn loose and there were many narrow escapes, but by hard work and good fortune the company won through without losing a man.

At daybreak the ruins of a house and some cleared patches that had once been under cultivation were in view. The raft was practically dropping apart so the men were landed and it was abandoned. There was a trail here

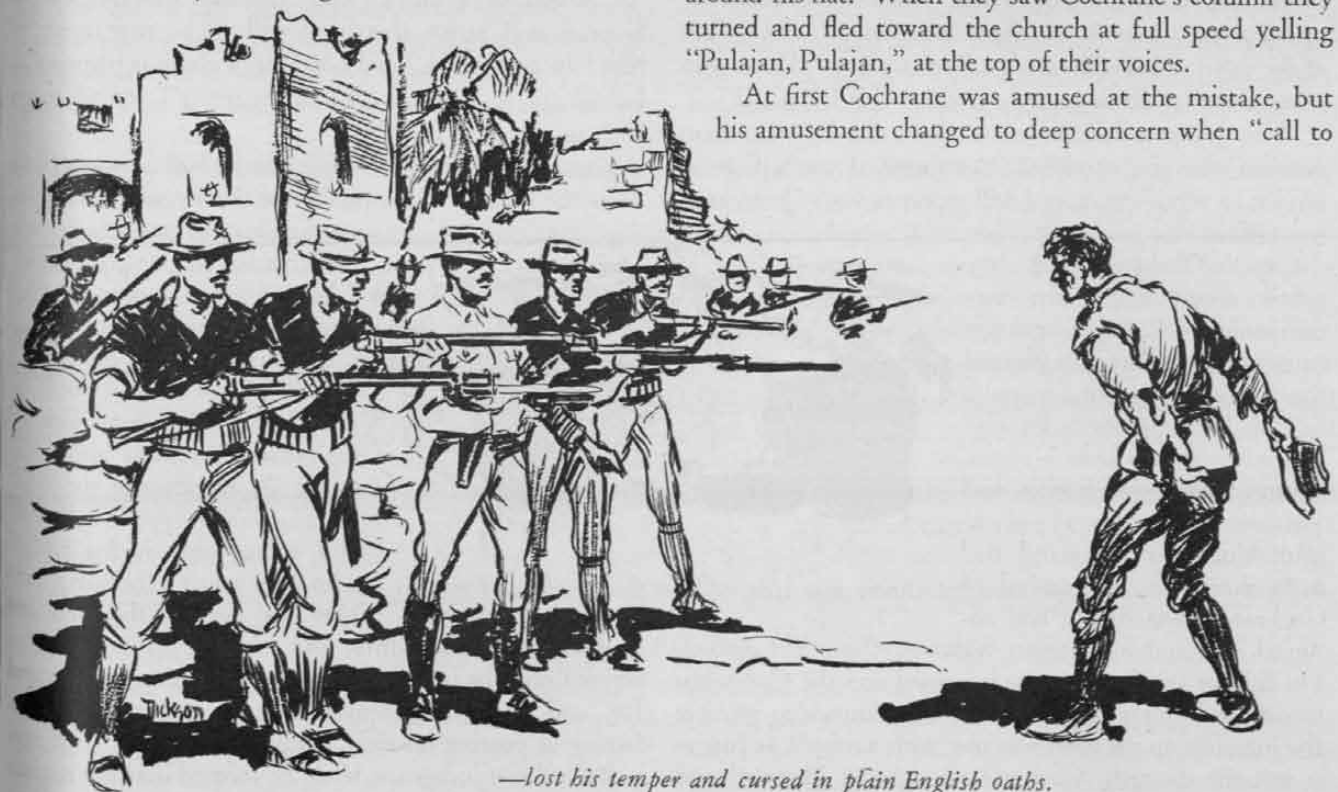
leading down stream but Hazzard and at least ten others were unable to march. Having had enough of traveling by raft, Cochrane decided to select twenty of the strongest men and to push on by marching until he found the military post or some other place where food and boats could be obtained. He informed Hazzard of this decision and cautioned him to keep the men together. He also called the senior sergeant aside and told him that during the Lieutenant's illness he must see that the proper measures for security were taken. Then he spoke a few words of encouragement to the men he was leaving, and after shaking hands with Hazzard, set out upon the route downstream.

The trail was overgrown and there were the usual features of ridge and morass with the ever-present mud and leeches to make marching a misery. Worst of all were the sloughs marking every valley line where the slimy water ebbed and flowed between steep banks of mud. During ordinary times such places were bridged with a few bamboo poles, but the bridges had now rotted down and each crossing presented a difficult problem to the exhausted men. Nevertheless, with infinite tenacity and resourcefulness the Captain led them on throughout the long morning and afternoon until, emerging at last from the forest, they came upon fields of growing rice beyond which could be seen the ruins of a town, and in the background the sea. Oras, situated at the mouth of a navigable river draining an extensive region rich in hemp, had been a prosperous trading center of over ten thousand inhabitans, but not one of its buildings had escaped the holocaust inflicted by the Pulajans. Even the church had been gutted by fire but the stone walls remained standing, and floating from the tower was an emblem the sight of which thrilled Cochrane with joy—the Flag of the United States.

—the coffee contained sugar.

The accumulated miseries of weeks were forgotten and the little detachment, which in the clear light of the open had the appearance of a procession of scarecrows, moved forward with quickened pace in happy anticipation of the meeting with friends soon to follow. As they approached the town they saw that the landing place was stacked high with boxes, sacks and crates and that parties of blue shirted soldiers, both American and native, were engaged in transporting articles from the stacks at the shore to where other stacks were being made in front of the church. Then their attention was attracted by three natives who appeared a short distance to the front. Evidently they were men of the town on patrol duty, as they carried *bolos* and spears and each wore a band of white cloth around his hat. When they saw Cochrane's column they turned and fled toward the church at full speed yelling "Pulajan, Pulajan," at the top of their voices.

At first Cochrane was amused at the mistake, but his amusement changed to deep concern when "call to



—lost his temper and cursed in plain English oaths.

arms" was sounded and the working parties dropped their loads and dashed for the church to reappear presently with rifles in hand on the walls of the building. Other soldiers took position in rear of a barricade formed of ration and ammunition boxes, and the ugly muzzle of a gatling gun, emplaced in the tower, disclosed itself from behind a parapet of sand bags. Within a few seconds the animated scene in the camp had changed to one in which nothing was visible of the garrison except the barrels of rifles, with bayonets fixed, protruding from behind cover, and every weapon was pointed at the forlorn little party of Constabulary.

Dismayed at the inhospitable reception, Cochrane halted his men near the outer edge of a barbed wire entanglement which enclosed the camp and moved forward alone, at each step expecting to become the target for hundreds of bullets. When he reached the barbed wire he received a peremptory order to halt and did so, indignation welling strong within him. Then the church door opened and a party of about twenty men advanced with rifles at the "ready." Recognizing the officer who led the party, the Captain spoke to him, but he could hardly make anyone realize that he was not an enemy and it was only after he had lost his temper and cursed vehemently in plain English oaths that he was admitted to the enclosure.

"What's the matter with you people, Ballard?" he said to the officer. "First you open fire at me from your damned launch with a gatling gun and now you receive me as though I were Papa Pablo himself."

The Lieutenant had not yet recovered from his astonishment. "You don't know how near you came to being killed, Cochrane," he gasped. "If one shot had been fired, you and your men would have been wiped off the face of the earth. How did you get here anyway? Don't you know that the whole country is alive with Pulajans?"

"Yes, I expect I know more about the Pulajans than you do," was the response. "And now, if you will be so kind as to admit my men, I will report to your Commanding Officer."

Captain Todd, U. S. A., the officer commanding the two companies of Regulars and one company of Scouts that formed the garrison, was not a popular man in his regiment ordinarily, and was even less so in his temporary capacity as station and battalion commander. The alarm into which his command had been thrown by the arrival of Cochrane's detachment had annoyed him and his manner was everything but cordial. He did not ask Cochrane to be seated and the Constabulary officer's request for the loan of the launch to go after the men left up the river was met with a refusal as curt as it was unexpected. Cochrane thought of Hazzard and the worn-out Macabebes anxiously awaiting the aid he had promised to bring them, and by a great effort of will kept his temper.

Every man clamored for the privilege of going.

"May I ask your reason, Captain Todd," he said, striving to speak with calmness, "for refusing to give me the help that for the sake of common humanity I have a right to expect of you?"

"I am not in the habit of giving an explanation for my decisions," the Captain of regulars responded pompously: "However, I am willing to inform you that I am holding the launch for the use of the General, whose arrival I expect daily, and also that I do not propose at the present time to risk sending men of my command up the river where Antonio Anugar, with the main body of the Pulajans, is known to be operating."

"But my men are dying of hunger and can't march. It will take only a few hours for the launch to make the journey and I have reason to know that Anugar's band is not on the river," Cochrane spoke earnestly, almost pleadingly, for the vision of his starving men haunted him.

His persistence only angered the other who began, "Do you, a mere Constabulary officer, presume to argue with the Commanding Officer of this station ....?"

Cochrane's lean face flushed. "I don't presume anything," he interrupted, "I tell you as a fact that I have destroyed Anugar's band and furthermore that although I am, as you say, a mere Constabulary officer, I take my men in the field to fight, instead of keeping them shut up behind barbed wire."

"What do you mean by saying that you have destroyed Anugar's band?" Captain Todd exclaimed, ignoring the reference to the barbed wire.

Cochrane drew himself up, "You have told me that the General will arrive shortly, I will make my report to him," he responded, "and now, Sir, with your permission, I shall try to find some native boats as I intend to go back up the river tonight."

Captain Todd may have felt that he had failed so far to show the traditional hospitality of the Regular Army; at any rate his manner now became more cordial and he pushed over a box of cigars and invited his guest to take a chair, saying that there was no use in being in a hurry and that dinner would be ready soon. Cochrane declined his belated offerings and withdrew. At the door of the office he was seized upon by Ballard and some other junior officers who were waiting for him. They bore him away to the mess and proffered him food, drink and tobacco, all of which he refused until he had first seen that his men were provided for, and then had enjoyed a bath and the delicious luxury of putting on clean clothing.

Ballard was indignant when he learned that the request

The situation for the moment was critical.

for the launch had been refused. "I knew old Toddy would rub Cochrane the wrong way but I never thought he would do that," he said to the other juniors. "We'll get boats from the natives and go after your men tonight when the tide turns."

"I'll take a detachment from my company so your men can rest," said another Lieutenant.

"It won't be at all necessary, as a good meal and some cigarettes will put new life in my men," answered Cochrane, not wishing to mention the Commanding Officer's refusal to permit his men to go to the rescue. "All I ask is that you get me the boats and some food and cigarettes to take with me," he added.

The battalion quartermaster, who was an old friend, promised to have everything in readiness, so Cochrane went to notify Sergeant Alalay of the hour of departure. Ballard led him to the mess of the Scout Company, which was also from Macabebe, and he found his men in good hands as many of the Scouts were their relatives or friends. Each Constabulary soldier had a heaped up platter of rice and corned beef in front of him and was engaged in making away with it without bothering about such superfluous accessories as knife or fork, nor was there any pause in the operation except when some man, to save himself from choking, had recourse to the quart pot of coffee at his right hand. It did him good to see them eat, and he remained outside the tent watching them until Sergeant Alalay saw him and rushed out, tin cup in hand, to announce that the coffee contained both sugar and the hitherto unheard of luxury of evaporated cream.

Without Cochrane's knowledge, Ballard asked permission of the Commanding Officer to accompany him either with a detachment of Scouts or as an individual volunteer, but the request was refused. Leaving at dusk Cochrane made the night journey up the river in the flotilla of small boats manned by natives safely and in relative comfort. Only those who have been in a similar situation can appreciate the feelings of Hazzard and his men when they were aroused by the approach of the boats and heard Cochrane's voice in response to the hail of the sentry. They had resigned themselves to an indefinite period of waiting and his return was not expected for several days at the least. None was too ill to partake of the food, but when the cigarettes were distributed, the cup of contentment was filled.

With the outgoing tide to favor them and fear of the gloomy forests as an urge to the boatmen made good time on the way down to Oras, the flotilla arriving at the station before noon. Lying at anchor off the port was a ship which Cochrane recognized as the *Basilan*. The return

had been reported by the sentry in the church tower and Ballard was in waiting at the landing place with information that the General had arrived and wished Cochrane to report to him. As Ballard had made arrangements for quartering the Company and conducting the sick men to the hospital, the Captain proceeded at once to headquarters. He found the General in conference with Captain Todd and some other officers, one of the new comers being a Captain Nicklin of the Scouts, with whom he had served on several former campaigns.

An officer of high ability and splendid presence, the General possessed, among other unusual gifts, the faculty of gaining the affection as well as the respect of all who served under him. He looked up from the map he was studying as Cochrane reported and smiled genially. "Well, young man, we were just talking about you. I am glad to see you," he said as he shook hands with the Constabulary officer. "You know Nicklin and Cook. Todd tells me you showed up here yesterday in rather a bad way for food. Aren't you quite a long distance away from your station?"

"It was the lack of food that brought me here Sir," Cochrane answered.

"That's odd," said the General. "Unless I am mistaken, supplies for at least three months were shipped to you long ago by the "Masbate." However, we will talk about those details later. Now as to the situation here and my plans for taking the field. Captain Todd has obtained what he thinks is good information to the effect that Antonio Anugar is at the burnt village of Concepcion near the head waters of the Oras River, and that Maslog is at the same place or not far from it. My tentative plan, therefore, is to move up the river with one company of regulars and three of scouts and attack Anugar in his stronghold. As you have just come from somewhere up there you may have additional news; so I have postponed making a decision until your return.

"I am sure Anugar's band is not on the Oras River, Sir," replied Cochrane as the General paused and nodded for him to speak.

"Give your reason for making such a positive statement," the General directed, bluntly.

"Because he attacked my stockade at San Ramon just nine days ago and after the fight I buried an even hundred of his men. Some of the rest are wounded and all of them are dispersed. Anugar himself probably escaped as he was not among the dead I found," was the response.

The silence which followed was broken by Captain Todd who remarked with a sneering implication that was lost upon all save the Constabulary officer.

"Evidently Mr. Cochrane, or rather Captain Cochrane, has not left much for the rest of us to do, unless we can locate Maslog, but perhaps he had done that also."

Cochrane flushed to the roots of his blonde hair but his gaze never left the General's face. "Yes sir, I have done that also," he said, when his commander glanced at him inquiringly. "At least I have a reliable guide who says he can take us there."

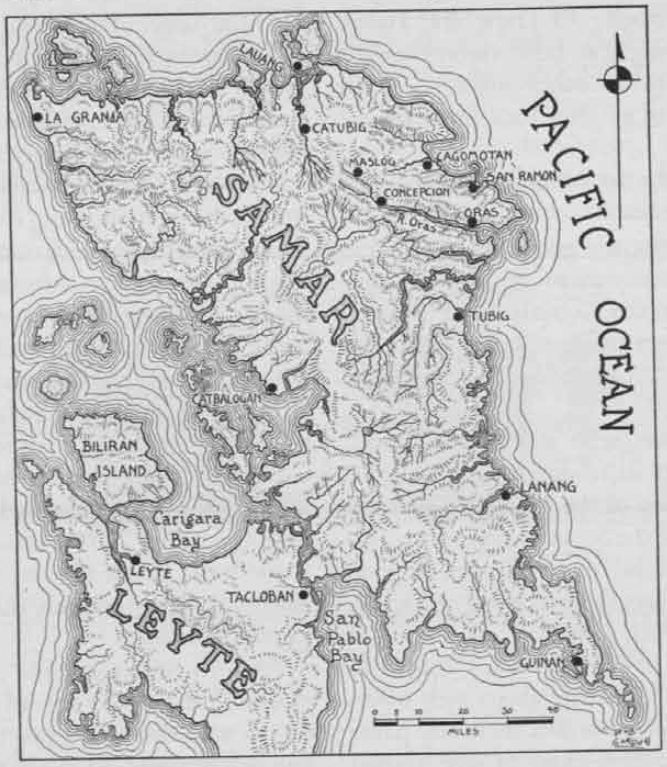
"Gentlemen, I think we had better let Cochrane have the floor," said the General. "He seems to know more about the actual situation than any of us. Now then, Captain, let's have your story."

Thus enjoined, Cochrane told in a few words of the attack on his station, the capture of Feliciano, the trail made by the Pulajans and the boy's statement that he could find the way to Maslog either from San Ramon or by the way of the village farther up the coast.

When he had concluded there was another period of silence and he noticed that the General was looking at him with a puzzled expression on his face. "How was it, Cochrane, that you did not march to Maslog instead of coming this way?" he asked finally. "Understand me, my boy, I am not criticising your actions at all, but knowing you as I do I am at a loss to understand why, with over a hundred good men in your company and the road to the place wide open after Anugar's defeat, you did not decide to go up there and take it."

Cochrane's face became almost crimson and he could hardly control his voice, so deeply were feelings wounded. "I think I told you, Sir," he said, "that I needed food for my men and came here to get it."

"But you had food, for I recall now that after Westover delivered your requisition for rations, I had supplies for three months sent to you immediately on the "Masbate." The General's manner was not unkindly but there was a tinge of sternness in his tone and



Samar.

this in the presence of the other officers flayed Cochrane to his soul.

"I did not get it. I got nothing; my men starved," was all he could say.

"Do you mean to tell me," the General persisted, "that you did not get the rations I sent you? But you must have done so or you could not have existed for all this time on that deserted coast."

Forcing his emotion under control, Cochrane looked squarely at the General and spoke. "Nearly three months ago, I disembarked at San Ramon with rations for ten days. Since that day not one pound of rations has come and my men have had to live on what we could find. I would have marched to Maslog had they been able to do it, but I knew they could not. They are more like living skeletons than men, as you will see when you look at them. If the boy I captured told the truth there is a ship on the reefs to the north of San Ramon. It may be the *Masbate*.

Feliciano.

The General strode across the room and put his arm around Cochrane's shoulders. "Gentlemen," he said turning to the other officers, "I am not going to try to apologize to Captain Cochrane, because I can't. He and I are going out to the ship, for we have some matters to discuss. I hope to see you all at dinner on board this evening. Come now, young man, let's see what Westover has for luncheon."

The Commanding Officer of the *Basilan* was both astonished and delighted when Cochrane appeared. He demonstrated his pleasure at the reunion by various attentions and gifts, of which perhaps the most highly appreciated was a box of fine cigars sent to the Captain's stateroom after lunch with the compliments of the donor.

The conference held during the afternoon with the General cleared up various matters about which each had been in doubt or only partly informed. The General confirmed the story told by Feliciano of the victories by which the Pulajans had come into possession of the rifles and ammunition, and the boy's statement regarding the vessel wrecked on the northeast coast was accepted as the explantation for the non-arrival of the *Masbate*. That ship had been under orders, after touching at San Ramon, to proceed directly to Manila for duty on the Luzon Coast, so its return to Catbalogan was not expected and consequently its disappearance had not become known at the local headquarters before the departure of the General.

The information given by Cochrane resulted in a material change in the plans for future operations, orders for which were given to the assembled officers that evening after dinner. Captain Todd, with a column composed of troops from Oras, was directed to proceed up the river to the head of navigation, and after reconnoitering the country to establish a camp at the burnt village of Concepcion. Ballard's company of Scouts was to take station there with the mission of clearing the locality of Pulajans, and protecting the peaceably inclined inhabitants. The newly arrived Scout Companies commanded by Captains Nicklin and Cook, together with Cochrane's detachment, were to proceed to San Ramon, where an expedition against Maslog, to be commanded in person by the General, would be organized.

Two days later Cochrane's men, who under rest and good food, had made rapid recuperation, were embarked on the *Basilan* and the cutter sailed for San Ramon. Although Cochrane had felt but little uneasiness about the safety of the station during his absence, it was a relief when the steamer rounded the Mangrove Cape to see the flag flying from the Fort and the swarms of ragged soldiers crowding the parapets to welcome the arrival of the long-looked-for ship. Sergeant Bustos, however, was too old a soldier to be caught napping. He noticed the brigadier's flag hoisted on the cutter and made haste to form the company under arms. When the General and other officers landed they found the little garrison paraded and as the party approached, rifles were snapped to the "present" and the prescribed flourish was sounded by the musicians, with the precision and formality of a command of Regulars. The General spoke a few complimentary words to the First Sergeant which made that veteran swell with pride; then he walked down the line, looking curiously as he passed, at the hunger-ravaged features of the men. He was visibly affected when at the conclusion of the inspection he asked Cochrane to express his thanks and appreciation to the men for the soldierly qualities they had displayed and to inform them that he was proud of them.

Meanwhile the supplies of food and clothing brought by the cutter were being unloaded. An issue of cigarettes was made at once to assuage the men's impatience while the cooks were busy with the preparation of an abundant meal.

The visiting officers were keenly interested in the Fort and its accessories. Hazzard's sketch of the locality and the inscription on the grave of the hundred Pulajans also received attention and praise. During Cochrane's absence the First Sergeant had found and buried thirty-one additional corpses that were polluting the air in the vicinity of the station. He had likewise discovered the hiding places in the jungle of six of the original inhabitants of the village and had induced them to return with their families and start rebuilding their homes. Hazzard, although weak, was now able to move about, and at his own request was detailed to supervise the issue of clothing and shoes to the almost naked Macabebes. A liberal supply of soap was included in the issue and a bath and change of clothing contributed as much as did the good food to the rehabilitation of the men. Feliciano and Spot showed

their joy at the Captain's return by remaining constantly at his heels, or under his feet, the efforts of boy and dog to win attention being ludicrously similar.

After the evening meal, Feliciano was interrogated at length. Notwithstanding his awe of the General he answered intelligently, reiterating his former statement regarding the wrecked vessel and asserting his ability to find a way to Maslog either by the land route or from the village on the coast.

In the detailed description that he gave of life among the Pulajans, he referred more than once to the torture and killing of prisoners by boys of his own age. When pressed on this point he admitted that he himself had officiated as "*verdugo*" on several occasions, adding naïvely that ordinarily it was not at all difficult as the prisoners, being tied to a stake, could not move hand or foot and always stopped squirming soon after the dagger was driven in at the place where he was told to strike. Once it had been a little hard, he said, when the victim was a woman whose cries and struggles made him think of his mother at the time when the Pulajans killed her. When questioned as to the motive of the Pulajan leaders in compelling children to act as executioners, he replied that the Chief thought this would make the boys bloodthirsty and fearless in battle. He had never seen "Papa Pablo," nor was even Anugar admitted to the presence of the so-called Pope, whose actions were always shrouded in mystery. His story was exceedingly interesting for he was gifted with unusually keen powers of observation and was anxious to please his new friends by relating all he knew of the Pulajans.

As a result of Feliciano's disclosures, the General decided to move the two Scout companies, each of which numbered over 100, and 80 men of Cochrane's company, by boat to Cagamotan, the burnt village on the coast to the north, and with the boy as a guide, to march from that place against Maslog. Hazzard was directed to remain at San Ramon with the mission of finding the villagers yet in hiding and persuading them to rebuild their homes. He was authorized to give the natives who had already returned enough rice for temporary needs and to use them as emissaries for locating and bringing in the others.

There was a commotion in Cochrane's company the next morning when the news was circulated that the Captain would leave that afternoon on another expedition and only 80 of the 143 men were to accompany him. Every man clamored for the privilege of going. The men who had remained at the Fort during his last absence maintained that it was now their turn, while those who had gone with him claimed the right to go again as a recompense for the hardships already endured. First Sergeant Bustos was unable to quiet the disturbance as the rival claimants finally demanded permission to present the case to the Captain, access to whom, by an iron-bound rule in the company, was never refused. Cochrane decided the question the only way it could have been decided properly—in view of the peculiar psychology of the Macabebes—that is, by lot, the obviously unfit men of course being eliminated by order. Spot decided the question of his going by stowing himself away in one of the row boats and appearing on board the ship at the moment of departure, this to the delight of his associate, Feliciano.

Westover got the *Basilan* clear of the reefs before dusk, and running well out to sea, made his northing during the night at half speed. At daybreak he sheered in towards the coast and by eight o'clock had brought the cutter to anchor in the shallow harbor about half a mile from shore. The wreck reported by Feliciano could be seen on a reef to the north. Westover identified it as the *Masbate* so the mystery of that ship's failure to arrive at San Ramon was ended. Of the fate of its crew, however, there was only conjecture. A visit to the wreck no doubt would throw some light on this question but this undertaking was postponed until the return from the expedition on land.

The troops were disembarked in the ship's boats, Cochrane's company, which was to lead the column, being sent ashore first with the mission of protecting the landing. No sooner had the disembarkation started than a *boudjon* growled out from on shore and the call was taken up and repeated, each time at a place farther inland, until its repetition died out in the distance. The landing, however, was not opposed. Well beaten paths winding about the place indicated that the locality was frequented by natives; probably the original inhabitants long since been driven into the ranks of the Pulajans.

Feliciano had no difficulty in finding the trail by which he had come from Maslog with the band that had attacked and burnt the village. The last boat load of men got ashore by noon and Cochrane's cooks served the midday meal to the entire command at the usual hour. Soon after it was finished the column was formed and moved out in single file. Feliciano led the way, with Cochrane next, then came eight Constabulary armed with repeating shotguns; next came the General, followed by the balance of the Constabulary. The two Scout companies brought up the rear. The order of march by no means conformed to the principle set forth in military text books but Cochrane insisted upon sharing the post of greatest danger with the little guide and the General likewise refused to take a less exposed position.

There was no doubt that there would be a fight, which meant that the column would be ambuscaded and then attacked by bolomen. The orders for such a contingency were that the men should rally by platoons and commence firing at will, the Pulajan riflemen to be ignored as a general rule and the fire to be concentrated on the bolomen. The trail was broad and well beaten with the "slick" appearance that heavy foot traffic gives to such a path in the tropics. It traversed a gently sloping coastal plain covered with alternate patches of jungle and *cogon* grass and occasionally it dipped to cross and recross a small

stream that flowed in a rocky bed between banks entirely hidden by masses of vegetation.

The air had ceased to vibrate from the rasping blasts of the warhorns and the jungle lay still and quiet under the fierce heat. Cochrane almost envied Feliciano as, clad only in his bright colored breechclout, he skipped after the gorgeous red and blue butterflies flapping lazily overhead, or dived into the foliage to explore the cool recesses of some hidden pool. Poising once, like a little golden cupid, on a boulder in midstream, he smilingly beckoned Cochrane to come on, and the contrast between his tiny figure and the fierce looking soldiers he was guiding brought to the officer's mind the line, "and a little child shall lead them."

As the column continued to advance and still no enemy was seen the strain on the men became greater. They knew they were marching into an ambuscade and naturally there was a desire to meet the danger and get it over with. As Cochrane pushed on with unconsciously quickened pace he selected first one place and then another on the trail as the spot where the column would become the target for a volley, and each time as he prepared himself for the ordeal and it did not come the strain became more intense.

Two of the short hourly halts were made and nothing unusual had happened. Then the head of the column arrived at a place where the grass on each side was long and thick. This time the Captain had selected the next bend in the trail as the most likely place for the ambuscade. As he walked towards it his thoughts wandered to the perforations made by the multiball ammunition in the stomach of the soldier mortally wounded at San Ramon. He did not expect to escape unscathed in the coming fight. Papa Pablo's warriors were instructed to try always to kill the white officers and as he towered above the Macabebes, wearing the gaudy red shoulder straps of the Constabulary, he was too conspicuous not to be singled out.

Such was his train of thought when the shrill blast of a whistle sounded almost at his ear and with a reaction entirely automatic, he whirled and fired into the face of a hideous red-garbed creature that rose up at his feet.

The discharge of the pumpgun synchronized with that of a volley loosed at point-blank range by a line of Pulajan riflemen until that moment completely hidden in the grass at the side of the trail. As the sheet of smoke and flame burst forth into the faces of the leading men, the Captain felt a blow as though he had been struck on the arm with a sledge-hammer and the shotgun dropped from his grasp. His left forearm had been shattered by a heavy soft-nosed bullet. The shock of the volley, delivered as it was at a range close enough to burn the clothing of the soldiers, would have appalled any but veteran troops. It was but the prelude, however, to worse danger, for while the Macabebes were trying to rally upon their fallen comrades, the long grass became alive with red-uniformed men who sprang from their places of concealment and charged the column on both flanks. Only those who have survived a *bolo* rush are able to realize how strongly the bravest man is impelled in such a situation to flee from the terrible knives; no others can appreciate the discipline and strength of character that enabled the soldiers at this time steadfastly to face the onslaught of the fanatics.

The situation for the moment was critical. Cochrane was attacked by four big natives, each anxious to finish the white officer and gain possession of the coveted red and gold shoulder straps; half the men in the two leading squads were down, and those on their feet, including the General, were fighting hand to hand with an enemy outnumbering them many times over. Heavy firing in the rear indicated that the Scout companies were also engaged. The soldiers were strung out single file and there was not enough room on the trail for them to take the best formation for meeting the attack. The advantage lay, therefore, with the active and muscular bolomen, whose movements, until they sprang into the trail, were entirely concealed by the vegetation. Cochrane stopped three adversaries by emptying his revolver at them and Sergeant Alalay saved his life again by shooting the fourth. Being unable to reload either gun or revolver, he then seized a *bolo* and defended himself from other opponents with this weapon until the Sergeant rallied some men to protect him. Meanwhile the General upheld his reputation as one of the best wing shots in the army by neatly dispatching with a pumpgun three Pulajans in just a few seconds.

The situation was saved, however, by First Sergeant Bustos, who the moment the volley was fired, closed his men up and had them to face alternately to the right and left. This formation enabled him to beat off the waves of bolomen that attacked his platoon and they fell back leaving the ground strewn with their dead and wounded.

Seeing then that prompt action was necessary in order to save the officers and men to the front, he rallied his platoon in a half circle and advanced astride the trail, the men marching shoulder to shoulder and forcing a way through the grass. The Pulajan riflemen who yet stood their ground were taken in flank and killed almost to a man, while the bolomen, massing to make an end of the sorely pressed advance guard, were forced back before the living shield thus interposed by the splendid old sergeant. They were loth to give ground, however, and made several charges before they withdrew.

Cochrane's second platoon moved forward in a similar manner and combed the locality, dispersing various groups that were still lurking in the grass. The column was then assembled and a count made of the casualties, the wounded, of course, being given such treatment as was available. The main effort of the Pulajans had been directed against the head of the column, the attack upon the rear being more in the nature of a demonstration that was defeated by the well disciplined Scouts without loss to themselves.

Cochrane fainted from loss of blood shortly after the

First Sergeant's timely maneuver, but he came to immediately and asked first for a drink of water and then for a cigar. His wrist and hand were without feeling as the shattered nerve ends hung in strips, but the pain in his upper arm and shoulder was almost beyond endurance. He had been wounded in previous engagements both by *bolo* and bullets but never before had he suffered so greatly. There was no surgeon with the command so Captain Nicklin applied a tourniquet and bandaged the wound.

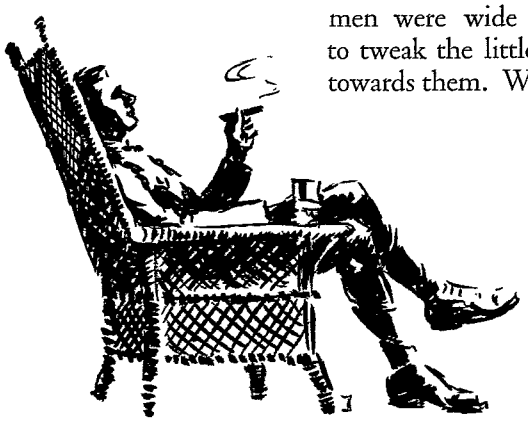
By unparalleled good fortune not a soldier was killed or mortally wounded. The initial volley caused a majority of the casualties. It was fired in the prone position, consequently the bullets went low and most of the wounded men were struck in the legs and feet. It was due to this lucky chance and to the promptness with which the soldiers rallied that the command escaped with such slight losses.

Cochrane was in torment from the pain of his shattered arm; and he was very weak, but he objected so strongly to being sent back to the cutter with the other wounded that the General permitted him to remain with the column.

The less seriously injured Pulajans either made their escape by crawling into the jungle or were shot while attempting to do so. Those unable to move were given a rough and ready first aid and left as they lay, their removal to the ship being deferred until the return. The generous treatment accorded by order of the General probably surprised them, but not one could be induced to give any information whatever.

Feliciano had taken to cover like a young partridge when the first whistle blast was sounded, and had not reappeared. Some of the Macabebes were of the opinion that after having purposely led them into the ambuscade, he had rejoined the Pulajans. Cochrane had more faith in his affection and gratitude, but when he failed to return in response to repeated calls, the advance was resumed without him, the Captain leading the way with a naked *bolo,* taken from one of the men he had killed, in his hand.

Several months later when asked to describe this journey, he replied that the pain, thirst, heat and loss of blood so affected his mind that he had no connected recollection of what happened. He did recall, however, that Alalay followed continually at his heels, helping him to keep on the trail and to avoid the cunningly hidden pitfalls and spear traps that were found more frequently the nearer the stronghold was approached. He said also that the remnant of the band they had defeated fell back before them, and that when they reached Maslog found it abandoned and in flames.



It's good to be home.

On the way back to the coast he fainted again and again, and his arm was by then badly infected; nevertheless he refused to be carried. When the column repassed the scene of the ambuscade he called Feliciano, and to his surprise there was an answering cry and the little boy darted from the grass to fall at his feet and clasp his knees, squealing all the while with joy. Feliciano's story was that when he heard the whistle he knew what it meant and for fear of being caught by the Pulajans he ran far into the jungle. When the noise of the firing ceased he crept back to find that his friends were gone. He resolved then to hide near the trail and await their return. This he did, remaining there in the grass without food or water for nearly two days and nights.

When all were safely reëmbarked, the cutter sailed for Lauang, stopping at the wreck of the *Masbate* only long enough to ascertain that ship and cargo were a total loss and that the crew had taken to the boats, carrying with them their arms and ammunition.

It was over a month before Cochrane was pronounced fit for duty and authorized to rejoin the Company which in the meantime had been transferred from San Ramon to a station on the north coast only a few hours distant by boat from Lauang. The General had long since sailed for Manila, taking with him Feliciano, whom he proposed to have educated as a ward of the Philippine Government.

Cochrane arrived at the new station at sunset. The sentries had recognized Spot at a distance and as the boat drew near the shore he found Hazzard and the men at the landing place to welcome him. There was no cheering; the Macabebes simply gathered around with shining eyes and grinned at their Captain while they waited for the mention by name and the word or two of greeting which he had for each man. The company was quartered in the deserted convent and dinner was spread that night in handsome style on an immense table of red hardwood.

After dinner the two officers took their ease in great cane-bottomed armchairs, designed no doubt by some fat old *fraile* who loved comfort. Alalay brought in a tray on which were whiskey and *Tansan* and a box of the fragrant Manila cigars dispensed at the commissary in Lauang. Spot lay curled at his master's feet. The massive doors between the officers' quarters and the dormitory of the men were wide open, and as he leaned forward to tweak the little dog's ear, he happened to glance towards them. What he saw in the half circle of light cast by the lamps was the men of the Company, sitting on their heels in the semi-darkness, with their eyes fixed on him as though he were an idol to be worshipped. He pretended not to see them and leaned back, stretching out his long legs luxuriously. Then he looked over at the Lieutenant and said with one of his rare smiles, "It's good to be home again."

Public Speaking

By Colonel William H. Waldron
Infantry

"Many public speakers miss a lot of opportunities to stop."

SOMEWHERE away back in the dim and distant past a man got his fellow men together and talked to them. In those days men's lives were wrapped up in the struggle for existence and it is more than probable that his talk was about the measures to be taken against a common foe. Here we have the first public speech and the man who made it was a natural leader for he stepped out ahead of the crowd and did something new and unusual. It is entirely probable that he founded a tribe which eventually grew into a nation. In any event he set the wheels of progress in motion and they have been rolling along ever since.

History records that empires, kingdoms and republics have come into being, risen to greatness, sunk into decadence, and passed on, and much of this process of evolution has been largely the result of public speaking. History also has repeated itself all down through the centuries and our present is no exception to the inexorable law. We have but to look about us and see what is happening in the world today to appreciate that fact. In the years to come history will continue its repetition, for history is only a record of human events and the human nature which produces these events changes not a whit.

Through all the ages the fine art of public speaking has remained essentially the same as it was in the beginning. The technique of the successful public speakers of today is substantially the same as that which was practiced by the chieftains of the tribes, the rulers of the people, the generals of the Medes and Persians, the scholars of Greece, The Roman Senators and all the great figures who have flashed acros the pages of world history. First, there has always been an introduction into which is woven one or more expedients to gain the attention of the audience and create in them a mood for a sympathetic reception of that which is to follow. There then comes the presentation of the subject matter of the speech with a development, in logical sequence, of the ideas which the speaker wants to get across to his hearers. This is followed by the grand climax in which is included the appeal to the emotions of the people. All of this proceeds in the same simple sequence that has been the vogue down through the ages. The public speaker who would deliberately disregard this time honored and accepted outline is indeed a brave man.

Public speakers who have a message, who know what they are talking about, and who are able to present their subject in an attractive way, will always be in demand in the United States.

Golden opportunities are afforded to the officers of the Army in this vast field of public speaking. There are thousands of civic clubs all over the country who are ever on the alert for a speaker with a message. It is here that they may be able to render an important service to the profession of arms and at the same time contribute to the welfare of the Republic. Officers who are detailed for duty with the civilian components must be effective public speakers if they are to carry on with the job. They must be able to stand up before an audience of any size; they must have something worthwhile to say, and have the ability and intestinal fortitude to say it; and last but not least, having said it, they must be able to sit down promptly and graciously.

A young man had made his maiden effort at public speaking and it was apparent that he was quite proud of himself. His old-timer uncle was in the audience. Knowing he would get the unvarnished truth, the young man made bold to ask uncle how he liked it. "Very good, very good," replied the old-timer. "But, my boy, you missed several wonderfully good opportunities." "What do you mean, opportunities?" inquired the youngster. "Opportunities to stop and sit down," answered the uncle. And so it is with many public speakers; they miss a lot of opportunities to stop. I once heard an accomplished speaker declare that no man can speak more than twenty minutes on any subject without repeating himself, and that is literally true in a vast majority of cases.

In order to become an effective public speaker an officer will have to prepare himself by sincere study and practice. Also since there are mighty few who can speak extemporaneously, every officer should have tucked away in his brain a short and well prepared talk on the organization and functions of his own arm or service, and how it fits into the scheme of preparedness. This should include a brief discussion of the history and salient features of the National Defense Act. You would be surprised how little people know about our scheme of preparedness as provided for in this basic law. To supplement this talk, an officer should have others available and one of the most appropriate that can be devised is a short talk on current events of national and international importance. Issues of local, national and international importance are always vital subjects for discussion.

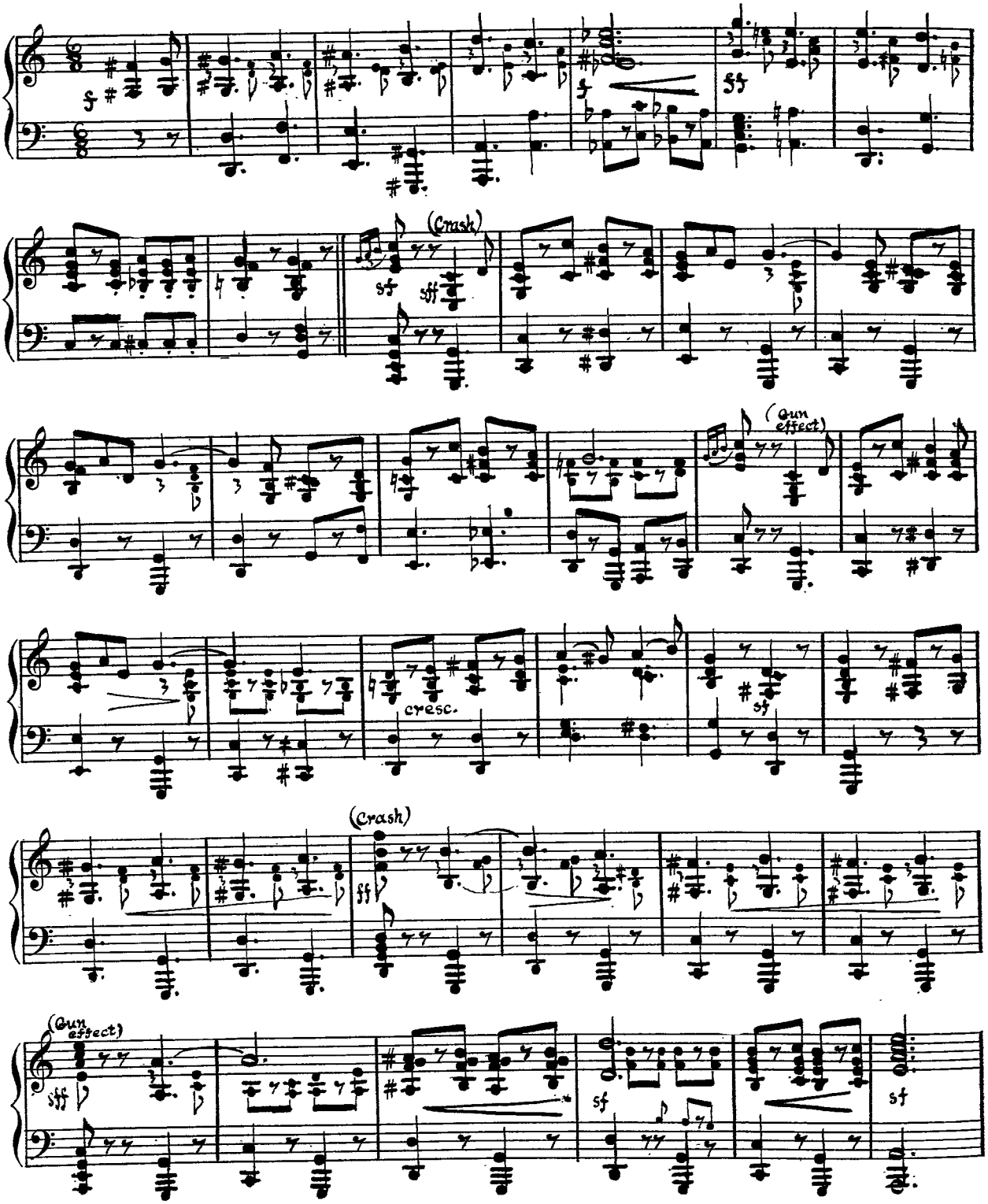
Crowds will assemble for one purpose or another and some one will get on his feet and talk with a force and effectiveness that bespeaks authority. The crowd will follow him and do his bidding for a crowd is made up of emotional human beings.

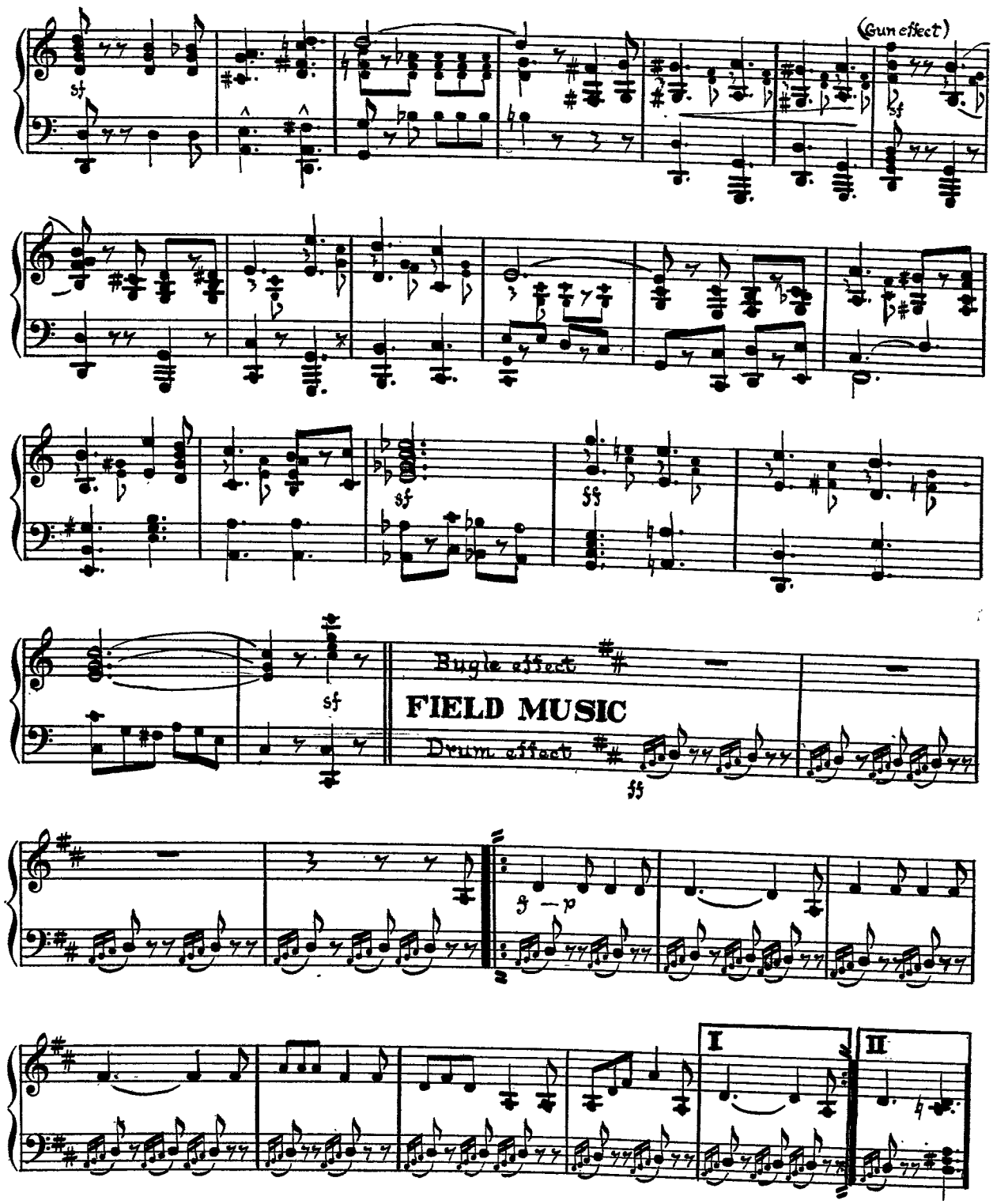
The ability to speak in public is a most valuable asset to an officer of the army. Those who have it will find many opportunities to use it, and these should be taken advantage of when presented. Those who do not have it should lose no time in attaining this proficiency which is becoming ever increasingly important.

Crash on Artillery!

Words and music by J. F. Hewett and A. H. Osborn

(Dedicated to Major General John W. Gulick)

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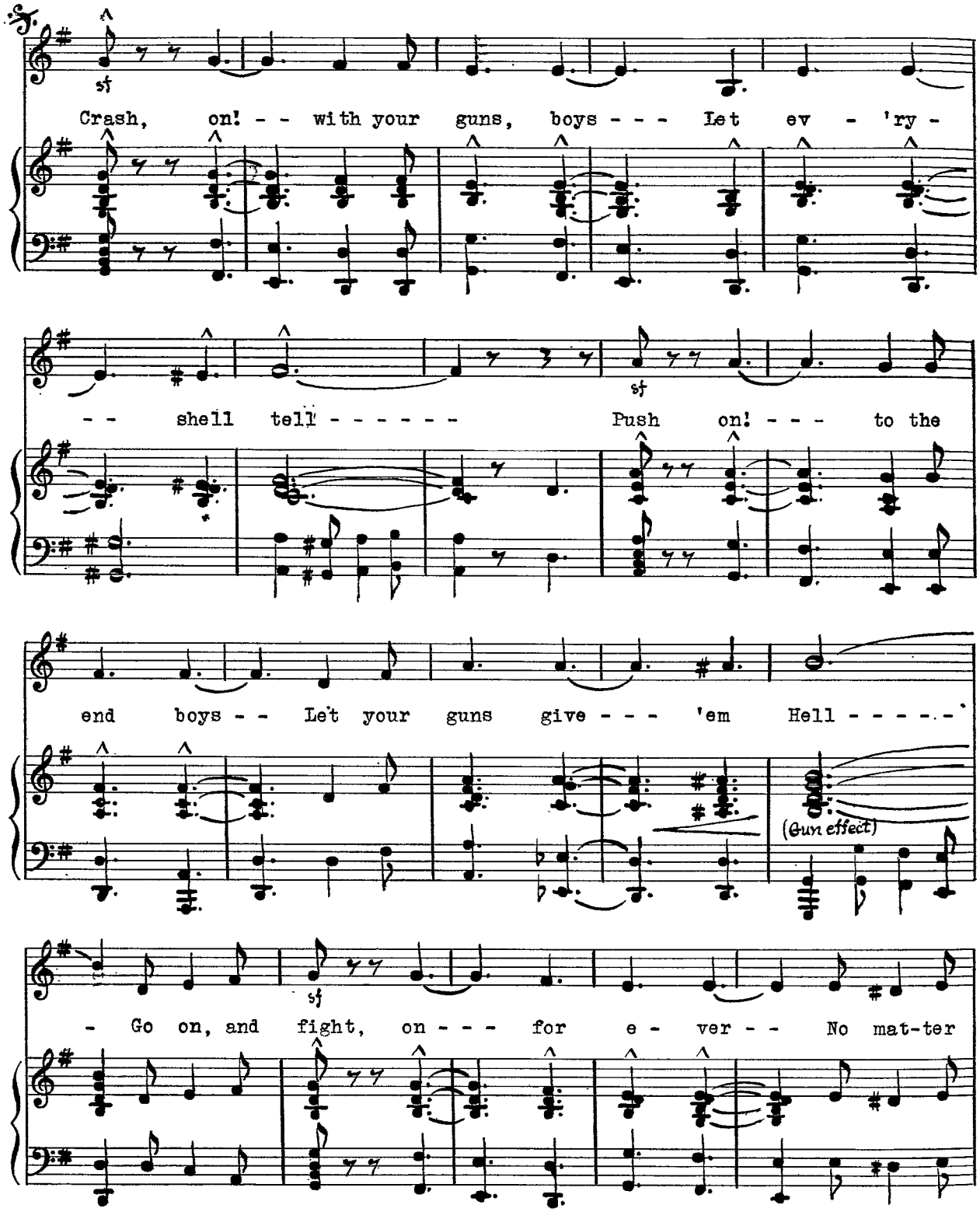
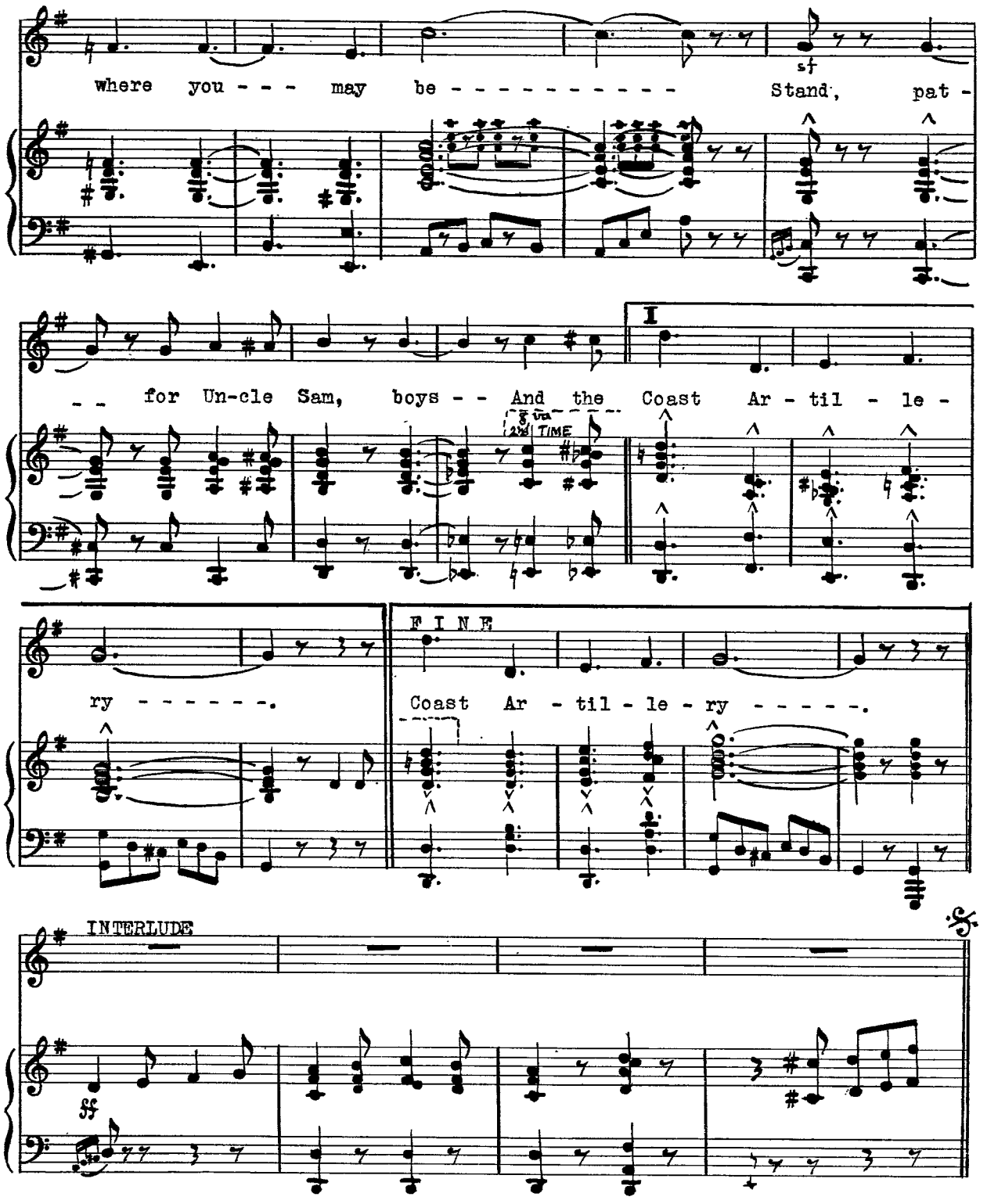
Bugle effect
FIELD MUSIC
Drum effect
I
II



2nd Stanza

Who backs the infantry when the fighting begins?
Who cracks the enemy with a fire that wins?
Who brings the planes down in flames, boys, o'er land
and o'er sea?
Ever and forever, it's the Coast Artillery.



3rd Stanza

Drink to the flag, boys, of the grand old C.A.
Here's how! to the men who will fight come what may.
And here's a toast to the gunners of each battery
Here's health! to the General, and the Coast Artillery.

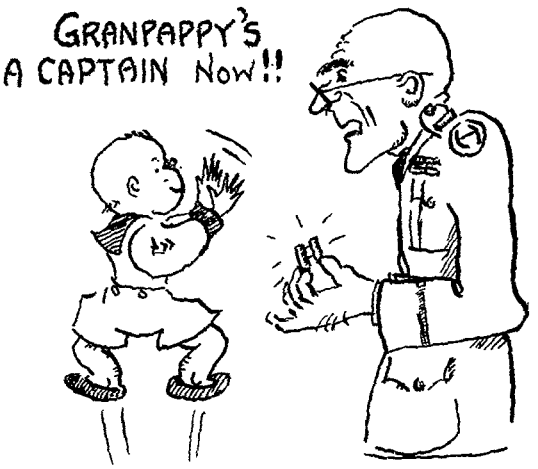
Promotion Thesis

Bright, lil' bars of gold;
Wearer will be quite as old
As Alexander dead and cold
Ere they turn to silver.

Single bars of silver plate
Multiply to two too late.
Long ago Youth took the gate
While advancement tarried.

Next the golden leaves appear
With life's yellow leaf and sere
Ambition's fires burn low, I fear.
In our aging Cæsar.

All his future's in the past;
Silver leaves approaching fast
But it's doubtful if he'll last
Long enough to wear them.
But
Eagles drop from high
Stars on this game old guy
Who sleeps so quietly
In Arlington.



Promotion is in the Air

What will come out of it all is anybody's guess.

THE life blood of the nation courses its way through official Washington where the nature and complexion of its corpuscles are materially changed. Such emotions as hope, expectancy, disappointment and despair vie with each other for the ascendancy and operate to alter its color from red to blue and back again. As usual, the atmosphere of the nation's capital is surcharged with the portent of impending events in both the civil and military world. So far as the latter is concerned, the question of promotion, elimination, or what have you, occupies the center of the stage.

It will be recalled that early in July the Chief of Staff sent out a directive to the General Council consisting of the Deputy Chief of Staff, and the chiefs of arms and branches and the sections of the War Department General Staff, to prepare a promotion plan, every important feature of which should be supported by the majority opinion of the Council to the end that the completed plan could command the unified support of the Army. Individual officers were encouraged to submit for consideration their ideas as to the action necessary to improve the unsatisfactory condition now existing. In conformity with the directive, each chief of arm and branch endeavored to obtain the reaction of the officers for whom they are authorized to speak, and each has submitted his recommendations. The same procedure has been followed by the several sections of the War Department General Staff. Added to this there are many individual proposals now before the General Council. Out of the welter of proposals and in spite of the currents and cross currents of personal opinion, bias, prejudice, aspiration and all the other human reactions which enter into the make-up of an individual, something may emerge which will prove a boon to the commissioned personnel of the Army. If it does not, it will not be because of a dearth of ideas or want of thorough, careful deliberation, backed by sound judgment and a sincere desire to improve conditions which are admittedly bad.

It is quite probable that something will be done about promotion, but it is too early to hazard an inspired forecast as to what that something will be. Readers of the JOURNAL may be interested, however, in knowing the essential features of some of the plans now under consideration. We therefore publish brief synopses of a few, selected random. The numbers designating the several plans have no significance; they are used merely for the purpose of differentiation.

PLAN I

Provides for the separation from the promotion list annually of 12½% of the colonels, 8% of the lieutenant colonels, 6½% of the majors and 6% of the captains, in all some 450 officers. Whenever this number is not attained by normal means, i.e., death, retirement for age, physical disability, resignation and Class B procedure, then additional separations by forced attrition will operate to bring the total up to 4½% of the promotion list officers. A board of major generals will do the selecting out on the basis of efficiency and general value to the service. Officers selected out under the provisions of this plan will not be retired but will be transferred to a "service command list" where they will be available for assignment to the Service Command contemplated in paragraph 38 of the War Department Mobilization Plan of 1933. They will receive 75% of the pay they draw at the time of transfer and will be available for a period of fourteen days' active service annually without increase in pay or emoluments.

This plan further provides for the promotion of brigadier general to major general by seniority provided the senior brigadier is pronounced qualified for promotion. Should the senior brigadier be found not qualified he will be transferred to the service command list. Length of service in grade for major generals and brigadier generals of the line is limited to four years. At the end of that period they are transferred to the service command list. Chiefs of arms and services, or their assistants in the grade of brigadier general, are also to be transferred, upon completion of their four-year tour, to the service command list. Under this plan it is estimated that during the first year of operation the following promotions would take place:

241 lieutenant colonels to colonels
460 majors to lieutenant colonels
528 captains to majors
482 first lieutenants to captains
532 second lieutenants to first lieutenants

After the first year the annual separation would probably be distributed as follows:

79 colonels
59 lieutenant colonels
109 majors
193 captains

NOTE: The service command list comtemplated by this plan not only provides a badly needed reserve of physically fit Regular officers to direct and supervise the all important mobilization machinery in the event of a major emergency, but offers an ingenious alternative to overloading the retired list with the able-bodied victims of forced attrition.

PLAN II

This plan proposes the creation of 500 vacancies annually. It estimates that from 300 to 350 of this number would be from "normal" causes. The remaining 150 to 200 would be obtained by forced elimination, based upon comparative efficiency and general worth to the service.

The plan proposes that the present single list be retained and made to approach a proper list as regards age in grade and freedom from blocks. To accomplish this it is proposed to retire colonels after eight years, and brigadier generals after six years' service in grade if they are not carried on the list for promotion. The following retirements based on age and grade is proposed:

Colonels over	58
Lieutenant Colonels over	54
Majors over	50
Captains over	46

This scheme also carries a provision to permit retirement upon voluntary application of all officers after 22 years of commissioned service. The pay of officers selected out under this plan would be the same as at present for officers eliminated by Class B procedure, i.e., one year's pay for officers with 10 years or less of commissioned service and 2½% times the number of years, not to exceed 75% for officers of more than 10 years of service. This plan stresses the necessity for a new and better form of efficiency report.

Plan III

This plan provides for the automatic promotion of second lieutenants after three years of service and first lieutenants after ten years of service. It permits officers of the World War hump to retire voluntarily after ten years from the date of the passage of the bill. It provides for the distribution of promotion list officers by grade as follows:

Colonels	6%
Lieutenant Colonels	7%
Majors	16%
Captains	30½%
1st and 2d Lieutenants combined	40½%

There is a specific provision that no officer will be promoted ahead of any officer now above him on the promotion list. To accomplish a proper flow of promotion this plan provides that vacancies in each of the grades shall occur annually as follows:

Colonels	15%
Lieutenant Colonels	8%
Majors	7½%
Captains	4½%

Vacancies after normal losses to be created by voluntary retirements or forced attrition on the basis of efficiency.

Plan IV

This plan has some unusual provisions in that it abolishes the grade of brigadier general and promotes all officers of this grade to the grade of major general, the upper third of this list to receive the pay and allowances of major generals and the remainder to receive the pay and allowances now prescribed for brigadier generals. It proposes five generals of the line (the Chief of Staff and the commanders of the four armies) and four lieutenant generals of the line.

The plan calls for a board of nine general officers to be known as the general personnel board to be charged with the operation of the law and to classify officers annually as suited or unsuited for promotion. Under this plan, promotions to the grade of colonel, lieutenant colonel and major are to be made by seniority from those officers carried on the eligible list for promotion to the next higher grade. Officers not included on the eligible list would mark time in their present grades. Officers passed over twice in making up the eligible list are to be placed on the retired list. Officers selected out under this plan will be paid 2½% of present pay multiplied by the number of completed years of commissioned service, not to exceed 75% of the pay at date of retirement. This plan, if put into effect, would result in the immediate promotion of 214 lieutenant colonels, 393 majors and 859 captains. The resulting increase of the number of active field officers would be 620. (All Central and South American armies take notice).

An officer once placed on the eligible list for promotion would not be removed therefrom except as a result of promotion or the specific recommendation of the general personnel board. The Secretary of War would report to the President annually those general officers who should be retired at the age of 62. The forced retirement of those officers below the grade of general who have been twice passed over would tend to smooth out the promotion list and stimulate promotion of the more active and capable officers.

There is no eligible list for lieutenants. Second lieutenants are to be promoted to first lieutenant after three years of commissioned service and first lieutenants will be promoted captains after ten years of commissioned service.

This plan provides for age in grade retirement, at the discretion of the President, as follows:

Generals at 62 years
Colonels at 60 years
Lieutenant Colonels at 58 years
Majors and officers of company grades at 56 years

A limit is placed on the percentage by grades of promotion list officers as follows:

Colonels	4½%
Lieutenant Colonels	7½%
Majors	20½%

Plan V

Proposes selection to grade of general officer. All other promotions by seniority.

This plan is based on the premise that an officer commissioned a second lieutenant at 24 should attain the grade of first lieutenant at 27, captain at 33, major at 40, lieutenant colonel at 46, and colonel at 51.

It provides for the following distribution of promotion list officers by rank.

	Per Cent	Number	Increase	Decrease
Colonels	6%	628	158	
Lieutenant Colonels	7%	732	155	

Majors	16%	1,674	51
Captains	30½%	3,190	260
Lieutenants	40½%	4,236	...

The reason for the increase in the number of colonels and lieutenant colonels is to provide for a proper promotion flow without excessive forced attrition in the grades of captain and major.

Under this plan the total number of separations from the active list is 533 per year. Deaths, retirements, resignations, Class B boards, etc., will account, on the average, for 277 leaving 256 to be selected out on the basis of comparative efficiency as follows:

Colonels	18
Lieutenant Colonels	35
Majors	75
Captains	88
Lieutenants	40

This plan recommends that officers selected out receive retired pay amounting to 2½% of active pay at time of retirement multiplied by the number of years of service, not to exceed 75%.

Plan VI

This plan does not favor promotion by length of service or age in grade.

It advocates forced attrition where the rate of attrition from the normal causes is not sufficient to create the number of vacancies necessary to provide a proper flow of promotion.

It estimates that a 4.2% attrition of promotion list officers will meet the requirements and proposes that officers be selected out to make up that percentage after all normal attrition factors have operated. It is estimated that this will produce the following vacancies annually:

Colonels	25
Lieutenant Colonels	35
Majors	115
Captains	225
Lieutenants	40

It proposes no change in the distribution of officers according to rank.

As an aid to the "normal attrition" feature it proposes that any officer may be retired after 30 years of service at the discretion of the government as well as at the discretion of the officer. After 9 years of service in the grade of colonel or 6 years in the grade of brigadier general, an officer will be retired if not promoted to next higher grade.

It advocates a modified form of "'selection up" into and above the grade of major. It proposes a selection board to consider the eligibility for promotion of officers in the grade of captain and above, beginning at the top of the list in each grade. This board places on a list for promotion each year officers to fill the expected vacancies in the order which their names appear on the promotion list. In other words, no junior is jumped over a senior. Officers passed over are not automatically retired. They may or may not be selected out. If not selected out they continue in their present grades and are considered for promotion again at each succeeding annual meeting of the selection board as long as they remain in the service.

Under this plan officers selected out will be retired on 75% of their pay at the date of retirement.

Plan VII

This plan proposes an increase in the number of field officers to 35% of the total number of officers.

One of the major premises of this plan is based on the assumption that officers should be promoted to the next higher grade as follows:

First Lieutenant	at about	26
Captain	" "	30
Major	" "	40
Lieutenant Colonel	" "	48
Colonel	" "	52

It proposes to encourage retirements and to apply the Class B law more strictly. Where existing forms of attrition fail to cause a sufficient number of vacancies, it proposes forced retirement of the necessary number of officers from those whose place on the age curve is highest with respect to the normal age curve for the entire promotion list. It also provides for the selection out of all officers passed over by a selection board appointed for the purpose of preparing an eligibility promotion list for the grades of lieutenant colonel and colonel.

This plan advocates the retirement of major generals at 64, brigadier generals at 62, and all officers in the grade of colonel or below at 60. All officers retired or selected out for age under the provisions of the preceding paragraph receive 3% of their pay times the number of years of commissioned service up to 75%.

The foregoing resumé makes no pretense of being complete. Many ingenious proposals not included in the above summaries have been advanced. A number of them contain some "selection up" features but, for the most part, the plans proposed are against outright "promotion by selection." Even those which favor some one of the many variations of promotions by selection, carry features designed to protect the rough field soldier types with few social graces from the danger of being jumped by the fair-haired boys hundreds of files their juniors.

Two features are common to a majority of the plans under consideration. One of them is a recommendation that the percentage of field officers be increased and the other is the advocacy of some form of forced attrition to produce a proper flow of promotions and flatten out the hump. There is also a strong feeling that the retired list should not be overloaded. Except on these points there is little evidence of any crystalization of thought on the subject. What will come out of it all is anybody's guess. Truly, in more than one sense, promotion is in the air.

Why the Answer Is No!

By Lieutenants Marvin J. McKinney and Burgo D. Gill, C.A.C.

WHEN we first joined the service it dawned on us that there was such a thing as the Quartermaster Corps, but what was it all about? Supply, a generic term, was the answer to our question, but like all general terms it was meaningless. The Quartermaster Department was largely a matter of mystery, and it is a human trait to deprecate anything we do not understand.

In a recent article we had published on education for junior officers,* it was stated that each new officer during the first three to six years of his service should serve with an artillery arm, a mounted and a dismounted branch, and with horses or motors, as well as a tour in a supply branch. In that same article mention was made of the fact that there should be a minimum amount of staff work (except supply) like police and prison, post exchange, aiding, personnel, and adjutanting. In our present school system we receive an ample amount of instruction for staff work. However, it is many years before one wakes up in the vital necessity of the Q.M.C.

It was about eight years after receiving our commissions before we realized the extreme importance of supply. It was only by chance even then that the true state of affairs was brought to our notice. Of course, the C.C.C's was, and is, the chance-like emergency. If the supply branch of the army had fallen down, regardless of what the line might have done in handling these young men, the Army would have received a black eye that would have taken a longer time to regain its normal color than even the discoloration caused by the "embalmed beef" scandal of three decades ago.

It is realized that the Quartermaster Corps, after the long period of doldrums as far as taking new blood into it, is at last needing recruits. Actually, we wonder why officers wish to transfer to it in spite of the fact that it looks like actual professional bribery is resorted to in some instances. For example, take Major XYZ, a splendid officer, who is possibly worried over the Leavenworth or the War College detail. "Transfer to the Q.M.C. and we will send you," and off goes the major.

May we note the mental drawbacks that the thought of a transfer or a detail in the Q.M.C. brings up no matter how much we would like the experience.

1. The youthful fixed opinion of, "That blankety-blank Q.M.! Who wants to be one anyway?"

2. The fact that the Q.M. on a small post is generally overworked by his four assignments of supply, commissary, agent finance, and post maintenance and utilities. One look at the mass of detail work with the mountains of paper work behind it is enough to give a line lieutenant *mal de mer* at the thought of being immersed in it.

3. The unfairness of some older officers and C.O's who let it be known that their policy is, "I don't like Q.M's, and now that we understand each other, let's get to work."

4. Post maintenance work, which was mentioned in "2," takes better than half the usual Q.M's time, and seems to cause more than two-thirds of his worries. The Q.M. should be a capable staff officer and not be forced to waste his time on paint, plumbing, gardens, and roads around the post. Young line officers do not want to go into the Q.M. because they do not wish to be post maintenance officers all their lives.

5. Here are some concrete examples that we have seen: Within less that a year the writers have noted two superior majors who have transferred to the Q.M. Both are brilliant men and excellently trained in the army service schools. With the training that they have received, plus their records and ability to work, they should have held enviable staff positions. But, as Q.M's on their present assignments, what do we see? One (a post Q.M.) was "ridden" almost to the point of a nervous breakdown by the unreasonableness of a colonel who would not have treated any member of his regiment in that fashion. The other is the case of an officer who was the Q.M. of a large C.C.C. district with very poor assistants and insufficient laborers. His task was made more difficult by the erroneous views somebody occasionally gave his C.O.

After thinking quite a bit about the Q.M.C., especially after noting the great amount of work necessary at each post, and realizing that the maintenance of a post and its grounds is generally the personal hobby, as well as the duty, of most commanding officers, why should the post Q.M. have to handle post maintenance? It strikes one rather forcibly that these functions should be held by the post police and prison officer working directly under the colonel. This would free the Q.M. of a lot of his troubles, and put the onus of the care of a post where it properly belongs—upon the C.O.—who would have his "house keeping" staff officer, the P. and P., as his right hand man.

Young officers are ambitious, and look for better jobs and higher rank in times of war, and want training to accomplish this and further their ambitions. College details and schools should not be the only bait held out by the Q.M.C. The work should and can be made more interesting.

Would it not be better for each individual officer, or especialy selected ones, to serve a two-year detail in the Q.M.C. during the early years of his career? If it were so, more officers would have a better understanding of its problems and realize what supply means and how vital it is!

*"Can We Broaden Our Basic Education?" Coast Artillery Journal, March-April, 1934.

The .45 Automatic Pistol

By Major Harry R. Pierce
C.A.C.

IN many ways the .45 Colt automatic pistol is a much abused weapon. It is claimed by some that it is inaccurate, by others, that it is not dependable on account of the possibility of jams. In one respect, however, no criticism is ever heard. All will admit that it has a powerful wallop.

While no bald statement will be made herein that the .45 automatic is the best weapon made, it is the belief of the writer, after years of shooting, experimentation and study, that it is not far from the top and well deserving of its place as official side arm of the Army, Navy and Marine Corps.

In this article, the usefulness of this weapon is considered, not as a target gun, alone, nor primarily as a military arm, but as an all-around, general utility weapon for all killing purposes. For we must remember that a firearm is, after all, a lethal instrument, one designed to kill some living thing.

That the .45 has certain disadvantages will be admitted but it is claimed that most of these can be overcome or eliminated by proper knowledge and understanding. It is the intention, in this article, to explain how some of these may be corrected.

Let us discuss certain inherent characteristics of hand-guns with the particular object in view of determining how the .45 stacks up.

ACCURACY—Let us suppose that we desire a gun for target practice alone. We would, most of us, choose one of .22 caliber. It is by far the most accurate and most easily fired of all hand weapons. This caliber does not, however, answer the requirements of a lethal weapon. As we go up the list of calibers we find some that make good pocket guns but with poor accuracy and limited range and accuracy. These limitations decrease, in general, as the calibers increase. We finally arrive at the .38 which is generally conceded to be the smallest allowable for real killing use.

Of these larger calibers we find, today, only two popular sizes. The .38 in revolver and automatic and the .45 also in both varieties. Once in a while we see a .38/40, a .44 or a .44/40 but these guns, all excellent, are not as favored as they used to be before the War, principally on account of the lack of availability of ammunition for them.

If we consider supreme accuracy alone, there is no doubt but that the .38 revolver tops them all. From a machine rest it will make a smaller group every time. The revolver has a mechanical advantage with its fixed barrel that never can be attained in a weapon with a movable barrel, all other things being equal. The actual difference, in inches, is really slight, at hand-gun ranges, but it is something that makes a popular appeal, particularly to target shooters.

"It is a waste of time to debate about what kind of firearm is safer in the hands of the kind of person who will pull a trigger without knowing whether or not the gun is loaded."

One of the crack shots of the Los Angeles Police Pistol team is quoted as saying that the .38 revolver is good for a 10% better score than the .45 automatic. With this remark in mind, a comparison was made from recorded scores fired at the Los Angeles Police Pistol range by the same men over the National Match Course using their pet .38 revolvers and the .45 automatic. These results are shown below:

Shooter	.38 Score	.45 Auto. Score	Difference	Per Cent Loss Using .45 Auto.
1	280	248	32	11 plus
2	275	244	31	11 plus
3	268	241	27	10 plus
4	273	240	33	12 plus
5	266	236	30	11 plus
6	270	236	34	12 plus
7	271	234	37	13 plus
8	270	232	38	14 plus
9	266	216	50	18 plus
10	259	196	63	22 plus
Totals	2,698	2,323		
Average	270	232	38	14 plus

As can be seen, there is an appreciable difference in target practice it will be admitted but, on the target used, an enlargement of the group by an inch at 25 yards would account for it. Why worry about an inch when the average man's personal error at that range is six inches, at best?

On the other hand, there are other considerations, affecting the usefulness of a gun, than machine rest scores or even target practice scores. The hang and feel are important, particularly as they affect getting into action in a hurry. Target practice does not take that into consideration. The ease of loading, the speed of fire and the facility with which a gun may be carried all affect the final analysis.

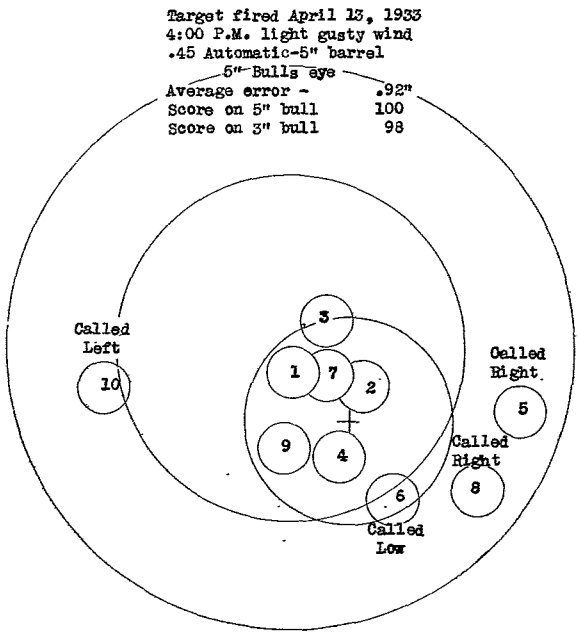
While one target proves nothing it may be considered corroborative testimony and for this purpose, one recently fired, is shown. This indicates ten shots, fired consecutively from a regular Ordnance issue pistol with an issue barrel at 25 yards, outdoors. The only difference between this pistol and the average one issued to troops is the amount of care put into the sight adjustment and trigger pull, something that can be done to most weapons of this type.

In this connection, let me say a few words about trigger pull. The average revolver, when prepared for target practice, has a good, sweet pull of 3½ to 5 pounds. A light pull may be dangerous in the hands of a novice but it is of great value to the expert in making a good score. A sweet pull is an absolute necessity in any gun. In these two elements lie the greatest disadvantage of the .45 as issued—disadvantages that can be almost entirely overcome.

Practically all of the criticism of the .45 as regards accuracy is due to this trigger pull, either a heavy one—in some cases as heavy as ten or twelve pounds—or a rough one. Triggers are usually issued heavy in the interests of safety. When buying a gun, however, or in picking one out for target work, it is usually quite simple to pick one out that has the desired weight and feel. If not, a good machinist or gunsmith can easily fix it to suit. It is generally a question of hand working the hammer notch to the proper smoothness or in changing the angle of this notch. This is a delicate operation that requires experience and is not recommended for the average person to attempt. It is not, however, an expensive job and is well worth the money it costs in satisfaction obtained.

With the .45, a light pull is not necessarily desired. Experience has shown that a moderately heavy pull will bring in better scores for the average than a very light one. By moderately heavy I mean in the neighborhood of 6 pounds. The pull may be safely made as light as 4 to 4½ pounds if desired. Below that will generally cause the slide to follow through upon firing.

Sight adjustment is always important. Most guns are not sighted correctly, strange as it may seem. This is partly due to lack of targeting in manufacture and partly to the individual characteristics of the person using the gun. So much depends upon how a pistol is held and upon how one looks over the sights. While it is true that there is a correct way to do both it is rare that two persons will have their centers of impact in the same place with the same gun. For this reason it is hard for one person to fix the sights for another.



In order to determine whether or not the sights are correctly set, fire a group of ten shots at a well defined bull's eye and determine the center of the group. It is assumed that the shooter has been properly instructed in the proper way to aim. If the center of the group is near the center of the bull's eye, the gun is properly sighted. If, on the other hand, this center of group is high, file off the rear sight or, if low, the front sight. Care should be taken not to file too much. A fine, smooth file should be used and a little taken off at a time interspersed with other group firings to determine results. The rear sight is dovetailed into the slide and may be moved to the right or left to take care and correct for deflection variations. If the group as determined is to the right, take a small copper hammer and knock the sight slightly to the left. If the group is to the left, the reverse is true.

If the owner of a pistol is not a good enough shot to make a satisfactory group, have a good shot give the weapon a test for accuracy. If the gun is all right there are two ways in which fairly good groups may be made without waiting to develop into a better shot. One is to use an arm rest while firing, being careful not to let the pistol, itself, touch the rest; at the same time, keeping the sights as far away from the eye as possible.

Another way, and one that generally works out better, is to call the shots and to disregard all those that are not called "good." In the target shown it will be noted that four out of the ten shots were called right, left or low, or, in other words, not "good." When a shot is called "not good" it is generally difficult to tell how much off it is. Ordinarily, it is worse than we think it. In this group, had these four shots been disregarded, a fine six shot group would have resulted from which the center of impact could easily have been determined.

Blackening the sights is quite essential in target practice although not practicable for service use. The sun, shining on the sights from the side, will have a tendency to throw the group in the opposite direction. As great a difference as 4 inches has been noted at 25 yards due to this cause alone. The favorite method of blackening sights is by a flame carrying a heavy black smoke. The best apparatus for this purpose is the acetyline lamp using carbide for fuel. Some people carry a lump of camphor in their shooting kit. In emergency, a match, a candle or a cigar lighter answers the purpose. A specially prepared paint is sometimes employed with the added advantage that it will not rub off. Any method that will prevent glare is satisfactory.

It is often the case with World War automatics that the sights are narrow and hard to see. Sometimes the rear sight notch is so shallow that it is impossible to sight the gun properly. The rear sight notch can be deepened by the judicious use of a thin file. Broader sights can be substituted for the narrow ones if desired. For general use it is believed that the broader sights are to be preferred.

Most automatics can be improved by the purchase of a match barrel from the Colt factory. While the issue barrel may be every bit as good, the chances are that a match barrel will be better and worth the cost. If this is done, a barrel bushing should be purchased at the same time and fitted to the barrel at the factory.

There is one other little point in shooting which, although it does not affect the grouping of shots, may seriously affect the score, especially if targets of different sizes are fired at at different times. We might call this the problem of the point of aim. If one is in the habit of always shooting at the same size target at the same range, the correct point of aim is, of course, at six o'clock, and the center of group should be in the center of the bull. The difficulty arises when we become accustomed to shooting under those conditions and suddenly shift to a two inch bull. Unless we think to take a lower point of aim, our group will probably be high. In a general utility gun we should have a sight setting that, with the natural aim, will be right in the majority of cases. It is very embarassing to have a gun sighted for a 6 o'clock aim at a 5 inch bull and be called upon to hit a small target such as a match box. After four or five clean misses, we may remember to aim a little low. In the meantime, we have jeopardized our reputation, if we ever had any. For such all around shooting at large and small targets, it is believed better to sight the gun to shoot about one inch above the point of aim. This insures correct shooting for small targets and the larger ones are nearly as easy to hit. For game shooting alone it would be preferable to have a sight setting to hit where aimed, but the one inch rise in 25 yards will not make a great deal of difference.

Many people who claim they cannot shoot a hand gun fail to realize the limitations of this class of weapon. They expect the impossible. They fail to realize that the person has never been born who can hit exactly where he wants to every time. A target for a hand-gun is never a point but an area. The ability of a marksman is not to see how many bullets he can put through the same hole, but rather to see how small a group he can make. The size of this group is appreciable even with really good shots. For the benefit of those who are unfamiliar with what can be expected from this type of shooting it might be said that, at 25 yards, a twelve inch group is good for a novice, a six inch group is good for an average good shot and a four inch group will always rank high in any match.

SAFETY—Many people contend that the automatic weapons, in general, are not safe. It is rather a waste of time to debate about what kind of firearm is safer in the hands of the kind of person who will pull a trigger without knowing whether or not the gun is loaded.

The .45 automatic in good condition in the hands of a person qualified to use a pistol is as safe or safer than a revolver. The grip safety furnishes an additional safeguard against accidental discharge not furnished on the average revolver. But, as an empty fire extinguisher is worse than no fire extinguisher at all, since it furnishes false security, so may the very features on the automatic that insure against accidental discharge prove false security. They may be out of order. If this is the case, an owner of an automatic should know it and correct the difficulty. It is very simple to test these devices and it should be done frequently. The method of doing so follows.

1st—Disconnector. This is the little gadget that prevents automatic operation. Cock the gun (unloaded, of course). Press against the muzzle and push the slide to the rear a short distance, about a quarter of an inch. Pull the trigger. If the hammer falls, the disconnector is probably worn and needs replacement. It may be that the fault is caused by the hammer notch having been filed at some time or other rather than in the disconnector but if the hammer is to blame, the safety lock test or the grip safety test will probably fail, one or the other or both.

2nd—Safety lock. Cock the hammer and place the safety lock at safe. Pull the trigger. If the hammer falls there is something the matter with the safety lock, or, as noted above, with the hammer.

3rd—Grip safety. Cock the hammer. Pull the trigger without touching the grip safety. The hammer should not fall. The grip safety may be worn where it bears against the sear spring or the sear spring may be broken. If, on pushing in the grip safety, it springs back to normal position when the pressure is released, the trouble may be, as in 1 and 2, due to improper filing of the hammer notch. Some people do this little thing to give a lighter trigger without knowing how far they can go in safety.

SHOCKING POWER OR STOPPING POWER—If we look up our ballistic tables we find something like this:

Weapon	Bullet Weight Grs.	Muzzle Velocity f/s	Muzzle Energy ft./lbs.	Energy 100 Yds. ft./lbs.
.38 S. & W. Spl. 6" barrel	158	860	258	218
.38/44 6½" barrel	158	1,125	444	373
.38 Super-auto. 5" barrel	130	1,190	408	303
.45 Colt 5½" barrel	255	780	353	301
.45 Automatic 5" barrel	200	910	368	319
.45 Automatic (issue)	230	810	335	295

Off-hand we would pick the .38/44 as the cartridge that would give us the greatest stopping power both at the muzzle and at 100 yards. But in reality, we would be overlooking a very important factor—the area of cross section of the bullet or the area over which the energy is distributed upon impact. A smaller bullet usually gives greater penetration, an important element where brain shots are desired, but the larger bullets have greater shock even if of less actual power. Since it is the shock that kills as often, or more often, than actual penetration, we wish to amplify the energy by a formula for stopping power. It is difficult to manufacture any accurate formula for this purpose since there are other things to consider, the principal one being the shape of the bullet. A flat nosed bullet will have a greater stopping power than a sharp nosed one of the same weight and impelled with the same power. To all intents and purposes, however, if we multiply the energy by the area of cross section of the bullet

we may find a relative number which will do for purposes of comparison. The following table gives the stopping power calculated in this manner for energies at the muzzle at 100 yards:

Weapon	Bullet Weight Grs.	Stopping Power Muzzle	Stopping Power 100 Yds.	Loss in 100 Yds. of Range
38/44 Revolver	158	50	42	16%
.38 Super automatic ..	130	46	34	28%
.45 Colt Revolver	255	56	43	21%
.45 automatic	200	58	50	14%
.45 automatic	230 (issue)	53	47	11%

It is a matter of interest to note that the lighter the bullet the greater the loss in energy and stopping power during flight.

SPEED—Speed of fire is a difficult problem to analyze. So much depends upon the individual. Ed McGivern, in recent articles, shows how he can take most any kind of a gun and ripple off five shots in a second or less and, at the same time, hit something. The average person would have difficulty in firing his shots that fast with a machine gun, to say nothing about hitting anything he wanted to. To see some of our expert revolver shots knock out almost perfect scores at twenty-five yards in ten seconds is an education in trigger-hammer manipulation. These feats take a great deal of practice.

To use the automatic fast and hit something besides the landscape also takes practice, but it is believed that a reasonable amount of speed can be attained more easily with the automatic with its mechanical cocking than with a revolver.

The principal advantage of the automatic comes, in my opinion, not in firing five shots fast, but in firing a greater number of shots fast or faster than a man equipped with a revolver can do. For instance, this gun has been fired as fast as 21 shots in five seconds. Five or six shots can be fired quite rapidly with a revolver, but no one has yet devised a means of reloading with any speed comparable to that of the automatic. In battle this is of great advantage.

RANGE—Referring again to our ballistic tables, we find the 38/44 well in the lead in range. This is a theoretical advantage. In truth, however, it is believed that its usefulness ends there. As far as a hand gun is concerned the question of long range use is a doubtful one. Any hand gun, unless equipped with a stock for use like a rifle, is primarily a short range weapon, 50 to 75 yards being generally considered the limit of practical firing. That the modern gun, of whatever caliber, will shoot accurately up to 200 yards and more is well known, but the dispersion in holding is so great as to make such actual use exceptional.

The .45 automatic shoots very well with normal sights up to 75 yards. From 75 to 100 yards a slight elevation is necessary but can be accomplished by aiming high. Beyond 100 yards, the elevation necessary to hit is increased to such an extent and to it is added such a deviation to the left due to drift that accurate work is quite difficult. We may say, then, that 100 yards is the maximum effective range for this weapon. For really long range shooting it is necessary to have a gun with adjustable sights.

DEPENDABILITY—Under this heading we find the greatest argument against the automatic. The claims are that the automatic is apt to jam. It is true that I have seen four guns out of 24 jam on each run in a match where that number of targets were used, but will add that 99 per cent of guns that so jam can be corrected within a few seconds. People shooting an automatic *will* insist upon continuing to use a magazine that is bent or has split. A bent or split magazine will jam nearly every time, whereas a gun in good condition using a magazine, also in good condition, will practically never jam. The only case I have ever known where a .45 automatic jammed not due to a poor magazine was due to a split cartridge case. Magazines should be inspected frequently and ammunition should be looked over for defective cases prior to loading. This is merely common sense.

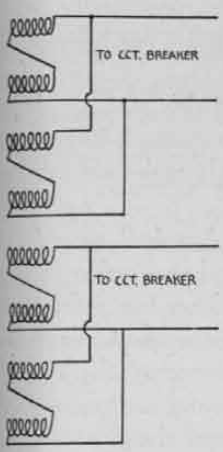
UNFORTUNATELY, WE CANNOT DISCARD *within a few years an instrument which is as old as mankind. No more could we completely discard the horse in favor of the automobile, nor the scythe in favor of the harvester, nor the pen in favor of the typewriter, nor the local store in favor of the mail order house, nor the policeman in favor of local agreements to behave, nor the constabulary of the state in favor of an honor system among drivers of vehicles, nor the local militia in favor of arbitration between angry minorities of our people, nor armies and armament in favor of international councils and courts, all in any short period of time. Each will go along with the other until our human efforts gradually supplant one with the other in so far as practical limits will permit. If the new instrument fails, we shall temporarily, of necessity, turn back to the older one in spite of our desires and ideals, but we shall not, on this account, abandon the ideal.*—COLONEL CHARLES G. METTLER.

The Corregidor Nail-Picker

By Lieutenant G. H. Stubbs, CAC

THE Corregidor Nail Picker came into existence about two years ago when the Commanding General's attention was called to the large amount of damage being done to automobile tires and animals by nails on our roads. The Commanding General, having directed the Police and Prison Officer to have the prisoners pick or sweep up the nails, I mentioned the magnet idea and thus my troubles began.

I do not claim that the outfit described here is fully perfected. I do claim three things for it: (1) it works, (2) it costs next to nothing to make or operate if labor is discounted and there is a good "finder" around, (3) after a month's operation of the "picker" the number of punctures per week on both CA trucks dropped from an average of ten per week to one per week and the number of horses and mules on sick report from nail wounds dropped from eight to one.



The outfit in general consists of a DC electric power source with appropriate control panels and an eight unit electro-magnet, all mounted on a Liberty truck. Materials needed are as follows:

1 Liberty truck (better get permission to use a "reserve" for this limited service so that a permanent installation can be made.)
1 SCR-82 or other gasoline driven DC generating unit.
1 BD-5 control panel.
2 Wheels about 8 inches in diameter.
1 Crossbar about 1½" by 1½" by 7'.
10 Bolts, ¾" by 12".
2 Eyebolts ¾" by 6".
36 Nuts ¾".
4 Sq. ft. soft steel plate, ¼" thick.
6,000 Ft. wire, copper, No. 12 or 14, double cotton insulated.

Suspension chains and rods, conduit cable, insulating cloth, etc., as needed. Most of the above is readily available on any post, together with a lathe which is needed for winding the magnets and for machine work.

The power plant used in our outfit is a SCR-82 with BD-5 control panel (25 volt). This unit consists of a one-cylinder, air-cooled motor with a DC generator. It is an obsolete or obsolescent type issued for battery charging or general electrical work. Any available DC portable power unit producing from 7 to 56 amperes at 5 to 40 volts can be used by simply rearranging the eight magnets in their series—parallel relation. I used the 25-volt side of the generator with only two of the three panel circuits, each circuit handling four magnets in series—parallel.

Each magnet consists of an iron bolt ¾" in diameter surrounded by a soft iron collar (to increase the capacity of the core) and soft steel end plates. The end plates were threaded and screwed against the collar to avoid movement after winding. The wire is wild wound with additional insulation provided by generous application of shellac and a layer of insulating cloth added after each three or four layers of wire. Tape applied to the outside is for protection and it was found advisable to add tin shields on the lower part of the two center coils which are bumped most often in operation. North poles are mounted next to the cross-bar. The following information on the magnets is furnished; it may be varied considerably in some respects:

CORE

Soft iron in cylindrical form.
Diameter — 4.6 cm.
Length — 7.6 cm.

WINDINGS

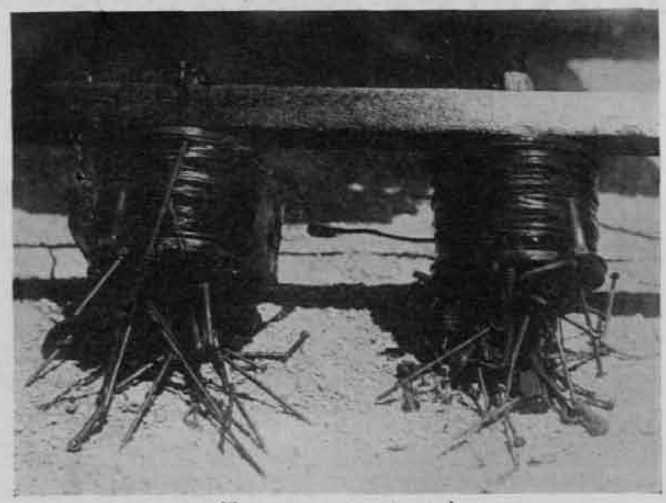
Wire — 12 ga. (B&S) C.C.
Number of turns — 600.

END PLATES

2 plates to each coil.
Soft steel.
Diameter — 13.3 cm.
Thickness — 1 cm.

The hook-up will be made plain by referring to the diagram. The complete magnet rack consists of 8 mag-

The Corregidor Nail-Picker.



Two magnets at work.

net coils—4 coils to each circuit, 2 sets of coils in parallel and 2 coils in series.

ELECTRICAL DATA

Voltage across each circuit — 20 Volts.
Resistance of each coil — 1.4 Ohms.
Total resistance of circuit — 1.5 Ohms.
Current through each coil — 7.0 Amp.
Total current through generator — 28.0 Amp.

MAGNETIC DATA

Ampere turns, 4,200.
Permeability, 800.
Cross-section area, 122 sq. cm. (Diameter of coil itself, 12 cm).
Length of coil, 7.6 cm.
Flux density, 557,040 gausses.

HEATING OF COILS

The whole of the cylindrical area of the coils is exposed to the air for cooling.

Actual rise in temperature due to passage of current is 85 degrees Fahrenheit.

The chief difficulty in design was with the method of mounting the magnet itself so that it would be close enough to the roadway at all times without being battered to pieces. The mounting shown may properly be called a suspension—support system. The suspension rods are provided with a few inches of chain on each end for flexibility, and are long enough to allow the wheels to touch the ground under ordinary road conditions. The main cross-bar is mounted so that when supported by the wheels with the suspending chain slack the entire unit revolves and the magnets as they rotate are lifted higher. The entire cross-bar is adjustable for height as the vertical part of the wheel axle is threaded and nuts hold the bar in place. This suspension lifts the magnets up and over any obstacles in the road which the wheels strike but damaging bumps on the magnets are inevitable so they should be rugged. For this reason the speed of the truck must be kept down to three or four miles per hour.

The power plant and panel board must be firmly fastened in place. On our first test run this was not done. A quick shower, steep upgrade, slippery truck bed and as Chick Sale says, "You're caught." (It took two months to fix the generating unit.)

This outfit picked up about four hundred pounds of nails and scrap in its first week of steady operation. Most of this was legitimate prey for the picker but a few protests came in. The Quartermaster would like to have his reënforcing iron back for use on a concrete job; a man-hole cover had been moved (I never would admit responsibility for that one); a soldier wanted the five centavo piece he had thrown in front of the truck as a joke, and the iron handles on man-hole covers were invariably pulled up to bump tires. The average day's "catch" is 25% nails or tacks, a few dozen tin cans, lots of nuts and bolts, miscellaneous scrap, sometimes a coin or two, a few odd toys, etc.

At first the picker was run over the roads continually for a week, and we found that the second or even third trip in a day was profitable. At present one trip over the roads each week keeps them clean, and at that business is not so good at times.

★

THERE ARE THOSE *who are so closely shut up within a little round of petty pleasures that they have never dreamed of the fun of reading and conversing and investigating and reflecting. It is essential to awaken the impulses of inquiry, of experiment, of investigation, of reflection, the instinctive cravings of the mind. The principle underlying all our educational procedure is that actions become more successful as they pass from the sphere of feeling to that of understanding.*—MEIKELJOHN.

The Collapse of the Old Russian Army

By A. M. Nikolaieff
Colonel, General Staff, Imperial Russian Army

"A less numerous professional army is a better instrument of war than millions of untrained men called out during periods of hostilities."

IT IS COMMON knowledge that the street riots in Petrograd in March, 1917, with which the Russian revolution began, were started by striking workmen and the troops of the Petrograd garrison which joined the workmen on the fifth day. It is known equally well that, following that mutiny and the fall of the Imperial Government, the Russian army at the front, despite the efforts of the Revolutionary Government to improve its fighting capacity, disintegrated and refused to fight.

How did it come to pass that the garrison of the Imperial capital mutinied almost over night? Why, after the March events in Petrograd, in consequence of the measures and the policy of the Provisional Government, did the army at the front completely break down? Was there no way to save the army, and thus prevent Russia from ending her part in the War and abandoning her Allies at a critical moment?

These questions are not merely of historic and academic interest, inasmuch as they touch upon an important problem, much discussed by military experts after the War: whether, under certain conditions, the tendency to increase the numerical strength of the army in time of war should not be limited by the principle that a less numerous professional armed force is a better instrument of war for self-protection than millions of untrained men called out during the period of hostilities.

Prior to answering these questions, it is necessary to point to an important factor that was peculiar to Russia's internal life and which, since the latter part of the 19th century, had operated continuously. This was the destructive activity of revolutionary forces aiming at the overthrow by force and violence of the existing régime. No time could offer better opportunities for revolutionary propaganda than a time of war.

As far as the Russian army was concerned, the main effort of propaganda was aimed at that part of the population which, under the conditions of modern warfare, turns a peace-time army into a "nation in arms"; that is, at the millions of men called out in time of war to be trained in special units at the rear, the so-called depot battalions or battalion of replacement troops. "In the rear of the army," we read in a letter written by a revolutionary during the World War and intercepted by the censor (June, 1916), "the revolutionary mobilization shall take control of all the rear establishments, but primarily of the depot battalions."

As early as 1904-05, during the Russo-Japanese War, it became obvious what importance was attached by the revolutionaries to the spreading of propaganda among the replacement battalions, with a view to "turning the imperialistic war into a civil war." But in that war, the number of men in those battalions was not large.

During the World War the situation was different. The number of men in the depot units was enormous. According to the annual report of the Russian Minister of War, on December 31, 1916, the number of men undergoing training in the units at the rear was more than 2,170,000. This, by itself, was a whole "army of the rear" behind the army at the front.

In that period of the War, the men who formed "the army of the rear" fell into two categories. One category, the smaller, consisted of recruits called out at the end of May, 1916, 908,000 recruits having been drafted at that time. Another category, the larger, consisted of militiamen *(opolchenie)* who had been called out to the number of 1,310,000 from September to the end of that year. The age of these militiamen, belonging to the second class, was from 24 to 43 years, and they had received no previous training. The trained men of that category belonged to the first class which was summoned during July of the first year of the War.[1]

The depot units, whose purpose it was to make good the losses of the army at the front, did not exist at all in time of peace. As soon as war was declared, these units were formed in the proportion of one battalion to every infantry regiment; only ten professional officers and a few score trained soldiers were assigned to each depot battalion to serve as its *cadre*. In the World War, first, because of the necessity of keeping a large number of men constantly ready to fill up the ranks of the army in the field, and secondly, because of the shortage of officers and trained soldiers, the numerical strength of the individual replacement units and their subdivisions had greatly increased. Companies in the depot battalions stationed in Petrograd numbered as many as fifteen hundred men each, and some had only two officers, whereas the strength of a company at the front was two hundred and fifteen men and three officers. Of no small importance, also, was the fact that the officers in the replacement units had been assigned for duty at the rear because of wounds, injuries, or poor health. Officers in those units who were physically fit, formed the exception.

At Petrograd were stationed the replacement units of nearly all the regiments of the Imperial Guard. With the

[1]The men who had received military training in time of peace and formed the category of trained reserves, a total of 3,515,000 (of whom 3,115,000 were reservists and 400,000 militiamen, first class) were called out during the mobilization to fill up the units of the standing army and to build up new formations.

exception of two Cossack regiments (about 1,200 horsemen) and small units of artillery and engineers, the garrison of the capital, numbering from 150,000 to 160,000, was made up of men who for the greater part belonged to the older-age groups, who, from the military standpoint, represented raw untrained material under the nominal control of an entirely inadequate number of officers. Furthermore, part of the garrison included men evacuated from the front because they had been found unfit.

Every depot battalion bore the same name as that regiment at the front to which it was sending reënforcements. Thus the replacement units in Petrograd were called depot battalions of the Guard regiments, Preobrazhensky, Pavlovsky, Volynsky, etc.,—in other words, the regiments of the three infantry divisions of the Imperial Guard. Attention is drawn to this detail because of the fact that, as a rule, non-military writers, as they describe the revolutionary events in the capital during March, 1917, call the depot battalions that played such an important part in those events, by the names of the regiments for which they were training reënforcements. In these descriptions we read that "the Pavlovsky regiment" mutinied in March, or that "the whole Preobrazhensky regiment [was] marching down the street . . . without a single officer." Thus, anyone who is not familiar with the details of military organization gets the impression that the mutiny occurred, not among the men of the depots undergoing training to serve as reënforcements, but among the crack regiments of the Imperial Guard, which formed the cream of the Russian army. The truth, however, is that those regiments were at the front and did not take any part in the March events.

Despite the prevailing opinion, the fate of the Russian Empire on March 12 (February 27, Russian Calendar) was decided in Petrograd, not by the fact that the regiments of the Imperial Guard had joined the revolutionary workmen, but because the workmen had been joined by the recently drafted, untrained contingents of the depot units of those regiments. Special emphasis is laid on that feature, because a mutiny of the Imperial Guard would have meant that the discipline of the Russian Army had been completely destroyed before the revolution. No such situation existed. According to the testimony of the army leaders (Brussiloff and Denikine), the Russian army in the field at the beginning of 1917 (before the revolution), in spite of its defects, presented an "imposing force" capable of carrying on an offensive successfully. The army joined the revolution not as a mutinous act but after its leaders had recognized and accepted the political change.

Petrograd with its suburbs, while it presented a large concentration area of depot units in the rear, was at the same time an industrial center of the greatest importance. The number of workmen employed in all the factories of the Petrograd district was not below 250,000. What the mood and attitude of the factory workers toward the Government was, may be judged from the number of strikes, economic and political, and from the number of strikers. The number of strikers, which in the initial period of the War (the second half of 1914) had fallen to the insignificant figure of 35,000 persons (in 68 strikes for the whole country), gradually rose during the War, until in 1916 it reached 1,080,000 persons in 1,410 strikes.

Regardless of the nature of the workers' dicontent in time of war and its causes, the important fact may not be left out of consideration that the workers, including women and those under age, constituted less than 1¾ per cent of the total population of Russia. Furthermore, the only class of the population which revolutionary propaganda, in the period immediately preceding the war, had affected was the industrial workers, many of whom belonged to the revolutionary parties. When we consider the concentration in the Petrograd area of more than 250,000 workmen and about 150,000 depot troops we realize that the conditions for revolutionary propaganda were exceptionally favorable.

The main reason for concentrating so many replacement units in the capital of the Empire lay in the fact that, inasmuch as in time of peace nearly all the Imperial Guard had been stationed in Petrograd and its district, the many accommodations of that area offered an easy solution of the question of quartering newly summoned men; however, under the peculiar circumstances of war time, such a solution testified to an amazing lack of comprehension of the situation and a want of foresight on the part of the authorities. They knew well that no efforts were being spared by the revolutionaries to imbue the depot battalions with propaganda; and they ought to have known that the men in those battalions, recently gathered together from all over the country, placed under the nominal control of a few officers and not welded together either by discipline or a spirit of comradeship, might, under the influence of that propaganda, be easily won over to the side of the workmen.

The swiftness with which the mutiny which started in one of the depot battalions, spread among all of them, may serve as the best proof to what extent the ground for a mutiny had been prepared. These were the events that took place in Petrograd during the five days of March, 1917, during which the fate of the Empire was decided:

On Thursday, March 8, a number of workmen in Petrograd went on strike because of a shortage of bread in the capital. Street demonstrations occurred on that and on the next day, during which policemen dispersing the crowd were beaten. On March 10 the street demonstrations became political in character; red flags with revolutionary slogans made their appearance in the crowd on the Nevsky Prospekt, the main thoroughfare. On that day a police captain on duty in the Znamensky square was killed and a hand grenade was thrown at a platoon of gendarmes. In the evening, shots were fired at a troop of the 9th cavalry reserve regiment which had been sent to disperse the crowd on the Nevsky; the cavalrymen, of whom one was wounded, dismounted and opened fire,

killing three and wounding nine men in the crowd. On the afternoon of March 11 the first case of military mutiny took place: the fourth company of the depot battalion of the Pavlovsky regiment walked out of the barracks armed, gathered on the street, and fired shots at the mounted police. This was their form of protest against orders to fire at the crowd. On the fifth day, Monday, March 12, the depot battalion of the Volynsky regiment mutinied; the men walked out of the barracks and refused to give up their rifles. Soon they were joined by parts of the depot battalions of the Preobrazhensky and Litovsky regiments. An armed crowd of mutinous reservists, accompanied by a crowd of workmen who had immediately joined the soldiers, was now moving down the Kirochnaya street and setting government buildings on fire—the barracks of the gendarmes' squadron, the military engineers' school, and the district law court. The military mutiny that started on the previous day in one company now spread through the depot battalions belonging to the three infantry divisions of the Imperial Guard. From that time on the capital was in the hands of an armed crowd.

The question arises: Was it not possible to put an end promptly to the street demonstrations begun by the workmen and so to forestall the mutiny of the depot troops?

As one reads the testimony given before the Special Commission of Inquiry of the Provisional Government by General Khabaloff, commander-in-chief of troops in the Petrograd area, no conclusion is likely to be reached other than that, owing to the failure to supply the striking workmen with bread from the army stores immediately[2] and other causes, the situation, as far as the Imperial Government was concerned, was hopeless.

One of these causes lay in the fact that not a single infantry unit of regular troops was at the disposal of the military authorities in Petrograd. Only with the help of such troops could order have been promptly restored and maintained.

But even regular troops, had such been available in Petrograd, would have been of little use in putting a quick end to the street excesses unless at their head there had been a man of strong will and energy. In circumstances calling for decisive measures, General Khabaloff acted with neither energy nor determination.

Finally, aside from the need of reliable troops headed by a resolute commander, the quick suppression of street excesses depended primarily upon the mood and attitude of the population of Petrograd. Lack of sympathy on the part of the residents of the capital for the demonstrations of the workers would have greatly facilitated the effective reëstablishment of order by the troops, if only for the reason that the man in the street would have kept away from those demonstrations. In reality, a very different state of things existed. The population was in a state of discontent and depression, in which every revolutionary manifestation, far from meeting with disapproval, was regarded by a great many as the beginning of a change for the better. That such a mood was the result of a number of serious causes is well known.

No small part in creating psychological depression was due to various rumors, which sowed alarm and undermined the hope of success (such as the rumors about the unreliability of the Allies and the sympathy of the Empress for the Germans). In spreading such rumors, the revolutionaries marched hand in hand with the Germans, who made extensive use of that method of fighting their enemy.

An event of such a catastrophic nature as the rebellion in the capital of the country of hundreds of thousands of men, half of them armed, in the midst of a great war, had as its inevitable result the disarrangement of normal life and the creation of chaotic conditions, not only in the capital, but in the entire country as well. The effects were felt first by the army at the front, for in 1917 the Russian army, numbering 7,000,000 men, had turned over the effectives of its infantry regiments several times (in some regiments as much as ten times). It represented, to a greater degree than any army in any epoch, those "armed masses," in which quality had been sacrificed for quantity.

Of the possibility of disintegration, with which those armed masses were threatened following the crash of the monarchy, the new government was well aware. But the measures by which that government was endeavoring to prevent disintegration and to save the situation showed that it had no knowledge of the fundamental principles of army organization. It failed to grasp the full meaning of the change brought about by the revolution. On one hand the new government, by its orders and efforts to "democratize" the army, was undermining the authority of the commanding personnel and destroying discipline[3]; on the other, it was preparing an offensive which only a well disciplined army could carry out.

Preparations for an offensive were made with a view to fulfilling a plan adopted before the revolution. Russia's obligations, according to that plan, which had been worked out in common with the Allies at the conferences in Chantilly in November, 1916, and in Petrograd in February, 1917, required that the Russian army should make a decisive attack not later than three weeks after the beginning of an offensive by the Allies. That offensive it had been planned to start in the beginning of the year but later on it was postponed until May. Now, as a consequence of the events in Petrograd and their influence on the army, not even in May could an offensive have

[2] Judging from a report of the Chief of the Supply Service, it would have been possible to spare for this purpose from 800 to 1,000 puds on the first and second days, and from 3,000 to 5,000 puds on each of the following days. One pud is equal to 36 English pounds.

[3] Of the measures adopted for the purpose of "democratization," but in fact leading to the destruction of discipline, the following may serve as typical examples: the C.O. of every unit, according to the new order of things, had to share his authority and responsibility with an elected committee of soldiers and officers and with a civilian commissar, whose secret duty it was to watch over the political conduct of the C.O.; courts martial were suspended and the right of the commanders to inflict disciplinary punishments was abolished.

been undertaken. At a conference held in Petrograd on May 17 by the commanders of the several groups of armies, members of the Provisional Government, and representatives of the Soviet Workers' and Soldiers' Deputies, the following statement was made by General Alexeieff, the Commander-in-Chief who had succeeded the Emeproor in that post after the latter's abdication: "The army is on the brink of ruin. One step more, and it will be thrown into an abyss into which it will drag Russia and her liberties, and there will be no way to save it."

It seems obvious that, with an army in which there was no discipline and which was "on the brink of ruin," an offensive was out of the question. Yet that offensive was undertaken. It was launched by the three armies (11th, 7th and 8th) of the Southwestern Front, and it had for its object the invasion of Eastern Galicia. It began on July 1 and made some progress but, after two weeks, it died down. Six days later the armies started to fall back, though no orders to do so had been given and their retreat soon turned into a flight. The details of that ill-fated offensive are as convincing as they are tragic.

A month and a half later the German operation against Riga showed that the Russian army was incapable, not only of offensive, but even of defensive, action.

In point of fact, not only by autumn 1917, that is, on the eve of the seizure of power by the Bolsheviks, but even as early as that summer, the Russian army was practically non-existent. In place of it, there were millions of men, armed and getting army rations, making up military units of various names and occupying a front line one thousand miles long, from the Baltic to the Black Sea, but absolutely incapable either of making an attack or of putting up a defense. The hope of the Provisional Government of continuing the war against Germany and Austria with the Allies fell through.

Was it not possible to devise some other means that would have offered a better chance to attain the desired results?

The Provisional Government from the very beginning of its existence was confronted by a dilemma. It had to choose between undertaking the offensive in accordance with the plan worked out with the Allies and, by so doing, to run the risk of completely destroying the army; and explaining to the Allies that it must abandon that plan with a view to saving the army. Of these two possible decisions, unquestionable preference, it would appear, should have been given to the one that contained the possibility of preserving the army and of continuing the war. Such a decision was not only to the interest of Russia, but to the interest of the Allies as well.

It would seem that the cutting down to a minimum of the numerical strength of the army with the object of preserving it was the measure that needed to be taken before anything else was done. To what minimum the strength of the army should have been reduced depended on the number of the *cadres* or professional elements, and on the young contingents, summoned in the course of 1915 (2,237,000 recruits were called out from January 15 to August 7, 1915) that still remained, and on the degree of reliability of individual units.

According to a statement of General Brusiloff at the May conference already mentioned, there remained in the units of the 10 cavalry corps 50 per cent of their *cadres*. The status of the artillery and engineers was the same. As to the main body of the army, the infantry, there remained in the companies an average of from three to ten soldiers of the standing army. These figures, of course, are a minimum. However, should we assume that in the 2,962 infantry battalions of the army, there remained in each company an average of five veterans of the 1914-1915 campaigns, including soldiers of the peace-time army, and 25 young men summoned in the course of 1915, an infantry force of 360,000, possibly of 400,000 men, might have been built up. By adding to these the cavalry units (about 80,000 men) and other arms of service, an army of a half million men might have been created. From all the officers of high and low rank it would have been possible to give that army excellent leadership. Far from resembling an unstable militia, that army would have presented a reliable force.

In considering the task which it would have been possible to assign to a "professional" army, it should be clearly understood that, by no means, would the scattering of that army along an extended front line have served any good purpose. The only task which the new army would have been in a position to accomplish was the protection of the political center of the country. Under the conditions that existed in Russia in 1917, the political center of the country should have been transferred from Petrograd to Moscow. In the emergency through which the country was then living, only by extraordinary measures such as this would it have been possible to save the situation. It may be said that, in case the army had taken up positions only on the roads leading to Moscow, (approximately on the line Pskov-Smolensk) it would have been possible for the enemy to occupy Petrograd and also to advance far into the interior along the lines to the south of those leading to Moscow. But in this connection it must be pointed out that, by the summer of 1917, the front line, running from the Baltic Sea to the Black Sea, presented an unstable and insecure screen which no longer gave protection. Furthermore it was not improbable—indeed, it was to be expected—that, following the entry of the United States into the war, the enemy would be compelled to concentrate their main forces on the Western Front. Germany, already experiencing difficulties with regard to her man power, would hardly take the risk of penetrating deeply into the interior of Russia or of undertaking operations on a large scale in the East. In any case, it seems certain that, had there been a reliable Russian army even a half million strong, the German and Austro-Hungarian troops would not have taken the chance of invading nineteen Russian provinces as they did after the seizure of power by the Bolsheviks.

COAST ARTILLERY ACTIVITIES

Office of Chief of Coast Artillery

Chief of Coast Artillery
MAJOR GENERAL WILLIAM F. HASE

Executive
LIEUT. COL. HENRY T. BURGIN

Personnel Section
MAJOR R. T. PENDLETON

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

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

Plans and Projects Section
LIEUT. COL. G. A. WILDRICK
MAJOR C. M. S. SKENE

Hawaiian Separate Coast Artillery Brigade News Letter

BRIGADE COMMANDER, BRIGADIER GENERAL ROBERT S. ABERNETHY
CHIEF OF STAFF, LIEUT. COL. FULTON Q. C. GARDNER, C.A.C.

S-1, LIEUT. COL. W. V. CARTER, A.G.D.
S-2, CAPT. WILLIAM F. LA FRENZ, C.A.C.
S-3, LIEUT. COL. BENJAMIN H. L. WILLIAMS, C.A.C.
S-4, MAJOR BIRD S. DUBOIS, C.A.C.

HARBOR DEFENSES OF HONOLULU
LIEUT. COL. WM. E. SHEDD, JR.
16th C.A.

HARBOR DEFENSES OF PEARL HARBOR
COLONEL AVERY J. COOPER
15th C.A.

SIXTY-FOURTH COAST ARTILLERY
COLONEL WILLIS G. PEACE
64th C. A.

By Lieutenant John R. Lovell, C.A.C.

The President's Visit

THE recent visit of the President of the United States has been the outstanding event in the history of the Hawaiian Islands. The entire population turned out and gave our Commander-in-Chief that warm, sincere, and typical greeting that Malahinis never forget, that great welcome and goodbye that the native Hawaiians call their "Aloha." The people of Hawaii certainly know how to entertain, and the occasion of the President's visit saw this art developed to perfection. It is difficult to find adequate words to describe the colorful affairs that were prepared in his honor.

The president, aboard the U.S.S. *Houston,* and accompanied by the U.S.S. *New Orleans,* arrived off the Kona Coast on the Island of Hawaii the morning of July 24th. He tried his hand at big-game fishing in the famous fishing banks there, but was rewarded only by several big strikes and a couple of small catches. He visited the city of Hilo on the 25th, and motored to the military rest camp, high up the mountains at Kilauea, where he saw Halemaumau, "The House of Everlasting Fire," an active cylindical-shaped volcanic crater, which is about one-half of a mile deep and about three-quarters of a mile in diameter.

When he arrived off Honolulu the next day, he saw the greatest Aloha demonstration ever staged in Hawaii. Great fleets of fishing sampans and other vessels in full dress formed a lane through which the cruisers passed en route to the harbor entrance. In the harbor a large number of native canoes, called "outriggers," met the cruisers. Duke Kahanamoku, the great swimming champion from 1912 to 1922, dressed in feathered cape, and standing majestically on a platform between two outrigger canoes, represented Kamehameha I, the Hawaiian warrior who conquered the Islands in 1719, and established the monarchy which lasted until 1893. The sky was literally black with Army and Navy aircraft; everything that would fly was in the air to take part in the welcome.

The Army review held at Schofield Barracks was the

greatest peace time military demonstration that has been conducted since the World War. The ceremony was conducted on the newly-turfed division review field, with the beautiful Waianae and Koolou Mountain Ranges flanking the sides of the great field. Everything that could march or roll was in the gigantic formation, which extended as far as the eye could see in every direction. It actually required over five minutes to call all elements of the command to attention.

Mr. Roosevelt arrived on the field and passed in front of the troops in his car. The crowd of spectators, numbering approximately 30,000 people, gave him a great ovation. The president took his station in the reviewing stand and watched over 15,000 troops pass before him.

The writer will make no attempt to tell how well the Coast Artillery did its job. That will be left to Major General Briant H. Wells, our Department Commander, who sent the following letter to Brigadier General Robert S. Abernethy, the Brigade Commander, a few days after the ceremony:

SUBJECT: Review for The President of the United States.
TO: The Commanding General, Hawaiian Separate Coast Artillery Brigade, Fort DeRussy, T. H.

1. It is with great pride that I pass to you and the officers and men of your command the verbal comments of the pleasure and satisfaction of the President of the United States on the fine showing of the Hawaiian Separate Coast Artillery Brigade in the review in his honor on July 26, 1934. To him and to all present the obvious efficiency with with the spectacle was staged gave a renewed knowledge of the fine efficiency of your command.

2. My own observations, as each succeeding rank passed in review, were ones of increasing satisfaction and pride. I know what careful preparation and training must necessarily precede such an excellent showing. Its consummation speaks itself for the efficiency of both officers and men.

The disciplined movement of your command to Schofield Barracks, amounting in itself to a major tactical operation, and involving the hurried assemblage of dispersed portions thereof and their dispatch without adequate opportunity, because of limited terrain and shortage of gas, for prolonged habit forming training, was a commendable success.

The orderliness and promptness of the initial formation for the review showed efficient planning and advance preparations.

The precision of marching; the uniform intervals and distances; the excellence of the saluting; the correctness of dress; the fine physical condition of the men; the neatness of uniform; the appearance of equipment; and the obvious effort of every individual to do his best, attest highly successful training and superb morale and spirit.

3. It is rare that the military eye cannot detect many errors of omission and detail. This review was the most notable of all reviews I have witnessed for the absence of such errors. I can wholeheartedly state that for perfection of detail and general performance, the Presidential review was the best I have ever had the pleasure of witnessing. Will you kindly convey to the members of your command my commendation for their efficient performance and splendid morale and spirit. I am very proud to be their commander.

B. H. WELLS, *Major General,*
Commanding.

When you read the letter, please do not get the idea the Coast Artillery excelled everything else on the field. Of course we have our own ideas, but the Hawaiian Division, commanded by Major General Dorey, and the Air Corps, commanded by Lieutenant Colonel Gerald Brant, did their jobs well. They received letters similar to the one above quoted.

The President was enthusiastic and greatly impressed. He asked to meet all of the Regimental Commanders and their Ladies immediately after the ceremony. In fact, he was most cordial with everyone with whom he came in contact.

At 11:00 a. m., Saturday, July 28, the President left the Royal Hawaiian Hotel and called on the Governor at the Palace to bid "Aloha" to the representative of the people of Hawaii. While there he delivered a short address to the people of the Territory, wherein he declared that the Chief Executive of the Nation recognizes these Islands as being an integral part of the United States. The remarks about the Army and Navy will be interesting to the readers of the JOURNAL, which I quote here:

"And in leaving, I want to say a word of congratulation on the efficiency and the fine spirit of the Army and Navy, of which I am Commander-in-Chief. They constitute an integral part of our National Defense, and I stress that word 'Defense.' These forces must ever be considered an instrument of continuing peace, for our Nation's policy seeks peace and does not look to imperialistic aims."

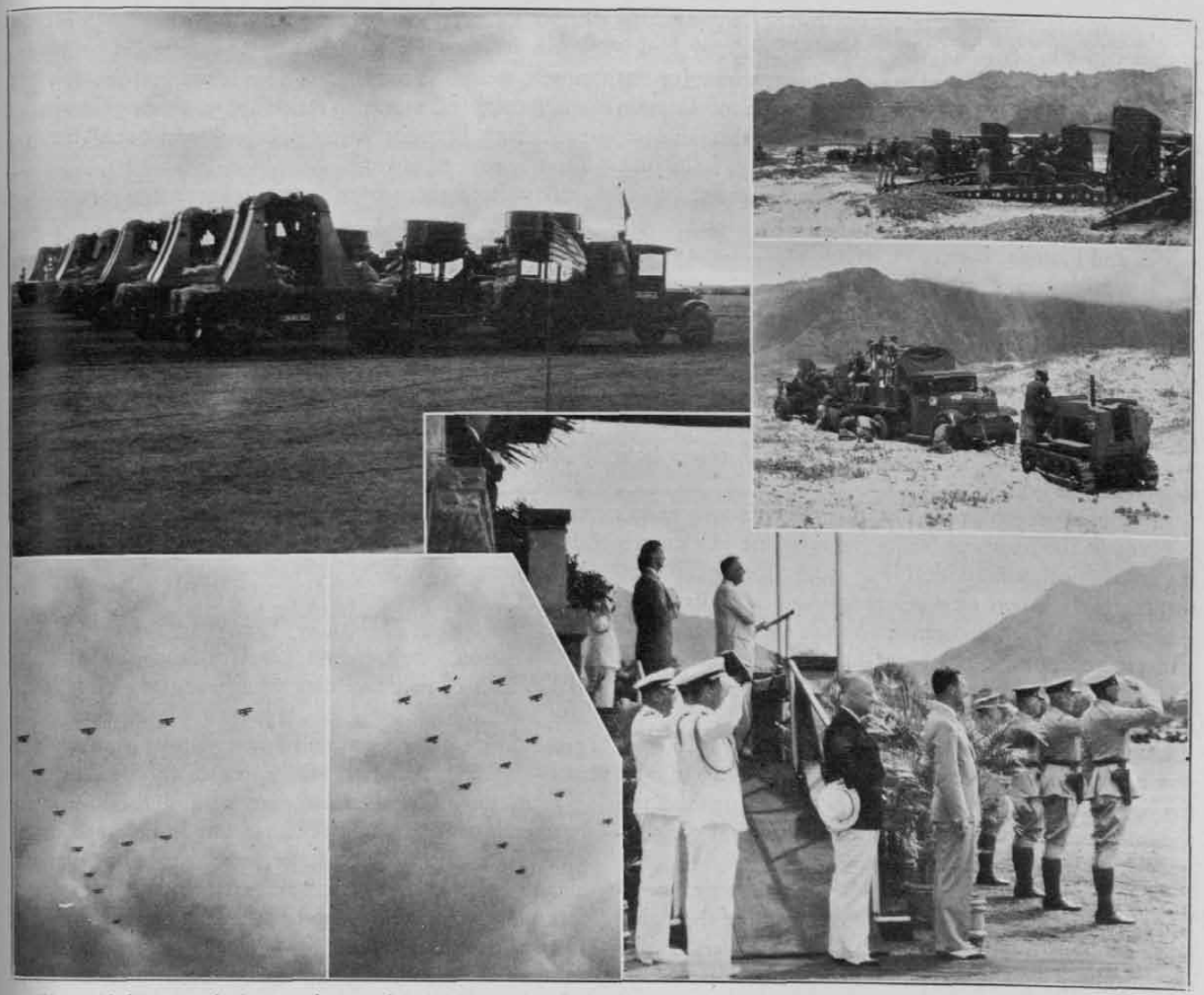
It is easy to see that the Army and Navy in Hawaii made a very fine impression on our President.

At the pier a special Escort of Honor, under the command of Major Franklin Babcock, 15th Coast Artillery, rendered the honors. The President then marched aboard and was received by the Navy again for his trip to Portland. As the *Houston* pulled away from the dock, the Hawaiian Division Band, composed of the six bands stationed at Schofield Barracks, numbering over 300 pieces, completely surrounded by the guidons of the Hawaiian Division, played several marches and that stirring melody of Hawaii—that song that tourists never forget—"Aloha Oe." As the cruiser cleared the harbor, a battery at Fort Armstrong boomed the 21-gun salute, and the President was officially on his way. As the cruiser rounded Diamond Head and nosed its way north-eastward, the Air Corps of the Army and Navy, about two hundred planes, passed overhead and rendered a parting salute.

The President of the United States may have occasion to make many trips, but for novelty and sincere affection on the part of the people, he will find none to compare with his recent trip to Hawaii.

HONOLULU SECTOR ATHLETICS

THE Fort Shafter baseball team, with Captain Edward W. Timberlake and First Sergeant William C. Ghan in charge, won the Army Baseball Championship of the Honolulu Sector for the third year in succession. The Shafter team will next engage in a three-game series with



Upper left: Moonlight Cavalry, 64th C.A. Upper right: Captain Brey's Battery prepares for action; and below, the same battery passing through defile in sand dunes to go into firing position. Lower left: Planes forming letters "F R" in honor of the President. Lower right: The President salutes the colors.

Wheeler Field, the champions of the Hawaiian Division Baseball League for the Department title. Following is the final standing of the teams in the Sector Navy Baseball League:

Team	*Played*	*Won*	*Lost*	*Percentage*
Fort Shafter	21	17	4	810
Submarine Base	21	17	4	810
Luke Field	21	16	5	762
Fleet Air Base	21	12	9	572
Fort Kamehameha	21	8	13	391
Staff	21	7	14	333
Harbor Defenses of Honolulu	19	4	15	210
Marines	19	1	18	190

Lieutenant Charles W. Gettys, the Sector Athletic Officer, has called for representatives from the various posts to organize the Sector-Navy Swimming League. Six organizations have entered teams as follows: Fourteenth Naval District, Luke Field, Fort Kamehameha, Fort Shafter, Harbor Defenses of Honolulu, and Staff. During the past two years, interest in swimming has mounted greatly. Last year, the Honolulu Sector Swimming Team defeated all competition in the Hawaiian Islands, and Corporal Eddie Alvarez of Fort DeRussy was sent to the National A.A.U. Outdoor Swimming Meet in Chicago, where he placed third in the high-diving competition.

Following is the standing of the teams at the beginning of the swimming season in the competition for the Sector Athletic Supremacy Trophy:

Post	*Boxing*	*Basketball*	*Track*	*Baseball*	*Total*
Ft. Shafter	957	600	1000	1000	3557
Ft. Kamehameha	1000	800	990	428	3218
Luke Field	171	1000	667	857	2695
H. D. of Honolulu	603	000	561	222	1386

Brigade Gunnery

By Captain William F. Lafrenz

UNDAUNTED by the scores turned in last month by the 64th C.A. Searchlight Batteries, the "additional assignment" searchlight batteries of the 41st C.A. (RY) under the leadership of Major Ira B. Hill, decided to show the Brigade, and the 64th Coast Artillery in particular, what they could do, using the old long horns and the Cadillac Searchlights.

Handicapped by this old equipment, harrassed by

other planes leaving and returning to the landing field (located in the center of the defended area), and incidentally trying to pick up their own plane through holes in the clouds, Battery A, under command of Captain Fred Koerbel, and Battery B, Captain Ed. Stillman commanding, held their exercises near Pearl City, from June 22 to 27, 1924, and turned in the following scores:

1st Platoon, Battery A, 41st C.A..... 92.7
2nd Platoon, Battery A, 41st C.A....109.4
1st Platoon, Battery B, 41st C.A.....120.9
2nd Platoon, Battery B, 41st C.A....106.7

Immediately following these exercises, the 64th Coast Artillery moved into camp at Bellows Field, Waimanalo, on July 2, 1934, to conduct its annual gun and machine gun practices. This move is a departure from the practice of previous years, in which the 64th Coast Artillery held its practices at Fort Weaver.

Encamping at an Air Corps Field, with two planes assigned to the regiment for its exclusive use in conducting its practices, was an ideal long sought for by this regiment, and the report on this arrangement is awaited with great interest by all concerned. While the results of the target practices have not been turned in at the time of this writing, they looked good, and a number of sleeves show evidences of direct hits.

One of the most interesting events during this period, was a demonstration conducted by the regiment, with the coöperation of the Air Corps, for the information and the instruction of officers from other branches of the service, the Navy, and the civilian community.

The program started at 4:30 p. m., with a tactical problem of the defense of a troop column marching through a series of defiles. Battery L, 64th Coast Artillery, under command of Captain William G. Brey, marching in rear of an advance guard, pulled out of column and took up a firing position halfway between two defiles. The transition from the march formation to firing position was accomplished in record time, and thirty minutes after pulling out of column, the battery repulsed a bombing formation (represented by a towed sleeve) which had appeared unexpectedly from the sea. The smoothness of the entire operation, from the placing of the guns and director in firing position and the orientation of the guns and director to the ultimate defeat of the raid, was indicative of the high state of efficiency of the organization.

At the conclusion of the problem, ably described by that master of the microphone, Captain Edward W. Timberlake, 64th Coast Artillery, the interested spectators were allowed to inspect the equipment of this battery and that of Battery I (the machine gun battery), set up nearby.

After everyone had asked all the questions they could think of, a report was received that a large enemy bombing formation was approaching from the sea. As it came over the horizon, flying high and in the clouds, fire was opened on the leading formation by Battery "B," 64th Coast Artillery, under command of Captain Oliver B. Bucher, located about a mile down the beach from Battery "L." As the formation came within range of the latter, its guns joined with those of Battery "B" in an endeavor to repulse the enemy. This battle practice was very spectacular and met with much approval from the spectators. Both batteries were "right on" and the sleeve was literally torn to ribbons.

A wait of about twenty minutes was well covered by the patter dispensed by "Orator" Timberlake. By this time it was dark and an ominous cloud bank had crept up over the horizon. An enemy bombing raid was staged against an imaginary defended area in our rear. Sound locaters followed this formation through the clouds and as the formation entered a clear space for only a short time, Battery "B" opened up, and another $200.00 silk sleeve was shot down and dropped into the sea.

Following the bombers came the hedge-hopping attack planes, which were met by the machine gun fire of Battery "I." Fifty caliber tracers found the range and a deadly fire was poured into the formation. This concluded the demonstration.

Fort DeRussy Transformed

By Lieutenant Clarence M. Mendenhall

LOVERS of Fort DeRussy who have not seen it lately wouldn't know the old hole now. That waste of algeroba, date-palm, coral and swamp-land "Mauka" (toward-the-mountains), is nearly metamorphosed.

First, some 900 algeroba, date-palm, and opuiua trees and scrub were yanked out by tractors and cleaned up by C.W.A. workers. A grove of large date-palms was left along Saratoga road. Sixty-three large date-palms were transplanted, screening the back side of the buildings on Kalakaua Avenue.

Second, top soil from Punch Bowl was hauled in and spread by C.W.A. workers to a beautiful level grade—150,000 cubic yards in five months.

Third, six lines of a semi-automatic sprinkling system were installed, covering a little more than half the area designed for the Hawaiian Separate Coast Artillery Brigade Parade Ground.

Fourth, Kalia Road (main road through the post) was widened to a four-lane boulevard.

Fifth, a work of art in the form of a cut rock portal and wall on Kalahaua Avenue was built. At the same time the baseball diamond was regraded, grassed, parked, and roads and parking spaces built.

Sixth, the boxing arena and carpenter shop were razed. The boxing arena is being rebuilt with adequate drainage and parking facilities in the vicinity of the Corral (removed in 1932), and the carpenter shop is taken care of by a large addition to the back of the Utilities Building (in rear of Randolph-Dudley enclosure), thereby concentrating all utilities.

Future projects that are within the means of actual present set-up of men and money are: construction of a quarter-mile race track and athletic field; salvaging and rebuilding lower warehouse and truck shed, gasoline station, and old stables, into a group of three buildings to

back on Waikiki Amusement Park for a new gas station, searchlight truck shed, and storehouse and dressing room for athletics; construction of a stone wall and gate from a new entrance at John Ena-Kalia Road Junction to the North Gate; and completion of grading and top-soiling the remainder of the entire area (75 acres).

We need money to complete the watering system. We may get it, but if we do not, we have transformed a back yard Kiawe thicket into a monument of surpassing beauty —a monument to the energy of Colonel Steele, to the generosity and broad vision of Mr. Lester McCoy, and to the life-blood of interest-in-the-job sweated out by the rest of us. No, you would not know the old hole now.

Overs and Shorts

Many new officers have been assigned to duty in the Brigade, arriving in September, October and November. These include: Lieutenant Freddie Scheiffler, Lieutenant A. B. "Duke" Miller, Lieutenant Geo. R. "Kamaaina" Carey (he was born out here), Lieutenant Colonel Peter H. Ottosen, Captain Jimmie Jacobs, Lieutenant Charles N. Branham, Lieutenant Wallace H. Brucker, Captain Arthur K. Chambers, Colonel Geo. L. Wertenbaker (who will be the Commanding Officer of the Harbor Defenses of Honolulu, Fort Ruger), Major Francis A. Hause, Captain Milton Heilfron, Captain William H. Sweet, Captain Le Roy A. Whittaker, Lieutenant Louis T. Vickers, Captain Geo. W. Rickers, Lieutenant Vernum C. Stevens, Lieutenant John A. Sawyer, Captain Frank J. McSherry, Major Edward P. Noyes, Major Gerald B. Robison, Lieutenant John H. Lewis, Lieutenant Freddie Keeler, Lieutenant Edgar N. Chace, Lieutenant Milton L. Ogden, Lieutenant W. T. Ashworth, Lieutenant Harry W. Schenck.

We are very happy to announce the marriage of Lieutenant Will K. Stennis to Miss Lillian G. Graft, at the Central Union Church, in Honolulu, on Wednesday evening, the 8th of August. It is also a pleasure to announce the marriage of Lieutenant Walter A. Rude to Miss Marion Craycroft, of Fresno, California. The best wishes of the entire Coast Artillery Corps go to our newly-weds, may their happiness be unbounded.

Colonel Avery J. Cooper, the Commanding Officer, the Officers and Ladies of the Harbor Defenses of Pearl Harbor, conducted an Aloha Review in honor of Colonel and Mrs. Harry L. Steele, who departed on the August 17th Transport for station at Fort Monroe, Virginia. Tea was served at the Officers' Club at Fort Kamehameha immediately after the Review.

Panama Canal Department News Letter

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

Fort Amador
COLONEL EARL D'A. PEARCE
4th C.A. (AA)

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

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

REMORSELESS time changes all things, even the assignment of the correspondent from the Canal Zone. My predecessor, being modest, declined to add to his contributions the prestige and glamour of his name. Now that official orders have transferred him to cooler climes, we feel that we are not violating any confidences by announcing that he was none other than Captain Parry Lewis. He handled a difficult job in a most excellent manner, and we hope that his facile pen (or typewriter) will not be permitted to lose its cunning now that the urge to write, supplied by official orders has been removed.

When Captain Lewis received his orders to return to the States he requested the Adjutant to appoint a successor as local news gatherer for the COAST ARTILLERY JOURNAL. The Adjutant, following an old Army custom, pointed a finger at me and said, "You're it. You have a lot of time. . . ." He explained that he meant "time" in this Department, not time on my hands, for with the operation of the two year law, we are all getting so many assignments "in addition to other duties" that we carry notebooks just to remember how many jobs we have.

The months of June and July called for reviews and inspections in quantity as well as quality, for we had the unique experience of entertaining the President and the Secretary of War at the same time. Anticipating these visits, the Department Commander ordered a review of the Pacific Sector troops at Fort Clayton on June 20, and a review of the Atlantic Sector troops at France Field on July 7. I have not heard the details of the Atlantic Sector review, except that General Fiske hald a critique similar to the one held at Fort Clayton, at which he expressed his pleasure at the appearance of the troops now that "tin hats" and blouses are a thing of the past, and promised bigger and better reviews in the future. His predictions materialized very shortly.

The Secretary of War arrived at Chistobal early on July 11, and was met by a guard of honor composed of Batteries "C," "F," and "H," 1st Coast Artillery. While the Secretary was en route from his reception to join President Roosevelt on the cruiser *Houston,* the guard of honor moved to join the remainder of the Atlantic Sector troops at Gatun locks to do honor to the President. While the *Houston* was transiting the canal, the Pacific Sector troops were massed at Milaflores locks. Turn about is fair play, and the age old custom was reversed. At both

places the Presidential party passed in review on the cruiser, saving us the extra effort of maintaining straight lines, intervals and distances.

The President was most complimentary in expressing his opinion of the appearance of the command and the Department Commander declared the following day a holiday. It was celebrated, in part, at Fort Amador by necessary fatigue so that the post would look its best when the President paid us a visit. As he left the Canal Zone on the evening of July 12, a Presidential salute was fired by the Amador saluting battery.

Secretary Dern made two visits to Fort Amador during his stay on the Isthmus. The first was on the evening of Friday the 13th when he watched a night drill from Flamenco Island. The drill was a success, notwithstanding the day and date, so either he brought us luck or 13 need have no terrors for us. The next morning he made a short tour of the post and fortified islands. Our regret is that he did not stay longer and see more. We were ready for him.

The following Tuesday we participated in a sector review at Fort Clayton in honor of Secretary Dern. The next day the Secretary flew to France Field where the Atlantic Sector troops were reviewed.

Beginning July 1, we dug out our old copies of T.R. 435-55 (the new one's have not been distributed) and are now busily engaged in target practices. Parry Lewis led off in the 2nd Battalion with a 14" gun practice. The final returns are not yet of record but the practice looked good, although the field of fire would not clear up until the Department and Sector Commanders who were to have been spectators went home to lunch. Battery "D" next fired a 155 mm. practice. Then Phil Taliaferro went into action, firing a series of practices with 155's using airplane data for tracking and spotting. This was followed by a 14" D.C. practice using the same fire control system. The films are not dry at this writing but there are obviously hits in the practice.

The 1st Battalion, 4th Coast Artillery, commenced antiaircraft firings with Battery "B." Ed King had just time to complete his practices before rushing for the gangplank of the *Grant*. At present the well-known argument is on regarding camera records versus visual spotting. We will record the results of the argument in the next letter. Battery "F" was next on the list for firing but further practices are postponed until we can get enough officers from the States to serve as officials. We are also short of men for gun crews.

The 1st Coast Artillery report that small arms instruction and range firing occupy a prominent place in the training schedules of all their batteries. We concur in this and add gunners examinations to our schedules. The examinations start this week with each of us serving on at least two sub-boards. We still hope that when we have finished there will be appropriations for a few experts.

On August 1st Colonel Reeder presented the regimental baseball trophy to the team captain of the Battery "B" winning baseball team at a regimental review. The field was heavy due to rain the previous night but we slithered through the review without any reported casualties. The regimental basketball season has ended and the post teams are playing in the Sector series on both sides of the Isthmus. Fort Randolph is leading in the Atlantic Sector series. Golf continues as a major sport at all three Coast Artillery posts. The Fort Sherman golf course has been extended and much improved. Private Barney M. Leonard, Battery "C" 1st Coast Artillery, tied for first place in the New Isthmian Open Golf Tourney. Our Fort Sherman correspondent reports that though July was the middle of the rainy season, not a single day was too wet for play on the Fort Sherman course. We might add that our "liquid sunshine" (with apologies to our Hawaiian correspondent, Jack Lovell) at Fort Amador has not prevented continuous play here.

As has been intimated, we are short of officers and men thanks to the two year law. The *Grant* took another quota of "short-timers" who have not been replaced, but we are up to the law on departures. If the *Chateau Thierry* only brings us enough recruits we will be up to strength in enlisted personnel. We will have to miss a few more transports though before all the officer replacements arrive and O.D. tours do not catch us coming and going.

The Amador Officers' Club held an informal supper at the Club Miramar on June 22, for the officers scheduled to leave on June 30th. Another supper and dance was held at the Post gymnasium on July 27, for those officers leaving on the *Grant*.

The following officers have left these parts during the past two months for stations in the United States: Lieutenant Colonel Richard Donovan, Lieutenant Colonel Kelly B. Lemmon, Major B. L. Flanigen, Captain H. H. Newman, Captain George R. Owens, Captain Parry Lewis, Captain Edward King, Lieutenant C. V. R. Schuyler, Lieutenant E. F. Cook, Lieutenant N. B. Wilson, Lieutenant E. W. Hiddleston, Lieutenant J. F. Rodenhauser, Lieutenant R. J. Glasgow, and Lieutenant Larry Brownlee. Larry missed the boat at Balboa but the trains still run to Colon and we expect that he caught the *Grant* there.

We have also loaned Major Benitez to Department Headquarters to run the G-2 section and Captain Edgecomb to Pacific Sector Headquarters to help arrange reviews for the shock troops.

Newcomers who have arrived are: Major M. M. Kimmel, First Lieutenant N. B. Simmonds, and First Lieutenant W. V. Davis at Fort Amador, and Captain F. G. Epling and Lieutenant V. M. Kimm at Fort Sherman. They have all survived the first shock of mass formations for reviews, but we can still say "they ain't seen nothing yet." They can look forward to maneuvers next spring, if they aspire to be doughboys.

Colonel Clarence G. Bunker, Commanding Officer, 1st Coast Artillery, left for the United States on August 4th. His command was assembled at Forts Sherman and Randolph to honor him in a final review. He retires this fall after a long and successfud career in the Army.

Fort Monroe News Letter

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

COLONEL RUSSELL P. REEDER, 2d C.A.,
Commanding Harbor Defenses of Chesapeake Bay
and 2d Coast Artillery.

COLONEL GEO. L. WERTENBAKER,
Commanding 1st Bn., 51st C. A.

MAJOR FRANKLIN KEMBLE,
Commanding 3d Bn., 52d C.A.

MAJOR JOS. F. COTTRELL,
Commanding 1st Bn., 2d C.A.

By Major J. D. Powers, C.A.C.

IT is at the end of a long, hot and hard summer that this news letter is being written, and we hope that by the time it is published the weather will be cool and all activities back to normal. The Summer Training Camps have returned to "pre depression" strength, and we have had C.C.C. processing camps to handle and C.C.C. companies to organize. We still have officers out in the field with the C.C.C., and an ever mounting load of C.C.C. administration and property accounting to carry. The ban on civilian employees for post utilities continues in effect, so the load of painting, plumbing repair, carpentry, and post upkeep has to be carried by the enlisted personnel.

The Harbor Defenses have lost many officers, and even though they are replaced, it will be a long time before the new officers can take the places left vacant in the affection of the garrison. Colonel Harold E. Cloke is leaving us for Fort Scott, Colonel Wertenbaker for Hawaii, Lieutenant Colonel Glassburn for organized reserves in St. Louis, Major J. D. Brown for the Utah A. and M. College, Major Dingley to the C. and G. S. School at Fort Leavenworth, and Captain "Running" Waters to Georgia Tech.

The first class, U.S.M.A. Cadets, arrived at Fort Monroe early in the morning of August 9, to stay with us until noon on the 14th. Five days was a short period in which to teach them all about the Coast Artillery but it seems from their target practice records that we did not do so badly. While they were here they fired target practices on the 155 mm. G.P.F. guns and the 3" antiaircraft guns. They had only one and one-half days' drill, but they made very good gun crews in that time.

The half of the class who fired the 155 mm. guns made a record that would give a regular Army Battery a rating of "Excellent." The half of the class on the 3" antiaircraft guns fired a practice that was worthy of a great deal of praise. They knocked down one sleeve and put so many shots close enough to the target that it looked as though it could stay up only by overcoming the force of gravity.

Accompanying the cadets were several distinguished officers from the Military Academy, including Commandant, Lieutenant Colonel Simon Bolivar Buckner, Infantry. There was also a staff of Coast Artillery officers, under the supervision of Lieutenant Paul W. Cole, who acted as instructors in Artillery training. Last but not least, was the inevitable staff of tactical officers whose task it is to keep the cadets on the "straight and narrow."

We had all sorts of dances and social affairs while the cadets were at Fort Monroe and attractive young ladies seemed just to spring up from nowhere. No one has ever been able to figure out how the cadets find all these girls, but they do it somehow.

On Saturday night, August 11th, the midshipmen had a ball in the Chamberlin Hotel and the cadets had a dance in the Coast Artillery School building. Everyone predicted that we might have an Army and Navy football game on the parade ground but we were denied that pleasure. The Navy seems to be very dry this year, so there was not any reason to have too much gaiety.

After Saturday the cadets had no more military activities here. On Sunday, August 12, they visited the aircraft carriers, *Lexington* and *Saratoga*. On Tuesday morning they set sail for West Point on the U.S.A.T. *Grant*. We were very sorry to see them leave and sincerely hope that they enjoyed their stay at Fort Monroe as much as we enjoyed having them here.

On Sunday morning, July 29, General Tracy and Colonel Cloke assisted in the unveiling of two memorial windows in the "Church of the Centurion" at Fort Monroe to the memory of the late Colonel Easterbrook and Mrs. Easterbrook. The windows were presented by the Easterbrook children, and very appropriately were placed in the chapel here, as Colonel Easterbrook spent many years as Chaplain at Fort Monroe, and always had a deep affection for this post.

The 246th Coast Artillery, Virginia National Guard, were at Fort Monroe from August 11th to August 26th, for their two weeks of annual training. They were under the command of Colonel Alonzo F. Wood, Va. N.G., and were quartered in the summer camps.

While the National Guard were here they fired service practices on the 10" D.C. guns, 155 mm. G.P.F. guns, the 6" B.C. guns, and the 12" Mortars; some of the batteries made good scores.

On August 17 they were visited by the Honorable George C. Peery, Governor of Virginia, accompanied by General Malone and General Tracy. The escort of honor was praised and training activities inspected.

Last year this regiment was "washed out" by the tornado and tidal wave, so this year each battery kept a man on guard at night to turn out the troops in case of another storm.

It seems that the marriage bug has bitten another of our few bachelors at Fort Monroe. Second Lieutenant Charles

G. Patterson (class of '33) and Miss Elsie Powell of Hampton were married on the 25th of August. We wish them luck because it is all we have left after buying a gross of wedding presents for the other members of the post who have married.

Now that the summer camps are about over, we are settling down to our own target practices, which are to be held in September and October. While we only have half the normal allowance of ammunition, we expect to equal the excellent records made in 1932, the last year we fired regular practices. To our surprise, Battery C, 2d C.A. (Captain F. R. Chamberlain, Commanding) was cited in Army Regulations (AR 775-10) being mentioned specifically and given the allowance of an AA gun battery and also the allowance of an AA MG Battery. In the past this battery has been kept busy firing for the School and the Board, but from now on it will have a chance to compete for honors with the AA Batteries in the mobile regiments.

In October a battalion of the recently organized Fleet Marine Force from Quantico will come to Monroe for 155 mm. and AA MG firing. Incidentally they have airplanes as an integral part of the force. The other day they wanted to borrow a Cloke plotting board and some fire control equipment from us, so ordered a plane down from Quantico during the afternoon to pick up the equipment and take it back. We wonder how long it will be before the Coast Artillery has planes under its control, just as it now has motor transportation, mine planters, and tugs? Four marine officers are to attend the C. A. School this fall—the Marines wanted to send more, but were limited to four. They have organized a school of their own at Quantico covering many of the subjects taught at the C.A. School, and are using some of their officers who are graduates of our school as instructors. We understand that they are bringing their class to Monroe in October to witness the firings.

Captain Riley E. McGarraugh is to go out on the *Colorado* during September as an instructor on sound locators for the AA School which the Navy is conducting on the *Colorado*. Lieutenant Crichlow of the C.A. School, and Lieutenant Kelly from the Harbor Defenses, will attend the school as observers. We have had many invitations from the Navy to cruise with them, and to witness their target practices, but their firing seems to come at our busiest season, hence none of us have been able to accept their invitation.

This year the 622d C.A. (HD) staged an innovation in the training of reserve regiments. Lieutenant Colonel James B. Bentley, the Regimental Commander, believed that the time had come when a Reserve regiment no longer needed "babying" by the Regular officers. With the approval of the District Commander and of Major E. B. Gray, the Unit Instructor, Colonel Bentley prepared a training schedule for his regiment, and well in advance assigned each subject to one of his officers who was an expert in the particular subject chosen. The plan worked out splendidly, and the 622d proved that it was competent to handle its own affairs, and that in case of mobilization it would need no help in training officers and men for active service.

The Beach Club is now completed, and our dances are being held in the club and on the porch. The club is larger than the old one, and a great many more windows have been cut in the walls, making it quite cool inside. The concrete dance floor in front of the club is almost finished. The soft drink and sandwich bar is now on the club porch instead of in the kitchen—more convenient but not so "clubby" as when we all sat on the kitchen table and ate hot dogs and drank Coca Cola.

The open air swimming pool is even better than we expected. When Captain Cochran sunk well points to secure filtered salt water, he had no idea how cold this water would be. Even on the hottest days the water in the pool has been cold.

Corregidor Doings

Renovation of the Cine

By Lieutenant R. J. Woods, C.A.C.

OLD SUNSHINERS will be interested in knowing that the Topside Ciné at Corregidor recently has been the victim of extensive operations and treatment. Not only has her face been lifted, but her exterior has been repaired and additions made thereto, her interior thoroughly renovated, and her approaches made to conform to the latest ideas in modernization.

During the typhoon season the Topside Ciné has long been the despair of patrons who have been forced to run through the rain some sixty to seventy yards from trolley or automobile then huddle in a two-by-four lobby while tickets were being purchased. In addition, there was always the chance that the seats would be in some location where the sound could not be heard, since the building was constructed originally with the idea of tropical comfort first and acoustics last.

Now all this is changed, thanks to a far-sighted Ciné Council.

First, it was decided to do something about the sound reception of talking pictures. A study of the theater was made and some five thousand square feet of "acousti celetox board" were purchased and installed. This board is specially designed to absorb a certain percentage of the sound and prevent the formation of echoes.

The remodeled Ciné at Corregidor.

Then it was agreed to redecorate the interior in buff and ivory. This was done, wash paint being used, and the final result greatly enhances the appearance of the walls.

An addition was built to the front, one story high, enlarging the lobby into what might be called a foyer. Two new ticket booths were construtced, and best of all, facilities for entrance from the trolley line, through a station at one end of the new addition and from private automobiles via a porte-coché at the other end. This porte-coché is reached by a concrete U-shaped drive from the main road. Due to the large increase in the number of private cars on Corregidor in recent years, and the consequent need for increased parking space, the main road has been widened opposite the Ciné and an automobile park constructed.

It may not be amiss at this time to give a somewhat sketchy account of the history of the Ciné—a true Corregidor institution, differing in many respects from any other army post theatre—and to show how it operates.

"Sketchy" was used advisedly, for there are very few documents relating to the history of the "Cinematograph," as it was called in those early days of the flickers, and much of our information might certainly be classed as hearsay.

However, we have reason to believe that the Ciné was first established about March of 1910. This theatre was at Bottomside, "near the Bay," and was operated by a Mr. James A. Scott as a concession of the Post Exchange.

It appears that Mr. Scott's rôle was limited to that of the original entrepreneur. It is indicated that his connection with the moving picture business on Corregidor came to a close in November of 1911. At this time the Division Commander, Major General J. Franklin Bell, purchased from his private funds the rights of Mr. Scott and paid off the claims of his many creditors. The Ciné continued in operation, reports being rendered monthly on financial status to Division (now Department) Headquarters by the "Officer in charge of the Theatre."

This control from Manila continued until August, 1912, when General Bell generously turned the Ciné over to the Commanding General at Fort Mills, with the stipulation that any profits derived be expended for the benefit of the garrison. General Bell well realized the advantages of establishing the Ciné as an organization distinct from the Post Exchange, and the desirability of making available thereby to this isolated garrison what is in effect a "community fund."

This fund is expended for the support of the schools; the maintenance of trained nurses; the provision of various forms of athletic facilities, and for other items too numerous to mention.

Of course, much of the profit from the Ciné has gone back into the business—into the purchase of new and better equipment for the theatres. Many years ago projection machines were installed at Forts Hughes, Frank and Drum in order that the men on duty at these small stations might have amusement three nights a week.

In 1914 the Bottomside Ciné was destroyed by fire. The insurance carried, however, was sufficient to reconstruct the building. Late in 1914 the Topside Ciné was opened. At first, a room was fixed up over the Post Exchange. Trade became too heavy for this room, and a building was erected on the southeast corner of what is now the parade ground. This building remained until 1926, when it was torn down and the present fine reinforced concrete building constructed at the instance of Brigadier General F. M. Caldwell.

In a letter of General Bailey's dated February, 1915, we learn that "even with these two theaters now the places are crowded every night and upon occasions hundreds of enlisted men stand in line outside to try and get seats." Apparently, movie fans were as rabid in 1915 as they are today.

About this time the garrison at Fort Mills was being greatly increased and there was a considerable body of infantry stationed at Middleside. Accordingly, General Bailey approved the construction of a third theatre, which was built about March, 1915, just below the present Middleside car station and close to where the Post Studio is now located. This building was torn down about 1923. It has never been replaced, as the Topside and Bottomside Cinés are able to care for the present trade.

In 1915, not only moving pictures were being presented, but also what General Bailey was pleased to call "Real High-Class Vaudeville." No vaudeville is shown today, but the Topside Ciné has a well-equipped stage on which the Army Relief Committee presented recently the original musical comedy: "Geneva Jitters," and the Corregidor Players gave the three-act farce: "The Whole Town's Talking."

At present, two shows of the same picture are run nightly at Topside, and the next evening the same show is given at Bottomside. Pictures are usually obtained within ten days after first run in Manila.

Admission? Less than you would suppose. Reserved seats, 20 cents; general admission, 12½ cents; children, 5 cents.

THE PEACE OF A NATION *does not depend exclusively upon its own will nor upon the beneficent policy of neighboring powers; and that nation which is found totally unprepared for the exigencies and dangers of war is criminally negligent of its honor and its duty.*—ANDREW JACKSON.

NEWS AND COMMENT

The Coast Artillery Song

IN the preceding issue of the COAST ARTILLERY JOURNAL it was predicted that we would be able to make full pronouncements concerning the long awaited official Coast Artillery song. For once we are able to make good on a promise, and the song is reproduced elsewhere in this issue. We hope that it will speak for itself and will prove a boon to the Coast Artillery Corps for years to come.

It may be of interest to our readers to know something about the history of the project and the trials and tribulations through which it has passed. From the inception of the idea the pathway has not been strewn with roses. It has encounterd some adverse criticism, it has met with procrastination, delay, inertia and a host of other enemies all of them bent upon delaying its progress or strangling it in infancy. The task that confronted Mohammed in moving the mountain was no greater in comparison than th difficulties confronting those whose task it was to bring the plan to a full fruition.

It will be recalled that other arms of the service have a distinctive song, the best known of these being "The Caissons go Rolling Along" and "O'er the Broad Missouri." It was felt that, in this respect, the Coast Artillery Corps should be on an equal footing with its sister arms. Several attempts have been made to bring out a Coast Artillery song; the best known of these compositions was one which made its appearance during the World War but this, like all the others, was open to the serious objection that the lyrics had been adapted to a well known and popular musical score, therefore, at best this song was only half "Coast Artillery."

At a meeting of the Executive Council of the Association held in the early part of 1933 it was decided to offer cash prizes for the lyrics and music of a Coast Artillery song. A cash prize always stimulates human endeavor and it was hoped that something worthwhile would result. It was pointed out at the time that a musical hit to catch and hold the popular fancy and favor is more the result of accident than design. This is borne out by the fact that of the thousands of compositions produced annually only a very small percentage strike a responsive cord and are elevated to any degree of popularity. The announcement of the contest brought forth 18 contributions. Some of these consisted of lyrics only, others of lyrics adapted to popular musical scores. Several consisted of music only. A committee was appointed by the President of the Association to make recommendations to the Council for the award. This commitee formulated the following hypotheses as outlining in a broad general way the requirements to which the winning number should conform.

a. It should be an inspiring military march that would instinctively quicken the pulse, raise the head, expand the chest and cause tired soldiers to pick up their feet with less effort.

b. It should be an original and distinctive Coast Artillery production. (Lyrics adapted to existing popular airs did not seem to fill the bill.)

c. The score was considered to be more important than the lyrics, for the reason that it is easier to fit words to music than vice versa.

The words as published elsewhere in this issue are subject to change. It is not unlikely that they can be revised to more nearly portray the record of glorious achievements of the Coast Artillery. Will some poet laureate come to the front with his ideas as to what they should be? The JOURNAL will publish all helpful suggestions.

All entries, without name of author, were submitted to the committee on award. Each member of the committee reached his conclusion and recommendation independently of the others. Subsequently at a meeting of the committee the merits and demerits of the few outstanding numbers were considered. In this the committee had the benefit of the advice and suggestions of a nationally known musician. As a result of all of this painstaking effort the committee recommended to the Executive Council of the Association that the first prize be given to Messers J. H. Hewett and Arthur H. Osborn, the latter is a lieutenant of the New York National Guard. Their composition is dedicated to Major General John W. Gulick, former Chief of Coast Artillery under whose regime the project took definite form. It may not be amiss to record that the co-authors have produced a number of song hits among the better known of these are the following:

The Princeton Cannon Song.

The Guard of Old Nassau.

The Mummy March and a Brigade March, dedicated to the Coast Artillery Brigade, N.Y.N.G.

We are sorry that there is no second prize, therefore the best we can do is to give honorable mention, and all the distinction that this carries, to the composition entitled "The Coast Artillery," words by Major Edward B. Dennis and melody by Mr. Kurt Freier.

The committee on award desires to make due and grateful acknowledgement to Captain W. J. Stannard, leader of the army band, and to Major R. J. Hernandez, Editor of the *Quartermaster Review*, for their painstaking efforts, valuable assistance and helpful suggestions in assisting the Coast Artillery song to emerge from its cocoon and to develop the full statute of an accomplished fact. To Major Hernandez belongs the credit for the excellent band arrangement now in course of production. This we hope will become nationally popular, certainly it should be included among the repertoire of all Regular Army, National Guard and R.O.T.C. bands.

The Blue Ribbon Winner

TO First Lieutenant Gwyn Perkins Rees, 6th C.A. Res., belongs the signal honor and distinction and all the other similar descriptive adjectives which we command for not only being the honor man in the Ninth Corps Area but also the officer who, insofar as can be determined from official records, has earned the greatest number of credit hours by means of completed extension school sub-courses during any 12 month period. Considering that the school operates for only 9 months of the year it is evident that Lieutenant Rees maintained an average of 95.3 hours per month throughout the year. This monthly average would not be considered a poor accomplishment for the entire year and it becomes almost phenomenal when we consider that it is more than three credit hours each day, Saturdays, Sundays and holidays included. We wonder how many gallons of midnight oil were consumed, how many hours of sleep missed. These questions we will leave for Lieutenant Rees to answer. It should be remembered that he was not out of a job and, therefore, seeking ways and means to fill in the time of his enforced idleness. On the contrary he was fully employed on the full time duties of a sergeant, Hq. Battery 6th C.A., a job which in itself must have consumed nearly all of the working hours of each day.

Lieutenant Rees, 6th C.A. Res.

Lieutenant Rees was born and educated in England. He holds a B.S.C. from St. Magdalen's College. He has been examined and recommended for promotion to the grade of captain, C.A. Res. His average rating on all completed extension school courses is 97.4. At the present time he is preparing to take the Command and General Staff School extension course. We wonder what he will do when, like Alexander, there are no more worlds to conquer.

* * *

What One Officer Thinks of Small Arms Firing

THE EDITOR, COAST ARTILLERY JOURNAL.

Dear Sir:

I am not entirely familiar with the editorial scope of the JOURNAL. It appears to me, however, that any subject or thought good for the service and particularly for the Coast Artillery would be suitable for discussion in the JOURNAL. Further, that officers of all grades should point out to you, as our quasi-official spokesman, improvements in our training which occur to them. These thoughts urge me to write the following:

This summer we of the 14th Coast Artillery were obliged to cause our men to fire "Instruction Course D" with rifle and pistol. We had to tell the men that the scores could not be counted for the purpose of qualifying and obtaining medals. A few weeks later the R.O.T.C. came to Fort Worden for their practical training. During that time they fired "Course D," and those who qualified were issued the prescribed medals. Our men were cognizant of these facts.

At present one battery of the 14th C.A. is engaged in a mine practice. It will load and fire one service mine. The cost will be several hundred dollars. Mine work with sub-mines comes nearer to the actual service condition than any other "simulation" we have in training. It appears to me that the only advantage of handling the service mines is to prove that they are properly loaded. Five mines are planted in a nineteen mine group and one only of these is fired. The tests are the main proof that the work has been done properly. The only other advantage that can be urged in favor of firing a service instead of a sub-mine is the moral effect of seeing and hearing the explosion.

There is nothing about having a shoulder pounded blue and black for "instruction only" and then having to swab a .30-cal. bore for a week that is likely to raise the morale of the average soldier. And, after all, there is nothing more embarrassing to any soldier than to have to admit that he has had practically no experience with the weapon he handles most, although he is in the Coast Artillery and not normally expected to function in the rôle of Infantry.

Why not use the cost of the mine to train the men with the rifle? It appears to the writer that nothing would be lost. Certainly much would be gained in the way of pride in the rifle and in the ability to shoot—which is still a prime requisite of any soldier. The writer is aware that the saving on mines alone would not suffice to qualify the Coast Artillery with the rifle, but with the small allowance already made it would go far. Certainly some other savings could be made to augment the budgeted amount required for rifle firing.

The writer is not an expert shot, nor is shooting a hobby with him. But he does believe that morale is the greatest factor in the handling of men, and that men properly handled will do any job creditably. He believes, further, that rifle qualification could be made a big item in increasing morale instead of a drag on good spirits as it now is. This goes also for pistol shooting.

The above thoughts are submitted to you, not as a complaint against the present training scheme, but as a suggestion which appears to me to be profitable and logical.

Very truly yours,

C. L. PARTIN,
Second Lieutenant 14th C.A.

Editor's Note: THE COAST ARTILLERY JOURNAL is the proper medium for the exchange of thought. Its columns are open to anyone who has ideas for the improvement of tactics, technique or training. We welcome contributions, and we hope that some one who does not agree with the idea expressed will make it the target for his heavy artillery and turn loose a broadside. Fire at will.

Try This

ARE your shoulder knots, aiguillette and similar insignia tarnished or in need of cleaning? If so try this; you will be surprised at the results: Make a heavy soap suds with luke warm water and ivory soap. To each pint of this add one tablespoon full of household ammonia. Immerse the article to be cleaned in this solution and thoroughly scrub with a soft brush. The insignia will look like new and will not be injured by the bath.

The Coast Artillery Goes to School

FOLLOWING is a roster of the instructors and student officers now on duty at the several service schools and other institutions of higher learning. The total number happens to be an even 100. This is approximately one-tenth of the officer personnel of the Corps.

Army War College

INSTRUCTORS	STUDENTS
Lt. Col. J. S. Pratt	Lt. Col. Robert C. Garrett
	Lt. Col. Olin H. Longino
	Major Carl E. Hocker
	Major LeRoy Lutes
	Major Earl H. Metzger
	Major George R. Meyer
	Major Robert M. Perkins

Command and General Staff School

	1933-35 Class
Lt. Col. Horace F. Spurgin	Major Christian G. Foltz
Lt. Col. Edward N. Woodbury	Major Rollin L. Tilton
Lt. Col. Eugene B. Walker	Capt. Wm. H. Donaldson, Jr.
Lt. Col. William R. Nichols	Capt. John T. Lewis
Major James B. Crawford	Capt. Porter P. Lowry
Major John H. Hood	Capt. Bryan L. Milburn
Major Frank L. Hoskins	Capt. Everard F. Olsen
Major Charles R. Finley	Capt. Walter L. Weible
	1st Lt. Bonner F. Fellers
	1st Lt. Paul L. Harter
	1934-36 Class
	Major Alexander H. Campbell
	Major Nelson Dingley, 3d
	Capt. Harry C. Barnes, Jr.
	Capt. Harold C. Mabbott
	Capt. John G. Murphy
	Capt. Thomas R. Phillips
	Capt. Andrew P. Sullivan
	1st Lt. George M. Badger
	1st Lt. Lester DeL. Flory
	1st Lt. Joseph E. Harriman
	1st Lt. Hobart Hewett

Coast Artillery School

Tactics

Major R. V. Cramer
Major H. R. Jackson
Major H. F. Grimm, Jr.
Major J. N. Caperton (Cav.)
Major E. L. Poland (Inf.)
Capt. W. W. Irvine
Capt. R. N. Mackin, Jr.
Capt. J. Beveridge, Jr. (A.C.)

Artillery

Major H. H. Acheson
Capt. J. R. Townsend
Capt. J. T. Campbell
Capt. L. L. Davis

Engineering

Major H. H. Acheson
Capt. D. W. Hickey, Jr.
1st Lt. R. W. Crichlow, Jr.
1st Lt. L. W. Bartlett

Extension Courses

Major W. S. Phillips
Capt. F. L. Christian

Enlisted Specialists

Major J. H. Cochran
Capt. R. W. Argo
Capt. J. T. DeCamp
1st Lt. L. M. Morton

1934-35 Class

Capt. Joseph B. Hafer
Capt. Leslie W. Jefferson
1st. Lt. Granger Anderson
1st Lt. Donald J. Bailey
1st Lt. Ben E. Cordell
1st Lt. Theodore J. Dayharsh
1st Lt. W. George Devens
1st Lt. Everett C. Dunham
1st. Lt. William H. J. Dunham
1st Lt. Burgo D. Gill
1st Lt. Noble T. Haakesen
1st Lt. Allison R. Hartman
1st Lt. Carl W. Holcomb
1st Lt. Francis B. Kane
1st Lt. Aloysius J. Lepping
1st Lt. Marvin J. McKinney
1st Lt. Nathan A. McLamb
1st Lt. William L. McNamee
1st Lt. Robert L. Miller
1st Lt. Clarence E. Rothgeb
1st Lt. Warren C. Rutter
1st Lt. Lawrence E. Shaw
1st Lt. Joseph P. Shumate
1st Lt. Peter W. Shunk
1st Lt. Arthur R. Thomas
1st Lt. Maxwell W. Tracy
1st Lt. Edgar R. C. Ward
2d Lt. James G. Bain
2d Lt. Oliver H. Gilbert
2d Lt. Everett D. Peddicord
2d Lt. August W. Schermacher
2d Lt. Merle R. Thompson
2d Lt. Robert F. Tomlin
Lt. Bohdan Mankowski, Polish Naval Officer

Advanced Technical Course

1st Lt. A. H. Bender
1st Lt. D. McLean

Naval War College

Major Richard F. Cox

Army Industrial College

Major D. S. Lenzner

Air Corps Tactical School

Lt. Col. R. R. Welshmer — Capt. B. F. Harmon

University of Michigan

Motor Transport Course

1st Lt. William L. McPherson

Massachusetts Institute of Technology

Electrical Engineering Course

1st Lt. Edward Barber

AS A POWERFUL NATION *not desiring war, we cannot accept the thesis that there is no such thing as neutral rights as opposed to belligerent rights. It will be through the curtailment of belligerent rights rather than through the negation of neutral rights that future war will be stamped out. There is apparently only one way to keep neutral rights respected. That is to make certain swift retribution, through sea power, of those who violate them.*—COMMANDER E. S. R. BRANDT, U. S. NAVY.

THE FOREIGN MILITARY PRESS

Reviewed by Major Alexander L. P. Johnson, Infantry

ARGENTINA—*El Caballo*—June, 1934.

The Argentine Army Remount Service began publication of a new periodical devoted to the horse, horse-breeding and related subjects. The first number of this interesting magazine, released under the auspices of the Ministry of War, contains 28 pages of highly informative material, profusely illustrated, which should prove of interest not only to cavalrymen and devotees of the horse in general, but to horse-breeders and more particularly to veterinarians. Distribution is free.

MEXICO—*Revista del Ejercito y de la Marina*—February, 1934.

A New Orientation of the Foreign Policy of Mexico. By Lic. Fernando Lera, ex-E.E. and M.P.

The recent revolutions have wrought momentous changes in the internal life of Mexico and inevitably affected Mexican international relations as well. The author notes in this article, first in a series on foreign affairs published by the important Mexican daily, *El Nacional*, that for the first time in her history Mexico has a chancery which inspires and directs a foreign policy based exclusively upon national interests and upon the new tendency of nations to seek the achievement of just aspirations in the international field by means of open diplomacy in which the interdependence of common interests imposes upon all nations a policy of mutual understanding, sincere coöperation and close economic collaboration.

Referring to the Pan-American Congress, which met at Montevideo in December, 1833, the author notes with satisfaction the important part played by Mexico, and the strong cohesion manifested by the American republics which heretofore had not had particular success in the discussion of international affairs. The author attributes the success of the Mexican delegation at Montevideo to the fact that the Mexican State Department has, for the first time in its history, become an effectively and efficiently functioning organization for the conduct of foreign affairs. He credits Sr. Puig Casauranc, Secretary of Foreign Affairs and formerly Mexican Ambassador to the United States, with effecting reforms whose far-reaching importance in the life of Mexico cannot be overestimated.

Some Observations on Our Military Preparedness. By Captain Luis Viñalo Carsi, Artillery—March, 1934.

Ascribing the social and economic ills which plague the world to an universal apprehension of impending war, the author seeks to determine the probable effects of World conditions upon the smaller nations which devote their attention to internal problems, and which do not seek to acquire new markets for their products. He points out the well-known fact that during the world war small nations were practically compelled to become partisans of the one or the other group or belligerent powers. To show what might befall Mexico in an hypothetical conflict between Japan and the United States, the author quotes Frederick A. Oliphant, Secretary General of the "International Society of the Americas," to the effect, that the Japanese navy and troop ships would silently cross the Pacific and establish a base of operation against the United States on the undefended coast of Lower California. "Only with the help of American troops fighting on Mexican soil would Mexico be able to repel the invader. Should, however, Mexico unaided offer resistance, Japan would resort to drastic measures, and Mexico would forfeit the possibility of favors in the future. If, on the other hand, Mexico were not to offer resistance, Japan might offer her certain concessions, but in that event the United States would be compelled to disregard international frontiers to defend its national interests. The United States would be justified in holding Mexico accountable for any damage that might result from Mexico's complacent attitude."

The author, in acknowledging the possibility of a situation such as Oliphant pictures, proceeds to examine the means at Mexico's disposal to meet the apprehended contingency. The Mexican infantry, he states, is armed with three or four different types and calibers of rifles and machine guns. This condition, he rightly concludes, is bound to entail grave consequences. Notwithstanding the scarcity of water in northern portions of Mexico, the author advocates the adoption of the water-cooled machine gun because of its greater capacity for sustained fire. Experience shows, he states, that the air-cooled machine gun becomes so over-heated in a short space of time that it cannot be fired again until it is cooled off sufficiently by artificial means. The author adds that as long as troops carry enough drinking water, there should always be an ample supply of water for the machine gun. Once the supply of drinking water is exhausted, nothing can save the army from a catastrophe.

The Mexican Army, the author notes, has no guns capable of high angle fire. The procurement of mortars for the artillery, he states, is imperative. Similarly hand and rifle grenades must be added to the infantry armament. The infantry also needs a satisfactory accompanying gun. Armored cars and tanks, the author observes, under conditions existing in Mexico would at best have but experimental value.

FRANCE—*La Revue d'Infanterie*—February, 1934.

THOUGHTS ON ANTI-TANK DEFENSE. By Lieutenant Colonel Henry Martin.

The defence of a center of resistance, the author writes, is based upon the barrage of automatic weapons of small caliber. Against tanks this system of defence is, in the author's opinion, inadequate. Assuming a situation in which the opposing forces are intrenched in positions about 100-500 meters apart, the author visualizes a daybreak attack preceded by a line of fast tanks, about 20 for each battalion front of 1,000 meters. Travelling at a rate of speed 16 km. per hour, these tanks would require but two minutes to cover the space of 500 meters, or less than 30 seconds to cross the space of 100 meters between the opposing trenches. The battalion not armed with anti-tank guns might succeed in putting out of action some of the tanks while they cross No-Man's land where it is widest, but on the whole, their efforts would prove ineffective.

The author observes that we might select our defensive positions so that they would be protected by natural obstacles in path of hostile tanks, such as dense woods, villages, bluffs, rivers or lakes. Of these, the author states, woods are the best, but he warns that care must be exercised to prevent the infiltration of enemy infantry. He cites the rôle of the woods near Cambrai in the battle of November, 1917, as a classic example. Villages and bluffs must likewise be defended against the ubiquitous infantryman. Water courses are serious obstacles to tanks. Although amphibian tanks might negotiate such obstacles, their armor plate is generally so light as to render them quite vulnerable to infantry fire. Again, he warns, the doughboy must be watched, for he alone is capable of overcoming any obstacle.

Artificial obstacles, such as mines, the author states, might serve a useful purpose in connection with permanent and semi-permanent fortifications. However, unless such mines are buried at some depth, the risk will exist that they might explode prematurely, perhaps as the result of the action of hostile artillery. On the other hand, a mine field adequately protected against premature explosion, yet provided with a system of effective control, would necessitate measures sufficiently elaborate to be incompatible with the normal flux of battle.

In the author's opinion, natural obstacles as a means of anti-tank defence are at best an expedient, while anti-tank weapons will render the main line of resistance indepenent of obstacles. In order to stop an assault wave of infantrymen, the author believes, the defence would require 20 automatic weapons to each 1,000 meters front. If we assume that if in the short space of time required by the tank to cross No-Man's land the anti-tank gun can put out of action two tanks, then it will be necessary, the author states, to provide at least ten anti-tank guns for every 100 meters front, in order to combat effectively a line of tanks attacking at intervals of 50 meters. However, the author adds, units protected by natural obstacles need not be equipped with such weapons, hence he concludes, anti-tank guns must be organized into regimental units available for attachment to battalions as the need for that arises. A divisional anti-tank gun company would be equally valuable in that it would enable the division commander to reënforce his regiments when needed.

The author believes that regimental anti-tank guns should be capable of going into action rapidly and to go out of action with equal dispatch. The divisional anti-tank gun battery might well be tractor-drawn for cross-country travel which would enable it to go into action wherever needed.

————*Revue Militaire Francaise*—April, 1934.

WHAT WE SHOULD KNOW ABOUT THE YUGOSLAV ARMY. By Lieutenant Colonel Delmas.

After acquainting the reader with the historic, ethnographic, geographic, economic and political background, the author renders a concise account of the strength, composition and equipment of the army of Yugoslavia. He states that with a population of 13 million, the annual contingent of recruits amounts to about 133,000 men of whom 80 to 90 thousand are actually enrolled in the army, while the remainder are allotted to certain schools, the gendarmerie and certain permanent cadres. Service is universal and compulsory. The maximum man power available in case of war is estimated at three million.

In time of peace the Yugoslav Army consists of five armies of 3-4 divisions, one regiment of heavy artillery and one maintenance company each. There are at present 16 divisions, each consisting of one infantry brigade of three to four regiments, one artillery brigade of two regiments and one train squadron. It has neither cavalry nor engineer troops. The Guard Division consists of one regiment of infantry, two regiments of cavalry, one regiment of artillery of two battalions and one company of engineers. Two cavalry divisions consists of two brigades of two regiments each, one battalion of artillery of three batteries, one cyclist battalion, one platoon pioneers, mounted, and one mounted signal troop.

By arms, the Yugoslav army consists of 58 regiments of infantry and 67 frontier guard companies. The infantry regiments consist variously of 2, 3 or 4 battalions, one machine gun company and one howitzer platoon armed with two 37 mm. guns. The battalion consists of four rifle companies and one machine gun company. The company consists of four platoons.

There are eight regiments of cavalry (8 divisional and 2 Guard). The regiment consists of four troops (escadron) and one machine-gun troop.

The artillery comprises eight regiments of field artillery of two battalions of two batteries each, except the battalions of the Guard division; 8 separate F.A. battalions of 2 to 4 batteries; 16 mixed regiments with one battalion of two batteries armed with howitzers.

The horse artillery consists of two mixed battalions of two field gun batteries and one mountain battery. The heavy artillery comprises five regiments of two battalions of three batteries each armed with 105, 150 and 155's;

one fortress artillery regiment of three battalions and one artillery park company; 3 separate battalions of G.H.Q. reserve artillery, two batteries each, armed with guns of heavier caliber than 155.

The Air Force consists of six regiments organized in two air brigades. The organization of an additional regiment is in project.

The Military Academy at Belgrade consists of two schools. The lower provides a three-year course for cadets who, upon graduation, enter the commissioned ranks as lieutenants. The advanced course provides two years' training for selected officers aspiring to general staff assignment. Special schools of the several arms and services offer various courses for the professional training of officers and N.C.O's.

The infantry is armed with the Mauser rifle, the Czechoslovak light machine gun, Model 1926, cal. 7.92 mm. and French heavy machine guns. Artillery matériel is of variegated type and caliber. Military aviation, already of importance, is growing in numbers and improving in quality from year to year. Although domestic industry is capable of producing a considerable portion of the needed military equipment, a great deal is still being procured abroad.

Having won three wars in succession, the Serb soldier has the victor complex. The Yugoslav race is excellent in body and soul. The army is rustic, animated by a live, patriotic faith, and it is being trained by enthusiastic leaders. It represents a powerful instrument of war, and it is being improved day by day.

GERMANY—*Luftwehr*—1 February, 1934.

THE AIR PROBLEM OF THE PACIFIC. By Major Baron von Bülow.

With the focal point of world affairs in the Pacific, the author looks to Japan as the probable source of the next armed conflict. He ascribes Japan's recent aggressive policy of conquest to a rapidly increasing population and a serious shortage of raw materials. In the author's opinion, success in Manchuria and Jehol represents the first though minor step in the realization of Japanese hegemony over the Pacific. Further effort in that direction, the author writes, will inevitably bring Japan into conflict with all powers bordering on the Pacific. China, torn by civil war, is unable to offer resistance. Japanese activities seriously menace the eastern possessions of Soviet Russia. The United States, the author states, views with alarm Japanese expansion towards the south, and it is equally concerned about its Far Eastern markets. Japan and Great Britain are right now in the throes of an economic war, while the Netherlands feel deep concern regarding the safety of their valuable possessions in the East Indies. Only France appears to be neutral, notwithstanding her colonial interests in the Far East.

The great distance which separates Japan from her chief opponents confers upon the Island Empire a great strategic advantage. A naval attack, the author believes, would present serious difficulties. Japan can close the Japan, China and Yellow seas by means of mines and submarines. The great difficulty in the problem of supply, in the author's opinion, precludes the possibility of Russian success in a prolonged campaign. With this situation in mind, the author seeks to determine the probable effect of air power upon the outcome of a theoretical conflict. He believes that the cruising radius of bombers, though ample for the European field, is totally inadequate for the requirements of the Pacific theatre of operations. He does not believe that peace time achievements in individual and mass flights indicate what might be expected under conditions of war. In his opinion, geographical position places Japan beyond the cruising radius of hostile bombers operating from the Asiatic mainland, for Japan's first concern in case of hostilities with Russia would be either to destroy or to take possession of Vladivostock and thus eliminate any possible threat from that direction. Although Soviet Russia is supposed to have an air force of about 1,000 planes in the Far East with about 200 of them near Vladivostock and Nikolsk with considerable cruising radius, the author is of the opinion that the great difficulty in the way of replacements and supply would preclude decisive air action against Japanese ground troops concentrating on the Asiatic mainland. On the contrary, he believes, Russia would be compelled to resort to exceptional measures to safeguard her single line of communications with the homeland against serious damage by Japanese aviation. Geographical factors thus confer upon Japan an advantage over Russia in the air. Russia is making a great effort, the author states, to increase her air arm to overcome the existing disadvantages, but that, in his opinion, cannot be done unless Russia succeeds in defeating the Japanese land army, and opens the way for establishing her own air bases in Korea or nearer to the coast of the Yellow Sea. This is unlikely, the author states.

China, the other serious opponent of Japan, has practically no aviation. The author notes, however, that according to Japanese reports, the United States entered into an agreement with China to supply the latter 800 pursuit planes and bombers by 1936. Moreover, he states, the United States will supply trained personnel to organize four schools for the training of Chinese aviation personnel. The author apparently failed to investigate the veracity of these reports, but assuming their accuracy, expresses the opinion that China equipped with American aviation matériel and provided with American-trained personnel would materially impair Japan's position.

The air policy of the United States, Japan's principal rival in the Pacific, the author writes, not only seeks to turn China into a formidable air power, but it is equally desirous of exploiting China for the benefit of American commercial aviation. He notes, that the "China National Aviation Company," which operates between Shanghai, Tientsin and Pekin, is American controlled. The author believes that this concern possesses far-reaching military importance. He states, that American control of China's military and civil aviation discloses a well-planned, syste-

matic effort to bring about Japan's strategic encirclement from the West. By means of a well-developed system of airports, he writes, the United States hopes to obtain a chain of "points d'appui" in the interior of China which would materially enhance America's influence in the military-political affairs of China.

The author discerns other important plans still up Uncle Sam's proverbial sleeves. Colonel Lindbergh's extensive air voyage last year evoked further speculation as to the real purpose of the United States. He states that Colonel Lindbergh held important conferences with the Soviet authorities with a view of extending American air lines into Siberia, which, if, when and as accomplished would result in Japan's encirclement from the north. On the other hand, the author believes, the America's strategical position to the east and south of Japan is not as favorable. Although the powerful American navy possesses or has under construction gigantic airplane carriers, and possesses refuelling bases in Hawaii, Guam, the Philippines and "other islands of the Pacific," it is hardly to be expected, he writes, that all of these carriers, whose complement of bombers could drop 100 tons of bombs, would actually attempt to close in on Japan for an attack. Japanese aviation and coastal defense, he believes, are adequate to prevent such contingency. The author states that American engineers are now preparing plans to increase materially the cruising radius of airplanes, and that a number of the latest models capable of long sustained flights are already stationed in the Canal Zone and the insular possessions of the United States.

Japan's military aviation, according to the author, consists of eleven air regiments with 2,050 airplanes and 22,000 officers and men. Japan considers this force inadequate for her needs and is planning material increases. Upon completion of her program, the author believes, Japan will equal if not exceed America's strength in the air—at least numerically. Technically, however, he states, Japan will remain considerably inferior to the United States. The author attributes three important war missions to Japanese aviation: 1. protection of the homeland against hostile attack; 2. support of the armies operating against Russia and China; 3. strategic attacks and raids beyond the seas. He observes, that Japan recently established an air base on the island of Saipan, in the Marianas, in close proximity to Guam.

In conclusion, the author writes, "if Japan possesses a strategic advantage in the air . . . . . her predominance at sea is even greater." Only joint operations of the American, British and Dutch naval and air forces hold out some prospect of success. Notwithstanding the aggressive character of American expansion, strangely enough, the author does not attribute any bellicose intentions to Uncle Sam. He does not believe the United States would actually intervene in a conflict in the Pacific because nothing would be gained by such an adventure, while it might entail a possible loss of influence and prestige. In other words, American neutrality is seemingly assured in the next conflict, and Russia once more allied to France, the author apparently discerns potent reasons why the Reich should team up with Japan for the show-down.

INDIA—*The Journal of the United Service Institution of India*—April, 1934.

CHINA'S CASE. By Captain A. E. Swann, I.A.S.C.

The author undertakes to present the Chinese point of view in the controversy with Japan. He regards the Japanese action and the inability or unwillingness of the Powers to stop it a serious menace to world peace. Japanese aggression in China, he states, is creating a situation pregnant with the danger of war on such a colossal scale that it is difficult to visualize what might be the end of it. China is arming, he writes, and is growing slowly and steadily more united. All she needs is unification and able leadership. Hatred of the Japanese is materially aiding the cause of unification.

Chang Kai Shek, aided by some fifty odd German officers, has laid the foundation of a new nationalist army, organized and armed on the Czechoslovak pattern. The training of the Chinese navy has been placed into British hands. Given funds and a certain amount of time, the author believes, the Chinese will drive the aggressor from their territory. With Russia as a possible ally, the storm may break much sooner than it would otherwise.

The author charges that most of the press comments and articles dealing with Manchuria have been tinged with a Japanese flavor. The Chinese point of view can hardly be heard. He takes issue with the various assertions of apologists for Japan and arguments advanced by the Japanese themselves on the subject. Contradicting the claim that Japan had saved Manchuria from Russian aggression and communism, the author points out that under Marshal Chang Tso Lin Manchuria was the only part of China which enjoyed a comparatively stable administration, and was more or less immune from civil war and disorder. Japan was not so much afraid of Russian aggression, he states, as of Chinese progress. Although Chang Tso Lin owed his rise to power to the Japanese, his subsequent independent attitude aroused the Japanese against him. He met his death on June 3, 1928, as a result of a bomb explosion while traveling on the Japanese South Manchurian Railway. His son, though considered a weakling and an opium addict, overcame his bad habits, and proved a greater menace to Japanese hopes than his father.

Unless the Japanese administration in Manchukuo becomes benevolent and thereby induces the anti-Japanese feeling to die down, and unless Japan sees the wisdom of coöperating with China rather than fighting her, the author concludes that the situation created by Japanese action in Manchuria will continue to menace the peace of the Far East. "The rising tide of Bolshevism may be a disturbing thought," the author adds, "but a rationalized Communism and Socialism will assuredly seem to many to be less alarming than economic domination by a Japan omnipotent in the Far East."

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.

SECTION I

Projects Completed Since the Last Issue of the Journal

It is necessary to state again that the number of projects completed since the last issue of the JOURNAL is not very great, but a few were rounded out and submitted to the Chief of Coast Artillery. Among them were:

PROJECT NO. 975.—TEXT ON TRACER CONTROL.—As stated in several previous issues of the JOURNAL, the preparation of this paper brought about much argument. The Board tried to include the recommendations of any person who had views on the subject other than utterly negative ones. After all this search, there appeared in the July-August issue of the JOURNAL an article by Major J. L. Daneker, C.A.N.G., setting forth some very good ideas. Had this article been available at the time, these ideas certainly would have been included in the text as submitted. It is understood that the Chief of Coast Artillery intends to have this text published and distributed to the service.

PROJECT NO. 999—TIME INTERVAL APPARATUS FOR MOBILE COAST ARTILLERY.—An outlined description of the apparatus tested under this project appears in the July-August issue of the JOURNAL. An analysis of the reports of the tests made with this apparatus causes the Board to feel that the development has not progressed to a point where any apparatus can be recommended for standardization. The Board recommended that two instruments, each with several modifications, be made up for mobile artillery use and that the modified apparatuses be submited for another test.

The desirability of adopting mobile time interval equipment for use of fixed armament has come up on several occasions. It would appear that any apparatus that can be made to operate effectively in the field could be used to even better advantage in the fixed installations, but there are other considerations entering the problem, and the Board is not as yet prepared to report on this phase of the development.

PROJECT NO. 1,000—INSTRUCTIONS FOR MARKING ANTIAIRCRAFT MACHINE GUN BULLETS.—In the last issue of the JOURNAL it was stated that this project was about completed. It was submitted to the Chief of Coast Artillery during July and it is understood that the pertinent parts thereof are to be published to the service very soon. If any success at all attends the present efforts to improve antiaircraft machine gun fire control, there should be more hits to count and this method should facilitate allocating those hits.

PROJECT NO. 1,001—SEARCHING AND ILLUMINATING SEARCHLIGHTS FOR ANTIAIRCRAFT DEFENSE.—As stated in the last issue of the JOURNAL, a questionnaire was sent out to several officers in an endeavor to obtain information on which to base recommendations as to the number and kinds of searchlights to be supplied to antiaircraft mobile regiments. The crux of this study was to strike a balance between:

a. The desirability of having all lights equipped as pilot lights; that is, equipped with sound locators and all related accessories; and

b. The difficulty of securing accessories in quantity.

As a result of the study the Coast Artillery Board's principal recommendations in the project were that, if practicable, all antiaircraft searchlights be pilot lights; and that, in any event, not less than four lights of a 5-light platoon or three lights of a 4-light platoon be pilot lights.

PROJECT NO. 1,004—SWITCHBOARDS, TYPES BD-71, BD-72, BD-76, and BD-82.—These four switchboards have been received and tested. They represent two types of construction. Switchboards BD-82 and BD-76 are alike except as to size, and are made up largely from parts more or less standard Signal Corps equipment. Switchboards BD-71 and BD-72 are alike except as to size, but these two are designed along lines different from BD-76 and BD-82, and should they be adopted as standard, would require more time for procurement.

All these boards are so similar to boards already in the service and already tested that only a short test was carried

out. The principal difference is the inclusion of the operator's telephone as an integral part of the switchboard. The Coast Artillery Board found that types BD-71 and BD-72 are not superior to types BD-76 and BD-82, and that the latter, with a few minor changes, are satisfactory. Recommendations in accordance with these conclusions were made to the Chief of Coast Artillery.

PROJECT NO. 1,006—RAILWAY MOUNT FOR 8-INCH NAVY GUNS.—The general discussion of this mount appears under the Coast Artillery Board Notes in the July-August issue of the JOURNAL. The Board reported, in effect, that this mount (modified 12-inch howitzer mount) falls considerably short of the ideal 8-inch railway mount. The Board's recommendations, in detail, were:

a. That the M1925E mount, after certain changes, be adopted as substitute standard.

b. Except in an emergency, no M1925E mounts be manufactured pending completion of the construction test of the new 8-inch mount now in the design stages.

c. That the design and test of the new 8-inch mount referred to in *b*, above, be given high priority.

SECTION II

Projects Under Consideration

PROJECT NO. 929—EXPERIMENTAL FIELD CHRONOGRAPH (JACKSON).—This project bids fair to be with us for some time as it appears improbable that the laboratory tests at Aberdeen Proving Ground can be completed at a reasonably early date. An old lady once said, concerning her sickly husband, that she hoped he would "get well or do something." Possibly the recommendation will be made sometime soon "to do something" concerning this instrument.

PROJECT NO. 953—HIGH SPEED TARGET.—The Board is more than ever convinced of the necessity, or at least the desirability, of such craft after reading the article appearing in the last issue of the JOURNAL by Captain R. E. McGarraugh, Coast Artillery Corps, under the title "High-Speed Target." Few harbor defense commanders are blessed with the availability of destroyers as was the one whose practices were described by Captain McGarraugh.

PROJECT NO. 964—TEST OF RUBBER-JACKETED SUBMARINE MINE CABLE.—This test cannot be completed for almost another year because there is involved a service test that was to extend over a total period of two years. Local tests involving use of the new cable by the mine command at Fort Monroe, Virginia, as well as electrical, abrasion and kinking tests, indicate that it is most satisfactory.

PROJECT NO. 973—TEST OF LACQUERS AND VARNISHES FOR USE AS RUST PREVENTATIVES.—In spite of adverse reports of laboratory tests made by Ordnance personnel on transparent lacquers and varnishes, the Board found two or three commercial products that for a time held out considerable promise of being satisfactory replacements for slushing oil on seacoast guns and carriages. An old German once complained that he didn't care what made his gas engine run, but he wanted the manufacturers to tell him what made it stop. The Coast Artillery Board has applied some of these lacquers and varnishes to bright parts of guns and carriages with more or less satisfactory results, but just now the immediate problem is how to remove such substances. If this part of the problem is ever solved it is felt that the Board can make a comprehensive report on this subject; but at the present time it is feared that lacquers and varnishes will prove to be of limited application as rust preventatives.

PROJECT NO. 987—LUMINOUS PAINTS FOR GUNS.—As stated before, this project involves the test of luminous paint placed at various points around the breech of the gun to guide the gun crew in night firing, when the piece is served without the use of exterior lights. Preliminary tests indicate that some such arrangement may be very useful. It is found, however, that grease and cleaning material soon destroys the luminous properties of the paint. The Board is making up some capsules with glass windows. These will be screwed into the breechface of the gun or attached at other places as required. The luminous paint contained in these capsules will be protected from grease and dirt and, furthermore, the capsules may be removed easily when not actually needed. Authority to make the alterations on the gun under test has not yet been received.

PROJECT NO. 989—AZIMUTH AND ELEVATION CHECKING DEVICES FOR 155 MM GUNS.—As tested, these devices were not very satisfactory. Some changes have been made, but no definite report can be made at this time.

PROJECT NO. 990—TEST OF DULUX, NON-OXITE AND OTHER PAINTS.—As stated before, these paints have been applied to guns and carriages at Fort Monroe, Virginia. To date none is showing any deterioration, but of course they have only been applied for a few months, and the test has yet many months to run.

PROJECT NO. 998—RANGE DISPERSION, SEACOAST GUNS.—This is a project undertaken by the Coast Artillery Board on its own initiative. The press of other work has prevented much progress being made on the subject. At the present time DAPE'S of all practices fired since the publication of the data on pages 45-48 of *Coast Artillery Memorandum* No. 10 are being compiled with a view to the evaluation of the part played by gun, carriage and projectile in producing dispersion. If any reader of this article has any pertinent information on this subject, such information would be most welcome.

PROJECT NO. 1,002—REVISION OF TABLES OF ORGANIZATION—MINIMUM SPECIFICATIONS AND INDEX FOR OCCUPATIONAL SPECIALISTS.—Work on this project consists largely in scrutinizing tables of organization and War Department publications on minimum requirements for specialists, in an effort to coördinate the various publications on the subject, with the ultimate view of getting the right man in the right place in time of war.

PROJECT No. 1,003—DRILL CARTRIDGES FOR 3-INCH ANTIAIRCRAFT GUNS.—These drill cartridges have been tried out in both the fixed and mobile antiaircraft armament. In the latter, armament extended drills have been carried on with the cartridge, but to date the results are not very conclusive. The rim of the cartridge base seems to be chipped up and deformed to a serious degree with comparatively little use. Of course, were it made of harder material the extractor would probably suffer instead of the rim of the cartridge, and this would be a more serious defect. Further tests will be made before report is rendered.

PROJECT No. 1,005—IMPROVED HOWLERS FOR TIME INTERVAL APPARATUS.—This project is closely allied to Project No. 999, "Time Interval Apparatus for Mobile Coast Artillery." These howlers were received too late to be included in the tests with the other time interval apparatus. They have every appearance of being satisfactory, but will be given a service test at the next firing of mobile armament to be carried out in this vicinity.

PROJECT No. 1,007—PAINT FOR CAMOUFLAGE OF SEACOAST EMPLACEMENTS.—This project was instigated by the Chief of Engineers by letter in which he requested the Chief of Coast Artillery to try out different kinds of camouflage paint on seacoast emplacements. The Chief of Coast Artillery directed the Board to proceed with this work. Preliminary studies of the subject indicated that following the matter to a logical conclusion would involve the expenditure of considerable money and labor, and that the experimentation would be required to be carried over at last one year. In view of these considerations further instructions were requested from the Chief of Coast Artillery. Reply to such request has not been received.

PROJECT No. 1,008—CLEANING AND PAINT STRIPPING DEVICES.—No exact computations have been made on the figure below, but the Coast Artillery Corps is charged with keeping in workable and presentable condition what is estimated as several million square feet of metal surfaces on guns, carriages and projectiles. These surfaces are exposed to all the variations of climatic conditions that obtain on this planet and there is a dearth of man power. A rusty, greasy gun may shoot as well as a bright, neatly painted gun, but the probabilities are in favor of the clean gun, and, furthermore, due to scarcity of personnel and ammunition, little opportunity is afforded in many cases to see whether or not the gun will fire.

Of still more acute importance to the harbor defense commander is the matter of keeping his armament in a presentable condition at the numerous and sundry inspections to which he and his matériel are subjected. To assist him in the care of his Class B and C armament, the Coast Artillery Board is attempting to coördinate a number of tests; e.g., Project No. 973—Transparent Lacquers and Varnishes; Project No. 990—Dulux and Non-Oxite Paints; and this project. In addition, the matter of using sand blasts is being considered. This instant test (1,008) is as yet rather inconclusive.

PROJECT No. 1,009—LAYTEX-INSULATED WIRE.—The Chief Signal Officer has developed a new field wire which is called "Laytex-Insulated Wire" and which seems to be an improvement over the old standard field wire (Type W-110). Ten miles of this wire has been received. For the purpose of test it has been connected to, and laid along with, six miles of the standard field wire. The time limit set for this test precludes any very conclusive report as to its durability, but the electrical features of the wire are being tested. So far the only improvement over the old appears to be the smaller overall diameter of the new wire, and the resultant reduction in the size and weight of a reel of any given length.

PROJECT No. 1,010—REPEATERS AND LOADING COILS FOR FIELD WIRE LINES.—These devices have not yet been received. They will be installed in the sixteen miles of wire already laid in connection with Project No. 1,009, Laytex-Insulated Wire. The repeaters are to be used to enable both telegraph and telephone communication to be carried on simultaneously, over the same circuit. The loading coils are intended to increase the length of field wire circuit over which satisfactory telephone communication can be obtained.

SECTION III
Miscellaneous

The following activities outside the scope of routine projects, have commanded the atention of the Board:

ANTIAIRCRAFT MACHINE GUNS.—The policy of the Coast Artillery Board as to antiaircraft machine guns was recorded in the last issue of the JOURNAL. With the approval of the Chief of Coast Artillery, the Board is bending every effort to prepare sights and other fire control apparatus to be used this fall at Fort Monroe in connection with the test of a quite sizeable amount of tracer ammunition made available by the Chief of Ordnance.

The Chief of Ordnance has shipped from Frankford Arsenal several pieces of fire control equipment. This matériel is being fitted to machine guns, and it is hoped to have the equipment ready before the ammunition arrives and by the time harbor defense troops can be made available to fire the problems. The development force of the Coast Artillry Board is very limited, and in order to have this machine gun matériel ready it has been found necessary within the last few days to relieve some personnel from the development of the high-speed target (Project No. 953) and assign such personnel to machine gun work. It is absolutely necessary that the machine gun tests be carried out this fall, and this will cause a delay in the high speed target development.

BLANK FORMS, CHARTS AND SCALES.—A fair proportion of the administrative work of the Coast Artillery Board, and a large proportion of the drafting work of the master gunners on duty with the Board, are devoted to the filling of requisitions for target practice forms and for

charts and scales for fire control of seacoast and antiaircraft armament. There seems to be considerable confusion in the Coast Artillery service at large as to how to make requisitions for these items. No attempt will be made in this article to correct this confusion, but the Board is seriously contemplating the preparation of instructions to be forwarded to the Chief of Coast Artillery with recommendation that such be published to the service.

VISITS.—Dr. E. F. W. Alexanderson of the General Electric Company visited the Board for a short period and discussed informally some of the ultra-modern developments in the electrical field.

Mr. M. L. Patterson, of the Sperry Gyroscope Company, exhibited moving pictures of some of the manufacturing activities of that company.

Major C. E. Cotter and First Lieutenant Walter J. Wolfe, Coast Artillery Corps, members of the Board, visited the Signal Corps Laboratories at Fort Monmouth, New Jersey, to assist in tests of Signal Corps equipment being prepared in those laboratories.

Captain C. S. Harris, Coast Artillery Corps, member of the Board, was absent from July 5th to August 3rd at Edgewood Arsenal taking the Field Officers' Course in Chemical Warfare.

Captain W. C. Ellis, Signal Corps, spent several days with the Board going over Signal Corps work in which the Board is interested.

Major I. A. Crump, Ordnance Department, and Captain E. T. Conway, Coast Artillery Corps, members of the Board, and First Lieutenant A. H. Bender, Coast Artillery Corps, attached, spent several days on the battleships of the United States Fleet while those vessels were engaged in short range battle practice off the Virginia Capes.

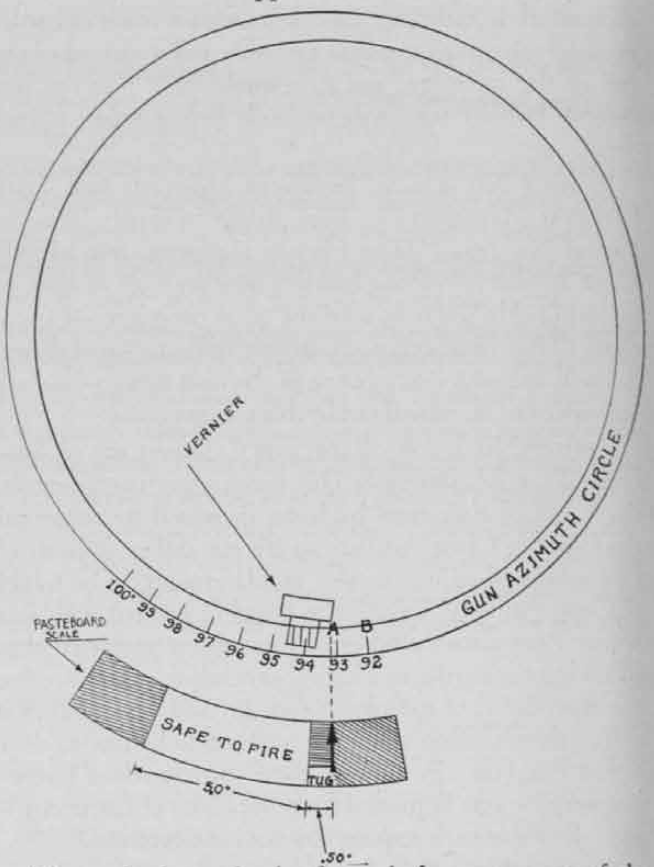
A Note on Safety Pointing Checking

By Captain James T. Campbell, C.A.C.

THE new Training Regulation on Coast Artillery Target Practice (TR 435-55, June 1, 1934) makes it mandatory that safety pointing checkers be used in all firings, including sub-caliber. (Par. 10 *c*). It also provides that line of metal observers will be used in all cases where practicable. For those cases in which line of metal observers cannot be used, it is provided that:

> "If the gun being fired is equipped with an oriented fixed azimuth circle, or if a suitable accurate temporary azimuth circle may be arranged for, the following procedure may be used: The safety pointing observer will be stationed so that he may read the actual azimuth at which the gun is laid for firing. He will be connected directly by telephone (field telephone is suggested) with an assistant who is provided with an oriented azimuth instrument so located that the towing vessel may be tracked. The assistant will observe and telephone the azimuth of the tug continuously to the safety pointing observer. The safety pointing observer will obtain before the practice such data as to the effect of wind, drift, and travel for the probable course of the target as will enable him to determine the safety of the pointing of the gun. * * * *

To avoid errors that might occur if the safety pointing observer depends upon mental calculations during the excitement of firing it is advisable to provide him with the scale described below. It is essential that the scale be drawn up for a target moving in one direction only. A distinct scale, kept by some other person, will provide for movement in the opposite direction.



The scale shown in the figure is for movement of the target from right to left. A thin strip of metal, cardboard, or wood is cut so that its inner edge conforms to the gun azimuth circle. It is assumed that the gun azimuth circle is stationary and that the vernier moves as the gun is traversed. On the scale as suggested the angle from the "Tug" index to the near edge of the "Safe to Fire" zone is 0.50 degree and the width of the "Safe to Fire" zone is five degrees. The scale is held against the azimuth circle with the index marked "Tug" set at a point on the azimuth circle corresponding to the azimuth of the tug. If the zero of the vernier falls anywhere within the sector marked "Safe to Fire" the gun will be pointed somewhere between 0.50 and 5.50 degrees to the rear of the towing vessel. For a gun that gives drift to the left or a large lateral dispersion, or if there is a strong cross wind effect to the left, one-half degree might not be a sufficient "safe field" in rear of the tug. In any of these cases the distance between "Tug" and "Safe to Fire" would be increased. For targets towed from left to right and guns with drift to the right it would be wise to increase this figure. This scheme was worked out for use on the 8-inch railway guns, but it will undoubtedly be found useful in other cases.

NATIONAL GUARD NOTES

Annual Training Period at Ft. Ontario

By Major Ben Bowering, C.A.C.

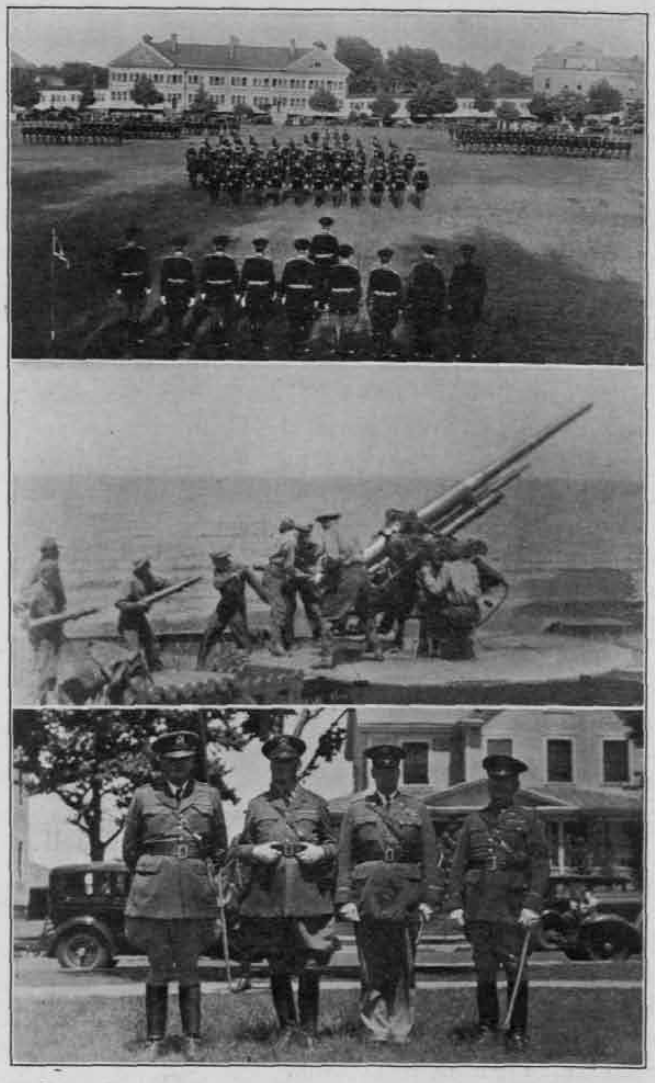
PROBABLY two of the most successful training periods ever held by Coast Artillery units of the New York National Guard were recently completed by the 212th C.A. (AA) and the 244th C.A., 155 mm. (TD) at Fort Ontario, N. Y. This post, overlooking the beautiful south shore of Lake Ontario, is the answer to a Coast Artilleryman's prayer for training purposes. There is very little shipping, hardly any fog, while haze over the lake seldom lasts more than a few hours.

The 212th arrived at Fort Ontario and found awaiting it a detachment of the 62nd (AA) from Fort Totten with the latest type of guns and fire control equipment. This detachment, under the able command of Captain H. S. MacKirdy, C.A.C., gave valuable advice and assistance to the regiment in preliminary training; and how well this was absorbed was shown by the fine practices fired by all the gun batteries. Battery C was not satisfied with putting 153 shrapnel holes in the towed sleeve, but put two projectiles through it as well. All courses towed for the gun batteries were above an altitude of 6,000 feet, and all work in connection with the firings was accomplished by the officers and men of the 212th. Much credit is due to the excellent work done by the 102nd Obs. Sq., N.Y.N.G., commanded by Major Lawrence Brower, who flew many of the courses himself. The firing of this regiment only goes to show what a well trained organization of the National Guard can accomplish when furnished the proper equipment.

The 212th went into overnight bivouac at Fulton, N. Y., for its tactical exercise, and during the afternoon of the first day in camp Mayor Smith of Fulton, N. Y., received a review given in his honor at the Fulton Airport. The annual beefsteak dinner given by Colonel William Ottmann (commanding the 212th), on the last Friday in camp was a great success and, in addition to all the officers of the regiment, was attended by many other invited guests.

The 244th arrived at Fort Ontario the day after the departure of the 212th, and the excellent weather continued during the training period of the 244th. The tour of duty of this regiment was marked by the smooth and efficient manner which it went into position, prepared for and fired its service practices. The regiment had completed its subcaliber practices after the third day in camp, and on the fourth day all batteries were ready to fire service practice. Four of the six firing batteries fired the first week in camp and the remaining two fired on the following Monday. All service practices were at ranges of 12,000 yards or beyond, and several "E's" are expected when analyses are completed. E Battery, the last to fire, practically destroyed the target.

The regiment held a very successful two-day tactical exercise after all firing was completed, the entire organization going into overnight bivouac near Mexico, N. Y., about 15 miles from Ft. Ontario. Probably the high spot of the social activities during the tour of the 244th was the birthday party given to Lieutenant Colonel Mills Miller, regimental executive, at the Pontiac Hotel in Oswego, N. Y. Captain "Judge" Hammond of the 2d Battalion was the orator of the evening and many requests have been made for copies of his masterful speech. Sad to relate however, "The Judge" seems to have misplaced his notes and so far has been unable to locate them.



Officers front and center, 244th C.A., Fort Ontario, N. Y. Battery D, 212th C.A. (AA), Fort Ontario, N. Y.

Left to right: General Cole, USA, General Byrne, NYNG, Col. Wilson, CAC, Col. B. Pendry, 245th C.A., NYNG

During the encampment of the two regiments, reviews were held for Major General William N. Haskell, Commanding N.Y.N.G., Major General Franklin W. Ward, the Adjutant General State of N. Y., Brigadier General William E. Cole, Commanding 2d C.A. District, Brigadier General Chas. D. Roberts, Commanding 2d Inf. Brig. (1st Div.), Fort Ontario, Brigadier General John J. Byrne, Commanding Coast Artillery Brigade, N.Y. N.G., and Lieutenant Colonel Ellery Farmer, Inf., commanding the post of Fort Ontario. All expressed themselves as well pleased with the high state of training exhibited by the two regiments.

Field Training of the 245th C.A., N.Y.N.G.

By Captain C. R. Morrison

THE annual field training period of the 245th Coast Artillery (HD), N.Y.N.G., was the realization of a Coast Artilleryman's dream. We had perfect shooting weather for two weeks, with all 12 batteries completing their service firing in two days. One mortar score was over 100 per cent, which is as perfect a score as you could expect from the mortar in zone 7. To those experienced in mortar firing a speed of four hours for four batteries using the same pit can be appreciated.

Brigadier General Byrne and his staff, consisting of Major Rhinelander, Captain Lee and Lieutenant Pogue, had their field training period with the 245th at Ft. Wright this year instead of Fort Ontario. The regiment was also honored with visits from Major General Haskell, commanding General of the New York National Guard, Major General Franklin Ward, The Adjutant General, N. Y. State, Brigadier General Cole, District Commander and Colonel Frank Fergusson, the District Executive.

In addition to the service firing, we had a tactical exercise of 24 hours duration which gave the field and staff officers excellent training in command and intelligence drills. Unusual interest was noticed among the enlisted men by the umpire, who used the control of situation method.

Exceptional coördination was obtained in ground and airplane spotting with the result corrections were speedy and accurate. The N.Y.N.G. aviation section was tireless and entered into every phase of the practice with the most perfect coöperation. Lieutenant Roy Youmans was the pilot and Lieutenant George Wenn the observer.

With this camp tour the regiment gives its farewell to the executive officer, Lieutenant Colonel Robert P. Orr, who retires for age in 1935. Those experienced in translating heart throbs could well elaborate on the last active duty tour of this splendid officer who devoted a normal lifetime to the service of his state and country. The best tribute that could be paid him would be the simple sentence, "He made them think."

The Instructor Spoke Too Soon

And now for the so-called instructor's trophy. In his anxiety to see the batteries make a good score he made an offer of a barrel of beer to the battery that hit the target. To him this looked like a safe bet, but the last record shot of Battery L, firing the 6" DC guns, did the trick. The dramatic report from the plane, "Hit, target destroyed," brought forth a round of cheers from 55 thirsty, husky men and a crestfallen look on the face of Lieutenant Colonel Warner. The dollars in his purse shivered and shook for they were again to see daylight, all because he spoke too soon.

The roster of the officers of the regiment includes Colonels Pendry and Orr, Majors Gleim, Humphries, Williams and Boyd, Captains Morrison, Alexanderson, Barron, Busener, Orthey, Donelan, Zollo, Richards, Weymann, Pabst, Munske, Voorhees, Heesch, Wrigley and Johnson, First Lieutenants Guhl, Haviland, Rick, Barker, Murphy, Morgan, Coleman, Derby, Paeper, Suhar, Zito, Yates, Babers and Dreyfuss.

Field Training of the 265th C.A.

THE 265th C.A. (HD), Florida National Guard, under its able commander, Lieutenant Colonel M. R. Woodward, completed a successful field training camp at Fort Taylor, Key West, during the period August 5-19, 1934. The regiment has undergone some transformation during the past year. With the idea of eventually forming a three battalion regiment (TD, AA, HD), assignments to matériel had been made so that Batteries A and B were assigned to two 155 mm. guns, each, Battery C to 3" AA guns, and Batteries D and E to 12" mortars. Under this assignment, Battery C, attended camp during this period at Fort Barrancas, Fla., where the latest AA equipment and a detachment of the 69th C.A. (AA), were available for instructional purposes.

The regiment, less Battery C, arrived in Key West at noon, August 5th, and paraded through the city headed by the local American Legion Drum and Bugle Corps. A new camp site had been constructed by the HD Commander, Major W. W. Rhein, 13th C.A., during the past year, comprising battalion latrines, duplex messes, and an officers mess. The troops were under canvas, erected by the advance detail.

Training on the armament was begun at once, and progressed speedily. Batteries A and B from Jacksonville, after a day's work of emplacing the 155 mm. guns, advanced progressively through drill and subcaliber practice on the guns they had never seen before. The 12" mortars were old acquaintances of Battery D of Miami, and Battery E of Key West. One incident in subcaliber practice with the mortars stands out in this camp. A defective round was fired; the projectile was followed by all eyes as it rose in the air and then dropped apparently in the middle of the camp. It later developed that it had fallen just short of the first line of tents, where it was found and returned to the battery by a sergeant of the Medical Detachment.

Service practice for the 155 mm. guns was held on August 14th, and for the mortars on August 15th. Ap-

parently all the vicissitudes of target practice were concentrated at this camp, such as overturned targets, erratic courses, rain, low visibility, slow radio communication, lost shots, misfires and interferring commercial shipping. As if to refute the fine scores of last year, this year's scores were unworthy of the organizations. However, as one battery commander said, more artillery was learned through adversity this year than ever before.

Following service practice, the troops were engaged in the field inspection, a close order drill competition, a field meet, muster and pay. A feature of the camp was a fire drill held one night about 9:30, the fire being simulated by red flares, and each unit assigned to some duty, such as the chemical engine, the bucket company, the hook and ladder company and salvage.

The people of Key West welcomed the regiment whole heartedly and provided entertainment in abundance. The city, now being operated by the FERA, was in the midst of a rejuvenation. The camp profited by the loan of FERA trucks to haul baggage and equipment, and the workers were available to assist in preparing camp, cutting grass and policing the Fort Taylor reservation.

The camp was honored for two days by Governor David Sholtz of Florida, Brigadier General Vivian Collins, State Adjutant General, Secretary of State Gray, United States Congressman Mark Wilcox, and other distinguished persons. A combined parade and review was held for the Governor on Saturday afternoon, followed by a reception, a camp dinner, and a dance at the Key West Country Club. Governor Sholtz was especially interested in the splendid band of this regiment, and personally led it in several of his favorite numbers.

The camp was blessed with cool weather and little rain during working hours. It developed that Key West, the southernmost city of the United States, was the coolest locality in Florida, if not in the entire South. The new camp site was found to be located on a coral rock formation. A compressed air drill was put in service to make holes for tent pegs, furnishing an innovation in tent pitching.

Battery B, Captain E. V. Garcia, was high scorer in the firing, and winner of the close order drill competition. Battery E, Captain L. E. Russell won the cup for high score with 12" mortars. Battery A, Captain P. F. McCall, won the cup for camp sanitation, and Battery D, Captain Roger Carter, won the athletic meet. Cups and medals were presented at the last parade held in camp.

On Saturday evening, August 18th, the camp ended, and the units departed by special train for points north.

The camp was short of instructional personnel, Major R. T. Gibson, C.A.C., and Sergeant Henry Bergfeld, D.E.M.L., stationed at Miami, were the only National Guard instructors present. Much assistance was received from the HD Maintenance Detachment at Key West, notably First Lieutenant R. H. Krueger, 13th C.A., on the 155 mm. guns. Lieutenant Colonel P. S. Gage, C.A.C., from the District Headquarters, paid us a visit for several days.

Notes on 249th C.A. (Org. N.G.) Camp Activities

By Captain Louis D. Farnsworth, C.A.C.

ONE of the hardest things to do in the military service in time of peace is to keep from getting into a rut and doing the same thing in a perfunctory manner. Though the civilian soldier is not so prone to become fed up with his military duties, his enthusiasm can lose its edge by repetition. Something new and different each year makes camp more interesting. New problems and difficulties to overcome add to the experience of a regiment and keep up its enthusiasm. The annual shooting of a target practice for a score under prescribed rules and regulations, and with very limited time, tends to put a regiment in a rut. If we could shunt our desire to make excellent artillery scores, we could become better all around artillerymen by following a policy somewhat as follows:

After a National Guard regiment has demonstrated that it can consistently shoot well under favorable conditions, send it into a harbor defense to shoot under the most adverse conditions that can be devised. Jim up the material, communications, fire control equipment and make the regiment dig itself out of the difficulties. Make it shoot under gas, smoke and confusion. Spring firing problems in the middle of a practice. Substitute intermediate or minor caliber ammunition in quantity to the value of the major caliber ammunition allowance and let the regiment do a lot of shooting. Make the personnel think along new lines. The best way to stimulate a soldier's mental activity is to put him up against a new problem and leave him to his own resources.

This year the 249th Coast Artillery of Oregon wanted to do something different, but it had to tread lightly so as not to jeopardize its target practice scores and its reputation as an excellent shooting regiment. Overlapping one day of its service practice period it went into a simulated 24 hour war condition period. A general and special situation was drawn up to lend atmosphere to the occasion. It had been planned that the 82nd Infantry Brigade with the 218th Field Artillery (155 mm. Howitzers) attached would maneuver from Camp Clatsop and work a problem in attack and defense of Fort Stevens during this 24 hour period. It became necessary to cancel this part of the program but the personnel of the 249th did not know this so the effect was partly there. The idea got across that in actual service conditions they would become part of an Infantry-Artillery team. The troops rolled their packs, left their comfortable barracks and marched to their battle stations on the afternoon of June 18th and made bivouac camp. Field kitchens were set up, latrines dug, and all the necessary details attended to for living in the field. During the afternoon and evening of the 18th the tactical problems involved in the general and special situations were solved by the officers concerned. Minature ships and a large scale battle map were used for the purpose. Problem time was condensed to the afternoon and evening of June 18th so as not to interfere with the target practice

on the 19th. Early in the evening a searchlight demonstration was staged by the regular garrison. The major caliber batteries had orders to be prepared to fire any time after daylight on June 19th. The tug and targets moved out during the night and reported in the field of fire before daylight. In this manner the target practice was tied in slightly with service conditions. It was hoped that firing could commence at 5:30 a. m. The batteries were ready, but on this particular morning a light fog prevailed until 9:30 a. m., limiting the range, and the scoring formulæ had command of the situation. From this point on normal target practice conditions followed. The officers including the regimental commander as well as the men had slept at their battle stations and were up at the alert signals at 3:30 a. m. The expectancy of the situation, discomforts of bivouac camp and partly broken rest during the night did not effect the shooting but on the contrary put a punch into it. The scores are a cause for justifiable pride. The day following the war condition period and the firing of the major caliber batteries, the two six inch batteries ("B" and "E"), were formed into the Canby Expeditionary Force. They were routed out of their bunks at 3:15 a. m., and cleared Fort Stevens at 4:00 a. m., en route to Fort Canby. This force traveled fifty miles by truck, six miles by ferry and two miles by marching, fired two six inch service practices using batteries other than those on which they drilled, and were back at Fort Stevens the same day. Both batteries did excellent shooting. To show how they clicked, both batteries kept two shots in the air during the fire for effect except during one firing interval. They fired at 12,000 yards and the average time was between 17 and 18 seconds each, this on a disappearing gun. Both scores are well over 100.

Lieutenant Colonel Clifton M. Irwin, commanding the 249th Coast Artillery, has established a doctrine within his units of—"Do it yourself." While the ordnance machinist closely observes and instructs when necessary, battery officers are required to do their own boresighting, clinometering, orienting and final conditioning of matériel before firing, testing of primers, primer circuits, etc. They have learned to use expedients. Last year in checking a newly installed plotting board they discovered that it needed regraduation. A strip of adhesive tape and a bottle of ink did the trick.

This article is advocating a change in the train of thought of many of our artillerymen; for years thought has concentrated on ideal scoring conditions during target practice and much calculation of minutia. As a method of training and providing practical experience for a National Guard regiment, it advocates making shooting difficult by supplying obstacles such as might happen in battle. This is consistent with a policy of simplifying Coast Artillery technique for National Guard units. By simplifying the technique is meant eliminating minutia (the things that consume firing time and cause errors) and concentrating more on things that will count in the stress of battle. As an example of what is meant, the battery commanders of the two six inch batteries of the 249th think of the bracket or fork of the six inch guns in terms of percentage. It is always 2% when firing the 90 pound projectile, whether the target is at a range of 6,000 or 12,000 yards. This is slightly in error theoretically but is practical, easy to handle, eliminates minutia and brings results. They also eliminate the use of the wind component indicator, deflection board, and Pratt range board after initial firing data is secured. This makes for less confusion, fewer errors, and more speed in the plotting room. Where they have a good height of site, as at Fort Canby, they want to eliminate the plotting board and use the D.P.F. and range percentage corrector only. Why not? A six inch gun can be used like a fire hose; if you hit over, depress the nozzle a little. For deliberate long range fire with major caliber, of course it is another story; yet our plotting room methods must be simplified for effectiveness, against high speed targets and in confusion of battle conditions.

National Guard Publicity

CIRCULAR No. 5, February 21, 1934, Headquarters 1st Maryland Infantry, Colonel D. John Markey commanding, contains excellent advice to a National Guard unit in its relations with the public. An abstract of this circular is given below.

Publicity for a National Guard unit must of necessity center around two aims: (1) The education of the public as to the true nature and function of the Guard, and (2) the heightening of the morale of the unit.

A casual survey will show that people are ignorant of the true nature of the National Guard. Brief, interesting news articles, appearing regularly in the local papers and reporting the weekly drills of a company along with its other special activities, will serve to educate the public. Care should be taken to emphasize such facts as the financial contribution which the Guard makes to a community, that the armory is a public building, that the public is welcome to observe the unit's weekly drills, and that the National Guard is a vital unit of the national defense.

Recognition should be given any outstanding work done by noncommissioned officers or privates. When the men learn that effort on their parts is thus recognized and rewarded, they will not fail to put more interest and personal pride into their work. Well directed publicity will serve to consolidate company pride and loyalty into a more potent unity.

Persistent publicity will serve to encourage enlistments and enable a unit commander to select the personnel of his group and thus to build prestige and the reputation of having a "hand-picked" unit.

When a unit is called upon to perform disagreeable service in the community in which it is stationed, an educated and interested public will be less prone to criticize the Guard, even though passions may be inflamed and reasons paralyzed.

RESERVE NOTES

C. & G. S. Course Opened to Reserve Officers

By Staff Sgt. A. S. DeAgro

LAST month the War Department called on all Corps Area Commanders to designate three reserve officers as principals and four as alternates to take the course at the Command and General Staff School. The course, generally known as the Special Course for National Guard and Officers of the Officers' Reserve Corps, will be for a period of three months and will commence about March 15, 1935. According to instructions published by the Adjutant General's office, the names of the officers recommended to take the course, designated in order of preference, must be submitted to that office not later than December 1, 1934. In the past several years Corps Area Commanders were permitted to designate only one principal and two alternates for the course.

Officers eligible to take the course are those who have completed satisfactorily the entire Command and General Staff School Extension Course. In the event that there are not a sufficient number of candidates of field grade to meet this requirement, consideration will be given to Captains who have creditably completed the Command and General Staff Extension work. Other considerations are that the offices recommended must be less than 48 years of age, and must be qualified to undergo the mental and physical requirements of the course. Mounted work plays a large part in the course of training.

Each application for detail is to be accompanied by a report of physical examination on A.G.O. Form 63, preferably by a medical officer of the Regular Army, containing a statement by the medical examiner that the applicant is considered physically qualified to meet the requirements of the mounted and field work. In addition each application will be accompanied by a signed statement from the officer showing: (1) That he will accept the assignment if ordered to active duty for the purpose; (2) Number of dependents and the age of dependent children; (3) Amounts and kinds of prior service claimed which can be credited in computing longevity pay; (4) Date of Birth; (5) Progress in completion of the Command and General Staff Extension Course; (6) Statement as to whether or not special advanced course for National Guard and Reserve Officers at school of arm or Service has been completed and if so, the date; (7) Whether or not he is on the Emergency Officers' Retired List or whether or not he is drawing a pension, disability allowance, disability compensation, or retired pay from the Government of the United States; and (8) National Guard Status, if any. If none that should be stated.

Final selection of those to attend will be made by the War Department, and no officer will be sent to the course whose record and qualifications do not indicate that he is well suited for training for high command and General Staff and for eventual duty in such positions.

New Extension School Regulations Issued

EFFECTIVE upon the opening of the 1934-35 school year and until further notice, approved solutions to examinations and students' answer papers thereto will be withheld from the students. In other words the approved solutions to examination are for use of instructors only. Extension course texts furnished to officer students and to civilians, C.M.T.C. trainees and other persons regularly enrolled in the courses with a view to qualifying for commission in the Officers' Reserve Corps will become the property of such students upon satisfactory completion of the subcourses, The "gift" of texts is to be considered as a reward for work completed. In the event that the student fails to complete a subcourse, every reasonable effort will be made by the appropriate agencies to secure the return of the texts pertaining thereto.

The extension courses have many advantages. Chief among these, at least from the Reserve officer's point of view, is the fact that it keeps him in touch with the military profession, and in fact is the one link which holds him to a full appreciation of what his commission in the reserve means, both to himself and to the Government. Every effort has been put forth by the War Department to make the extension courses both interesting and instructive and today they are on a high plane.

Extension schools will open October 1, 1934. Students are urged to complete their subcourses as soon as possible after receiving them from subordinate extension schools.

The announcement for the Army Extension Courses for the year 1934-35 has been issued by the War Department and it is understood that they are now being distributed to the Reserve officers. The announcement will be accompanied by list of subcourses pertaining to the branch of the individual officer concerned together with application for enrollment. The new announcement contains a complete list of common subcourses covering subjects which are common to two or more Arms or Service. There

are 23 such subcourses as follows: Administration; Advanced Military Cryptography; Care of Animals and Stable Management; Combat Orders and Solution of Problems; Commercial Law Contracts; Commercial Law, Property and Miscellaneous; Defense Against Chemical Warfare; Elementary Military Cryptography; Industrial Mobilization; Interior Guard Duty; Map and Aerial Photograph Reading; Military Discipline, Courtesies and Customs of the Service; Military Law, Courts-Martial; Military Law, the Law of Military Offenses; Military Sanitation and First Aid; Mobilization; Organization of the Army; Organization of the Infantry Division; Property, Emergency Procurement and Funds; Signal Communication for all Arms and Services; Staff and Logistics for the Division; Supply and Mess Management; and, Tactics and Technique of Separate Arms.

C.M.T.C. Blue Course Graduates

MUCH misunderstanding and confusion has resulted because of lack of knowledge concerning the requirements which must be met by C.M.T.C. trainees who have successfully completed the Blue Course, for appointment as officers in the Organized Reserves. Many of the trainees are under the impression that graduation from the C.M.T.C. Camps constitutes the sole requirement for eligibility for appointment as Second Lieutenant.

Army Regulations 350-2200, as amended by Changes of April 20, 1932, contain many new provisions concerning the eligibility of C.M.T.C. graduates for commissions. It provides that graduation will be considered as evidence of satisfactory completion of instruction in the following subjects of the Army Extension Courses, and candidates will be exempt from examination in those subjects: Military Discipline, Courtesies and Customs of the Service, Interior Guard Duty, and Military Sanitation and First Aid. In addition to these subjects, Coast Artillery Blue Course Graduates will be exempt from examination in Coast Artillery Ammunition and Weapons and Material.

Examinations for appointment in the Officers' Reserve Corps are governed by Reserve Corps Regulations. They are based upon the minimum qualification for appointment in the selected Arm or Service and proficiency is determined by examination or by presentation of evidence that the candidate has satisfactorily completed a course of instruction or is otherwise qualified in the subjects prescribed for appointment in the particular Reserve Corps Army Regulations for his arm.

It is of special importance to all candidates who hope to qualify for commission in the Organized Reserves to start work on the subjects prescribed in the examinations by enrolling in the Army Extension Courses. If they defer enrollment in the courses until after completion of the final camp their appointment in the Reserve Corps will be delayed by the length of time they spend in the extension school work.

Applications for enrollment in the Army Extension School with a view to qualifying in the military written examinations for appointment in the Officers' Reserve Corps will be accompanied by application for commission. The War Department pointed out that in certain instances applications for appointment in the corps or correspondence regarding such appointments have indicated Army extension course study with a view to qualifying for commission has been conducted in many cases where the individuals were, because of age or other reasons, ineligible for appointment desired. Rejection in such cases has resulted in embarrassment to the War Department and to individuals.

In the cases of Candidates desiring courses with a view to qualifying for appointment in the Infantry, Cavalry, Field Artillery, Coast Artillery and Signal Corps, careful consideration will be given to prior military training. This for the reason that if the applicant has not had military training approximately equivalent to that acquired by a graduate of the Blue Course of the Citizens' Military Training Camps, he can not be expected to meet the ability qualification requirements prescribed for appointment.

Exception as regards to practical military training for extension course enrollment may be made for applicants who in their collegiate or business training have demonstrated outstanding qualities of leadership and ability to handle men. This class of candidates, after reasonable preparation, may be expected to pass a satisfactory practical test to determine ability qualification.

C.M.T.C. Blue Course graduates and students who have completed the White Course, may be enrolled in the Army Extension Courses without being required to submit applications for appointment.

Los Angeles Field Exercises

LOS ANGELES and vicinity has been the scene of three combined arms field exercises for Reserve units on an inactive status during the past year, with approximately 500 officers participating in each.

The purpose of these exercises has been to encourage individual unit training activity, and the problems as drawn have been constructed with the idea of providing a logical background for field training of individual Reserve units.

Allocated to Los Angeles and vicinity are more than 50 Reserve units of the magnitude of regiments, separate battalions, and special groups of equivalent size or importance, representing almost every arm and service. Every one of the units is interested in field training, but very naturally they prefer training in their own particular line. To construct an exercise that will provide a logical use for practically all arms and services calls for a problem involving at least a reinforced division.

The first exercise visualized a reinforced division in attack against an invading overseas enemy. Participating units located and occupied assembly and attack positions on the actual terrain, reconnoitered and traversed routes

thereto, spotted and occupied command posts and positions of supporting troops, all with combat distances, frontages and intervals. The exercise terminated with a one and three-quarter hour command post exercise simulating the attack of the division. Participating units had their officer personnel, Boy Scout, R.O.T.C. and C.M.T.C. volunteers sufficient only for use as messengers, and a very limited number of enlisted Reservists. A front of about three miles was employed.

Limitations imposed by shortage of personnel and communications matériel, and by the assumption of actual combat locations, crippled the exercise materially, but brought to many officers their first real conception of combat conditions and positions, and the influence thereon of the factors of time, space, matériel and personnel, together with actual troop-leading experience. There was no cost to the government for one and a half days field training of 50 different Reserve organizations.

The second exercise was primarily a repetition of the first, on the same terrain, but with increased emphasis laid upon troop leading, combat positions, frontages, distances and intervals. In this, Infantry assault units, thinly skeletonized, crossed the line of departure at zero hour and advanced 500 yards on a three-mile front, maintaining direction and contact to right and left. Field messages reporting the actual minute the leading element of assault units crossed the line of departure were relayed back by runners and motorcycle from assault infantry companies through intermediate command posts to Division. Artillery units took up firing and command post positions, and from H hour observed from their OP's. In this exercise the CPX was conducted with CP's at sharply reduced distances and intervals (50 to 100 yards), runners operating from Infantry assault platoons on back to battalion, and telephone from Infantry battalion CP's on back fo Regiment, Brigade and Division. Due to lack of telephone matériel, artillery CP's used the telephones entering the CP's of the units their commands were supporting. Due to lack of Artillery personnel, Artillery brigade, regiment and battalion CP's were only represented, and these were skeletonized. For the second exercise Coast Artillery units conducted a separate problem on the same dates.

From this exercise considerable troop-leading experience was gained, and also command post functioning technique; but the short distance between CP's for the CPX proved too strong a temptation to the use of runners for message transmission back to battalion when telephone lines became overloaded, and improper ideas of time and space were drawn by participants. An excellent workout of the telephone net was obtained however.

These exercises have been termed "Combined Arms Field Exercises" more for the reason that numerous different arms and services have participated in the field on the same dates, than that the situations which comprise the background of the exercise call for the use of the combined arms. They might with more accuracy be termed "Military Field Days," since the various units have enacted only selected incidents of their theoretical parts in the division attack, and have put these on as isolated demonstrations.

The third exercise was particularly of the "Military Field Day" type. Certain Engineer and Coast Artillery units conducted their exercises entirely separate from the remainder of the reserve units, having arranged materially in advance for certain problems peculiar to their own services. Remaining units, with the other arms and services, joined in putting on a series of "Demonstrations" modeled after the method employed by the Infantry School.

The background for these demonstrations was a problem of a reinforced division in meeting engagement. A reinforced Infantry battalion, comprising the advance guard of the right column of the Blue reinforced division, afforded the basis for most of the demonstrations.

QUESTIONNAIRE PROVES INTERESTING

To arrive at a concensus of opinion as to the actual training value of the "demonstration" type of field training, a questionnaire was mailed to 100 officers of all grades. Every one of 60 officers replying expressed approval of the general idea of actual field or terrain exercises, in the vicinity of the home station, for Reserve personnel during the inactive training season.

As to the best type of exercise, 50 of the 60 favored demonstrations as the best method short of actual use of troops. Most responses stated that these demonstrations teach more to the actual participants than to observers; but that for best training results for all concerned, demonstrations must be carefully rehearsed in advance, technical inaccuracies ironed out, actors made letter-perfect, each performance dramatized to as great an extent as possible, and then put on briefly.

Discussion of the scope recommended for exercises upon the actual terrain disclosed that practically all Reserve officers favored the so-called Combined Arms Exercise, and indicated the reinforced division set-up as best calculated to interest all arms, services and installations, and afford training for the greatest variety of assignments and grades within these.

A few Reserve officers and a large proportion of Regular officers expressed the belief that the scope of such an exercise is too great and the exercise itself too complicated to produce satisfactory training results. One Reserve officer qualified this by saying, "Too large for the time available." Three Regular and two Reserve officers stated that they believe more is to be gained from a training standpoint from regimental field problems than from combined arms exercises.

Two Regular officers favored tactical walks. Out of 50 Reserve officers, six favored "Demonstrations" alone, four preferred command post exercises alone, and eight spoke for a problem of supply of a reinforced division. The remaining 32 recommended a combination demonstration and command post exercise.

C.M.T.C. Activities at Fort Barrancas

By Lieutenant Colonel Clifford Jones, C.A.C.

AN ideal spot for a training center, Fort Barrancas has again produced an ideal C.M.T.C. camp. With its military history extending back to the building in 1698 by a Spanish expedition of the first Fort San Carlos, and including the prolonged defense of Fort Pickens, which during the war between the States had the distinction of being the only fort south of Virginia over which the Stars and Stripes flew continuously, casting a romantic glamour over all military undertakings here, and the ever present hum of the training aircraft from the Naval Base nearby as a constant reminder that though war is one of the oldest arts it is also one of the most changing, this post is peculiarly fitted to inspire the best efforts of young men starting upon their military careers.

We should like to refer to this camp as to all others with which we have been associated as the biggest and best ever. Appropriations, however, effectually prevented the first of these claims and an intimate knowledge as to the excellence of the training at this post in previous years forbids our entering into unfair comparisons simply because we happen to be on the ground at this time. This has, however, been the biggest camp we could make it and if not the best we certainly know of none better. Under the direction of Colonel Arthur Fuller, the Harbor Defense Commander, and the leadership of Major Eugene Villaret, C.M.T. Camp Commander, the men were given a schedule which, in addition to the basic subjects, covered drill and ex-caliber practice at both a 155 mm. battery and a 12 inch battery, AA machine gun practice and the observation of a 3 inch AA battery in action. This schedule required hours which seemed long in this climate but none complained as the enthusiasm in the work was such that tasks which might have seemed hardships under other conditions were only regarded as opportunities for accomplishment.

The routine was not all work, however. Athletic contests offered opportunities for all to display their skill. Many boys will return to their homes with an added knowledge as to swimming and life saving which may stand them in good stead in the future. The weekly hops in the delightful setting of Gorgas Hall afforded opportunity for forming social contacts with the young people of Pensacola which will doubtless have life long effects in strengthening the interest of this section of the country in this lovely little city.

This article would not be complete without a special reference to Chaplain G. J. Rousseau, Captain, Chaplains' Reserve Corps. He has been associated with camps at this station for several years and has so impressed his personality upon both the camps and reserve officers with whom he has come in contact that he seems to almost be a permanent part of an otherwise changing organization. With his varied career embracing in its early phases service for his native country in the South African Boer War, extending through prison camps, including service as an enlisted man in the United States Army and culminating in a successful pastorate in several of the largest cities in Florida, his wealth of human understanding enables him to appeal in the strongest manner to young men seeking a military career. His effort in this camp has been unceasing and as if to prove his versatility has not confined itself to spiritual guidance alone More than one young man has found inspiration for the fish story of his life in the deep-sea fishing trips, initiated, organized and conducted by the Chaplain.

And so the camp closes, with a feeling of accomplishment, an increase of good fellowship and mutual understanding and a renewed faith in the future of a country which can in trying times, such as these, draw together a group of young men so anxious to inform themselves as to the real problems facing us and to prepare themselves for any eventualities which may arise.

Doings of the 621st C.A. (HD)

DURING the past two months twenty-four Reserve officers of this regiment received active duty training at Fort Totten, N. Y., and Fort Hancock, N. J., Seventeen of them were graduates of the University of Delaware R.O.T.C. class of 1934 and commissioned in May of this year. A large number of officers applied for active duty training this summer, but shortage of funds for this purpose prevented this training.

Major W. M. Cravens, Unit Instructor of this regiment, was in charge of Organized Reserve Camp instruction at Fort Totten, N. Y., from June 17th to 30th, and at Fort Hancock, N. J., from July 1st to 14th. The Major was granted one month leave of absence from August 20th to September 20th.

This regiment is proud to report that 46 of its officers completed all requirements for promotion to the next higher grade, and are eligible for promotion as soon as they have time in grade.

519th C.A. (AA) Brings Down Target

A REPORT has reached the JOURNAL indicating that the officers of the 519th C.A. (AA) under command of Lieutenant Colonel Frank J. Baum, covered themselves with glory during the 14 day training period at Ft. MacArthur, California, by shooting down the target with the 37th round (one gun only) firing at a slant range of approximately 6,000 yards. This performance is worthy of special notice because of the fact that the entire range section and gun crew were composed of reserve officers of the regiment. Our correspondent states that it was one of the finest exhibitions of antiaircraft gun fire ever witnessed at Ft. MacArthur. The plan of having reserve officers function as range section and gun crew greatly stimulated interest in the training and was of great benefit from an instructional point of view. One always learns more by the applicatory method than by observing others.

COAST ARTILLERY ORDERS

(Covering the period July 1 to August 31, 1934).

Colonel W. S. Bowen, from 1st C. A. Dist., Boston, to the Philippines, sailing New York, Dec. 14.

Colonel C. G. Bunker, for the convenience of the Government, to proceed to his home and await retirement.

Colonel L. R. Burgess, for the convenience of the Government, to proceed to his home and await retirement.

Colonel H. E. Cloke, from 2d, Ft. Monroe, to 6th, Ft. Winfield Scott, sailing New York, Sept. 22.

Colonel R. W. Collins, from the Philippines to 9th, Ft. Banks.

Colonel A. S. Conklin, from 62d, Ft. Totten, to Hq. 3d Corps Area, Baltimore, Aug. 22. Previous orders amended.

Colonel F. L. Dengler, retired for physical disability, Aug. 31.

Colonel E. D'A. Pearce, from 6th, Ft. Winfield Scott, to Panama, sailing San Francisco, Nov. 2.

Colonel R. P. Reeder, from Panama, to 2d, Ft. Monroe.

Lieutenant Colonel C. W. Baird, from 62d, Ft. Totten, to the Philippines, sailing New York, Dec. 14.

Lieutenant Colonel A. G. Campbell, from Hawaii, to 9th, C. A. Dist., Presidio of San Francisco.

Lieutenant Colonel Clifford Jones, from 13th, Ft. Barrancas, to 4th, C. A. District, Ft. McPherson, Sept. 30.

Lieutenant Colonel W. M. Colvin, from Org. Res. 2d Corps Area, New York, to Panama, sailing New York, Sept. 22.

Lieutenant Colonel M. A. Cross, from the Philippines, to Org. Res. 5th Corps Area, Cleveland.

Lieutenant Colonel R. P. Glassburn, from 51st, Ft. Monroe, to Org. Res., 7th Corps Area, St. Louis. Previous orders amended.

Lieutenant Colonel Allen Kimberly, from 6th, Ft. Winfield Scott, to the Philippines, sailing San Francisco, Nov. 7.

Lieutenant Colonel A. L. Loustalot, from the Philippines, to Org. Res. Ninth Corps Area, San Francisco.

Lieutenant Colonel P. H. Ottosen, from Gloucester High School, Gloucester, to Hawaii, sailing New York, Sept. 22.

Lieutenant Colonel C. W. Waller, upon his own application, retired, Sept. 30.

Major G. P. Anderson, retired for physical disability, Aug. 31.

Major B. N. Booth, from the Philippines, to 3d, Ft. MacArthur.

Major Aaron Bradshaw, Jr., from Panama, to 62d, Ft. Totten.

Major J. D. Brown, from 2d, Ft. Monroe, to Utah State Agri. College, Logan, Utah.

Major W. P. Cherrington, for the convenience of the Government, to proceed to home and await retirement.

Major H. C. Davis, Jr., from 14th, Ft. Worden, to Hawaii, sailing San Francisco, Nov. 6.

Major Octave DeCarre, from 13th, Ft. Moultrie, to recruiting duty, Little Rock, Ark.

Major W. K. Dunn, from 4th, Ft. McPherson, to 13th, Ft. Moultrie.

Major W. E. Duvall, from Hawaii, to Org. Res., 8th Corps Area, El Paso.

Major G. W. Easterday, from 5th, Ft. Totten, to Panama, sailing New York, Sept. 22.

Major W. C. Foote, from C. A. School, Ft. Monroe, to Panama, sailing New York, Oct. 16.

Major P. S. Gage, promoted Lieutenant Colonel, July 17.

Major C. J. Herzer, from Org. Res. Chicago, to the Philippines, sailing New York, Aug. 21.

Major M. J. Hickok, promoted Lieutenant Colonel, Aug. 14.

Major J. P. Hogan, from 62d, Ft. Totten, to instructor, C. A. C., N. Y. N. G., New York.

Major G. D. Holland, for the convenience of the Government, to proceed to home and await retirement.

Major F. A. Holmer, from the Philippines, to Org. Res. 2d Corps Area, New York.

Major R. M. Levy, from 13th, Ft. Barrancas, to the Philippines, sailing New York, Dec. 14.

Major J. T. H. O'Rear, from Panama, to San Francisco General Depot, Ft. Mason.

Major Gooding Packard, from Org. Res., 4th Corps Area, to the Philippines, sailing New York, Dec. 14.

Major W. G. Patterson, to report to Army retiring board, Ft. Hayes.

Major R. E. Phillips, from Owensboro High School, Owensboro, to Org. Res., 8th Corps Area, Houston, Texas.

Major H. R. Pierce, from 3d, Ft. MacArthur, to Panama, sailing San Francisco, Nov. 2.

Major F. C. Scofield, from the Philippines, to 2d, Ft. Monroe.

Major E. C. Seeds, to Walter Reed General Hospital for observation and treatment.

Major Fred Seydel, report to president Army retiring board, 9th Corps Area.

Major E. B. Spiller, retired for physical disability, Aug. 31.

Major D. N. Swan, from Panama, to Org. Res., 2d Corps Area, New York.

Major Charles Thomas-Stahle, from 62d, Ft. Totten, to the Philippines, sailing New York, Dec. 14.

Major Meade Wildrick, from Org. Res., 2d Corps Area, New York, to Panama, sailing New York, Sept. 22.

Captain A. J. Bennett, from the Philippines, to 6th, Ft. Winfield Scott.

Captain T. J. Betts, from 61st, Ft. Sheridan, to the Philippines, sailing New York, Dec. 14.

Captain Napoleon Boudreau, from the Philippines, to Org. Res., 5th Corps Area, Indianapolis. Previous orders amended.

Captain W. J. Burke, for the convenience of the Government, to proceed to his home and await retirement.

Captain A. F. Cameron, from the Philippines, to 9th, Ft. Banks. Previous orders amended.

Captain J. R. Clark, from the Philippines, to 62d, Ft. Totten.

Captain A. C. Cleveland, report to president, Army retiring board, Boston.

Captain J. M. Cole, from the Philippines, to 7th, Ft. Hancock.

Captain F. W. Cook, from 7th, Ft. DuPont, to the Philippines, sailing New York, Dec. 14.

Captain E. G. Cowen, from 69th, Ft. McClellan, to Panama, sailing New York, Dec. 15.

Captain J. L. Craig, from 13th, Ft. Barrancas, to Panama, sailing New York, Dec. 15.

Captain L. C. Dennis, from 52d, Ft. Hancock, to Panama, sailing New York, Dec. 15.

Captain R. T. George, to Panama, sailing New York, Sept. 22. Previous orders amended.

Captain M. B. Gibson, from 9th, Ft. Banks, to the Philippines, sailing New York, Dec. 14.

Captain C. A. Gillette, from 62d, Ft. MacArthur, to the Philippines, sailing San Francisco, Nov. 7.

Captain D. B. Greenwood, from 63d, Ft. MacArthur, to Hawaii, sailing San Francisco, Nov. 6.

Captain V. W. Hall, from Panama, to 2d Corps Area, Governor's Island.

Captain P. W. Hardie, from Hawaii, to 3d, Ft. Rosecrans.

Captain B. F. Harmon, from student, C. & G. S. School, Ft. Leavenworth, to student, Air Corps Tactical School, Maxwell Field, Montgomery, Sept. 1.

Captain J. E. Harrison, report to president, Army retiring board, Ft. McPherson.

Captain Milton Heilfron, to Hawaii, sailing San Francisco, Nov. 6. Previous orders amended.

Captain William Hesketh, from 8th, Ft. Preble, to the Philippines, sailing New York, Dec. 14.

Captain J. L. Hogan, from Panama, to 62d, Ft. Totten.

Captain R. J. Imperatori, from 52d, Ft. Tilden, to recruiting duty, Ft. McDowell, sailing New York, Dec. 14.

Captain B. T. Ipock, from Governor's Island, to 62d, Ft. Totten.

Captain A. W. Jones, report to president, Army retiring board, Ft. Lewis.

Captain D. D. Lamson, from 62d, Ft. Totten, to the Philippines, sailing New York, Dec. 14.

Captain P. W. Lewis, from Panama, to Org. Res., 5th Corps Area, Cincinnati. Previous orders amended.

Captain H. W. Lins, from the Philippines, to 8th, Ft. Preble.

Captain Frederick Lofquist, from 62d, Ft. Totten, to Hawaii, sailing New York, Dec. 14.

Captain W. L. McMorris, from the Philippines, to 61st, Ft. Sheridan.

Captain E. W. Miller, for the convenience of the Government, to proceed to his home and await retirement.

Captain Maurice Morgan, from student, C. A. School, Ft. Monroe, to the Philip-

pines, sailing New York, Aug. 21. Previous orders amended.

Captain C. M. Myers, from Univ. of Delaware, Newark, to the Philippines, sailing New York, Oct. 16.

Captain G. M. O'Connell, from Panama, to 6th, Ft. Winfield Scott.

Captain T. R. Parker, from 61st, Ft. Sheridan, to Org. Res., 6th Corps Area, Chicago.

Captain Victor Schmidt, from 7th, Ft. Hancock, to the Philippines, sailing New York, Dec. 14.

Captain W. W. Scott, to San Francisco, sailing New York, Aug. 21. Previous orders amended.

Captain A. B. Smith, for the convenience of the Government, to proceed to his home and await retirement.

Captain H. W. Smith, from the Philippines, to 69th, Ft. McClellan.

Captain E. H. Taliaferro, Jr., from student, C. & G. S. School, Ft. Leavenworth, to duty with the staff and faculty, C. & G. S. School, Ft. Leavenworth.

Captain L. P. Vane, for the convenience of the Government, to proceed home and await retirement.

Captain A. W. Waldron, from Hawaii, to 8th, Ft. Preble.

Captain F. B. Waters, from 2d, Ft. Monroe, to duty with R. O. T. C., Georgia School of Technology, Sept. 1.

Captain L. A. Whittaker, to Hawaii, sailing New York, Sept. 22. Previous orders amended.

First Lieutenant Sylvan Berliner, from Panama, to 5th, Ft. Hamilton.

First Lieutenant A. T. Bowers, from 69th, Ft. McClellan, to 62d, Ft. Totten.

First Lieutenant H. E. C. Breitung, from Hawaii, to 63d, Ft. MacArthur.

First Lieutenant W. H. Burns, for the convenience of the Government, retired.

First Lieutenant J. V. deP. Dillon, from Hawaii, to student, Georgetown Univ. Law School, Washington, D. C.

First Lieutenant J. J. Earle, Jr., retired for physical disability, Aug. 31.

First Lieutenant J. F. Gamber, to Panama, sailing New York, Sept. 22. Previous orders amended.

First Lieutenant R. I. Glasgow, from Panama, to U. S. M. A., West Point, Aug. 25.

First Lieutenant F. K. Gurley, from 63d, Ft. MacArthur, to Panama, sailing San Francisco, Nov. 2.

First Lieutenant M. A. Hatch, from 2d, Ft. Monroe, to 13th, Ft. Barrancas.

First Lieutenant W. B. Hawthorne, from 52d, Ft. Monroe, to Panama, sailing New York, Dec. 15.

First Lieutenant David Hottenstein, from 52d, Ft. Hancock, to student, George Washington Univ. Law School, Washington, D. C. Previous orders revoked.

First Lieutenant W. L. Johnson, from Hawaii, to 13th, Ft. Barrancas.

First Lieutenant F. R. Keeler, from 13th, Ft. Moultrie, to Hawaii, sailing New York, Sept. 22.

First Lieutenant J. C. Kilbourne, report to president, Army retiring board, 9th Corps Area.

First Lieutenant O. J. Levin, from Hawaii, to 2d, Ft. Monroe.

First Lieutenant W. J. McCarthy, promoted Captain, July 9.

First Lieutenant W. L. McPherson, from student, C. A. S., Ft. Monroe, to student, Univ. of Michigan, Ann Arbor.

First Lieutenant A. D. Miller, from 14th, Ft. Worden, to Hawaii, sailing San Francisco, Oct. 13.

First Lieutenant Leif Neprud, from 10th, Ft. Adams, to the Philippines, sailing New York, Dec. 14.

First Lieutenant Glenn Newman, from Panama, to 7th, Ft. DuPont.

First Lieutenant G. F. Nichols, from the Philippines, to 9th, Ft. Banks.

First Lieutenant F. N. Parsons, retired for physical disability, Aug. 31.

First Lieutenant F. F. Scheiffler, from 6th, Ft. Winfield Scott, to Hawaii, sailing San Francisco, Oct. 13.

First Lieutenant Grayson Schmidt, from 2d, Ft. Monroe, to U. S. M. A., West Point, Aug. 25.

First Lieutenant W. B. Short, from Hawaii, to 13th Ft. Barrancas.

First Lieutenant D. H. Smith, from 6th, Ft. Winfield Scott, to the Philippines, sailing San Francisco, Nov. 7.

First Lieutenant L. D. Vichules, from 9th, Ft. Banks, to the Philippines, sailing New York, Dec. 14.

First Lieutenant W. H. Webb, from Hawaii, to 2d Corps Area, Governor's Island, for temporary duty.

First Lieutenant W. A. Weddell, from 6th, Ft. Winfield Scott, to Hawaii, sailing San Francisco, Nov. 6.

First Lieutenant D. M. Wilson, from 62d, Ft. Totten, to the Philippines, sailing New York, Dec. 14.

First Lieutenant C. P. Young, from Hawaii, to 63d, Ft. MacArthur.

Second Lieutenant C. L. Andrews, to Randolph Field, Sept. 12, for duty and flying training.

Second Lieutenant E. T. Ashworth, from 6th, Ft. Winfield Scott, to Hawaii, sailing San Francisco, Oct. 13.

Second Lieutenant J. O. Baker, to 14th, Ft. Worden.

Second Lieutenant W. H. Ball, from 61st, Ft. Sheridan, to the Philippines, sailing New York, Oct. 16.

Second Lieutenant C. R. Bard, from Hawaii, to 69th, Ft. McClellan.

Second Lieutenant L. K. Beazley, to Randolph Field, Sept. 12, for duty and flying training.

Second Lieutenant F. T. Berg, from the Philippines, to 62d, Ft. Totten.

Second Lieutenant A. W. Betts, to 62d, Ft. Totten.

Second Lieutenant S. R. Beyma, to 2d, Ft. Monroe.

Second Lieutenant Edward Bodeau, from 62d, Ft. Totten, to the Philippines, sailing New York, Oct. 16.

Second Lieutenant F. A. Bogart, from the Philippines, to 52d, Ft. Hancock.

Second Lieutenant B. E. Brugge, to Randolph Field, Sept. 12, for duty and flying training.

Second Lieutenant W. M. Canterbury, to Randolph Field, Sept. 12, for duty and flying training.

Second Lieutenant E. N. Chace, from 52d, Ft. Monroe, to Hawaii, sailing New York, Sept. 22.

Second Lieutenant F. P. Corbin, Jr., from the Philippines, to 62d, Ft. Totten.

Second Lieutenant D. R. Corum, from 62d, Ft. Totten, to Hawaii, sailing New York, Dec. 14.

Second Lieutenant L. N. Cron, from Hawaii, to 62d, Ft. Totten.

Second Lieutenant G. B. Dany, to Randolph Field, Sept. 12, for duty and flying training.

Second Lieutenant J. T. Darrah, from the Philippines, to 51st, Ft. Monroe.

Second Lieutenant C. B. Duff, from the Philippines, to 11th, Ft. H. G. Wright.

Second Lieutenant J. C. East, from Hawaii, to 52d, Ft. Monroe.

Second Lieutenant H. W. Ebel, to 52d, Ft. Monroe.

Second Lieutenant W. F. Ellis, from the Philippines, to 61st, Ft. Sheridan.

Second Lieutenant E. E. Farnsworth, Jr., from 62d, Ft. Totten, to Hawaii, sailing New York, Dec. 14.

Second Lieutenant R. G. Finkenaur, to 51st, Ft. Monroe.

Second Lieutenant R. T. Frederick, promoted First Lieutenant, July 1.

Second Lieutenant H. A. Gerhardt, from 63d, Ft. MacArthur, to Hawaii, sailing San Francisco, Nov. 6.

Second Lieutenant S. I. Gilman, to Randolph Field, Sept. 12, for duty and flying training.

Second Lieutenant A. D. Gough, from the Philippines, to 6th, Ft. Winfield Scott.

Second Lieutenant E. E. Hackman, from 6th, Ft. Winfield Scott, to Panama, sailing San Francisco, Nov. 2.

Second Lieutenant W. A. Hampton, from 14th, Ft. Worden, to the Philippines, sailing San Francisco, Nov. 7.

Second Lieutenant A. R. Hartman, promoted First Lieutenant, July 25.

Second Lieutenant T. H. Harvey, from Hawaii, to 52d, Ft. Hancock.

Second Lieutenant C. W. Hill, to 2d, Ft. Monroe.

Second Lieutenant G. E. Hill, from the Philippines, to 52d, Ft. Monroe.

Second Lieutenant T. F. Hoffman, to 2d, Ft. Monroe.

Second Lieutenant H. J. Jablonsky, to 51st, Ft. Monroe, temporary duty, U. S. M. A., West Point.

Second Lieutenant D. B. Johnson, from 61st, Ft. Sheridan, to the Philippines, sailing New York, Dec. 14.

Second Lieutenant Franklin Kemble, Jr., to 51st, Ft. Monroe.

Second Lieutenant K. R. Kenerick, Randolph Field, Sept. 12, for duty and flying training.

Second Lieutenant G. L. Kushner, to 52d, Ft. Monroe.

Second Lieutenant J. J. Lane, from 52d, Ft. Hancock, to the Philippines, sailing New York, Dec. 14.

Second Lieutenant R. J. Lawlor, to Panama, sailing New York, Sept. 22. Previous orders amended.

Second Lieutenant P. A. Leahy, promoted First Lieutenant, Aug. 1.

Second Lieutenant J. H. Lewis, from 2d, Ft. Monroe, to Hawaii, sailing New York, Sept. 22.

Second Lieutenant F. A. Liwski, from Hawaii, to 13th, Ft. Barrancas.

Second Lieutenant C. R. Longanecker, to Panama, sailing San Francisco, Nov. 2. Previous orders amended.

Second Lieutenant William Massello, Jr., from 11th, Ft. H. G. Wright, to the Philippines, sailing New York, Oct. 16.

Second Lieutenant C. L. MacLachlan, from the Philippines, to 61st, Ft. Sheridan.

Second Lieutenant F. J. McMorrow, from 62d, Ft. Totten, to the Philippines, sailing New York, Dec. 14.

Second Lieutenant J. E. Metzler, to Panama, sailing New York, Sept. 22. Previous orders amended.

Second Lieutenant E. C. Mitchell, from the Philippines, to 6th, Ft. Winfield Scott.

Second Lieutenant E. W. Moore, to 6th, Ft. Winfield Scott.

Second Lieutenant R. R. Moorman, to 52d, Ft. Monroe.

Second Lieutenant L. S. Mosely, Jr., to

Randolph Field, Sept. 12, for duty and flying training.

Second Lieutenant M. L. Ogden, from 62d, Ft. Totten, to Hawaii, sailing New York, Sept. 22.

Second Lieutenant P. F. Passarella, from the Philippines, to 11th, Ft. H. G. Wright.

Second Lieutenant P. S. Peca, to 52d, Ft. Monroe.

Second Lieutenant J. S. Piram, to 51st, Ft. Monroe, temporary duty, Ft. Winfield Scott.

Second Lieutenant G. F. Powell, from the Philippines, to 6th, Ft. Winfield Scott.

Second Lieutenant L. C. Ratcliffe, from 6th, Ft. Winfield Scott, to the Philippines, sailing San Francisco, Nov. 7.

Second Lieutenant S. C. Russell, from 61st, Ft. Sheridan, to the Philippines, sailing New York, Oct. 16.

Second Lieutenant D. B. Ruth, to 51st, Ft. Monroe.

Second Lieutenant H. W. Schenck, from 11th, Ft. H. G. Wright, to Hawaii, sailing New York, Sept. 22.

Second Lieutenant Peter Schmick, from the Philippines, to 63d, Ft. MacArthur.

Second Lieutenant C. M. Sciple, C. A. C., transferred to Quartermaster Corps, July 19.

Second Lieutenant J. E. Shuck, to Randolph Field, Sept, 12, for duty and flying training.

Second Lieutenant W. M. Skidmore, from Hawaii, to 52d, Ft. Monroe.

Second Lieutenant C. D. Sluman, to Randolph Field, Sept. 12, for duty and flying training.

Second Lieutenant E. C. Somerville, from 13th, Ft. Barrancas, to Hawaii, sailing New York, Dec. 14.

Second Lieutenant R. S. Spangler, from the Philippines, to 52d, Ft. Hancock.

Second Lieutenant D. S. Spengler, from 61st, Ft. Sheridan, to the Philippines, sailing New York, Dec. 14.

Second Lieutenant J. J. Stark, to Randolph Field, Sept. 12, for duty and flying training.

Second Lieutenant Preston Steele, from 6th, Ft. Winfield Scott, to the Philippines, sailing San Francisco, Nov. 7.

Second Lieutenant P. W. Steinback, Jr., from 63d, Ft. MacArthur, to the Philippines, sailing San Francisco, Nov. 7.

Second Lieutenant J. D. Stevens, to 2d, Ft. Monroe.

Second Lieutenant P. B. Stiness, from the Philippines, to 10th, Ft. Adams.

Second Lieutenant A. J. Stuart, Jr., to 2d, Ft. Monroe.

Second Lieutenant L. K. Tarrant, promoted First Lieutenant, Aug. 1.

Second Lieutenant E. O. Taylor, from 63d, Ft. MacArthur, to the Philippines, sailing San Francisco, Nov. 7.

Second Lieutenant A. R. Thomas, promoted First Lieutenant, Aug. 1.

Second Lieutenant J. F. Thorlin, from 6th, Ft. Winfield Scott, to the Philippines, sailing San Francisco, Nov. 7.

Second Lieutenant H. F. Turner, to 2d, Ft. Monroe.

Second Lieutenant R. A. Turner, from 63d, Ft. MacArthur, to the Philippines, sailing San Francisco, Nov. 7.

Second Lieutenant W. E. H. Voehl, to 62d, Ft. Totten.

Second Lieutenant R. B. Warren, to 6th, Ft. Winfield Scott.

Second Lieutenant G. J. Weitzel, to 52d, Ft. Monroe.

Second Lieutenant R. L. Williams, Jr., from 13th, Ft. Barrancas, to the Philippines, sailing New York, Dec. 14.

Second Lieutenant Y. H. Wolfe, to 52d, Ft. Hancock.

Second Lieutenant R. J. Wood, from the Philippines, to 2d, Ft. Monroe.

Second Lieutenant F. J. Zeller, from 6th, Ft. Winfield Scott, to the Philippines, sailing San Francisco, Nov. 7.

Warrant Officer N. W. Raymond, from C. A. School, Ft. Monroe, to the Philippines, sailing New York, Dec. 14. Previous orders amended.

Master Sergeant A. J. Bergbom, 69th, Ft. McClellan, retired, Aug. 31.

Master Sergeant J. J. Duffy, 15th, Ft. Kamehameha, retired, Aug. 31.

Master Sergeant H. A. Fowee, 3d, Ft. Stevens, retired, Aug. 31.

Master Sergeant R. E. Hefley, 14th, Ft. Worden, retired, Aug. 31.

Master Sergeant J. D. Jones, 2d, Ft. Monroe, retired, Aug. 31.

Master Sergeant Harold Morelock, 14th, Ft. Worden, retired, Aug. 31.

First Sergeant J. C. Drivdahl, 6th, Ft. Winfield Scott, retired, July 31.

First Sergeant J. W. Haney, 4th, Ft. Amador, retired, Aug. 31.

First Sergeant Herman Kaiser, 55th, Ft. Ruger, retired, July 31.

First Sergeant E. L. Phipps, 61st, Ft. Sheridan, retired, July 31.

First Sergeant C. H. Schwab, 6th, Ft. Winfield Scott, retired, July 31.

First Sergeant Frank Seeley, 59th, Ft. Mills, retired, July 31.

First Sergeant W. H. Turner, Ft. Monroe, retired, July 29.

First Sergeant A. B. Waugh, 8th, Ft. Preble, retired, July 31.

First Sergeant J. E. Young, 64th, Ft. Shafter, retired, Aug. 31.

Sergeant Edward Acker, 6th, Ft. Winfield Scott, retired, Aug. 31.

Sergeant W. B. Coate, 13th, Ft. Moultrie, retired, July 31.

Sergeant P. C. Curtiss, 6th, Ft. Winfield Scott, retired, Aug. 31.

Corporal E. J. Walter, 63d, Ft. MacArthur, retired, July 31.

EUROPE IS CLOSER *to war than at any time since 1913—with armed troops patroling unfriendly borders and looking jealously at alien lands. An increasing spirit of nationalism prevails in many major powers, of which Germany under Hitler is the classic example. In the Far East we see a growing spirit of Imperialism on the part of the Japanese, which must inevitably cause the Chinese to develop a still greater enmity for al foreigners.*—"ECONOMIC HIGHLIGHTS."

BOOK REVIEWS

THE WAR IN THE AIR. Vol. IV. By. H. A. Jones. 488 pp. (Humphrey Milford — Oxford University Press.) $7.00.

By Lieutenant Colonel R. R. Welshmer, C.A.C.

This is the fourth volume of the official history of the war in the air from the British viewpoint. Source material and presentation thereof may be accepted as accurate.

The book covers the British operations on the Western Front from the Battle of Messines (June, 1917) to the close of the German offensive of March-April, 1918; also, the Naval operations in British home waters during the entire year of 1917, and the first three months of 1918.

A feature of the period dealt with was the development of air attacks against troops, transport, and other targets on the ground. These attacks reached the peak of intensity during the German advance on the Somme. On the 26th of March, 1918, when the situation on the Third Army front was most critical, the British had sixty squadrons working with their armies in France. Of these sixty squadrons, thirty-seven operated over the Third Army front, and twenty-seven of them were specificially engaged in low-flying attacks, with bombs and machine guns, against ground targets. (How about the future?)

On the 21st of March, 1918, the fog on the Third Army front was not so dense as along that of the Fifth Army front on the right of the Third Army. While happenings on the Fifth Army front were almost entirely obscured from the air during the morning, some of the observers flying over the Third Army saw and reported a fair amount of the events. This means that ground visibility, on which the defense plans so largely depended, varied, and indicates that such conditions must be taken into account in considering the success or failure of the troops.

One of the most interesting sections in this book deals with the development of the carrying, launching, and recovery of aircraft at sea. It also sets forth the development of the flying boat for reconnaissance "due in great measure to the faith and persistence of one flying officer," and, *it should be added,* to the devoted bravery of many.

This is a story of a fight for recognition by those who foresaw against those blinded by tradition or lack of imagination. It records the patient and persistent organization, the gradual triumph of new ideas over old, and of sublime courage and endless adaptability to ever-changing conditions.

The author has presented the record in a way to make every situation interesting, whether it is the trial of a new machine or device, or the account of a battle. It is the story of a great service worthily told, against, of course, the background of military and naval operations.

There are eleven maps inserted in the text, nineteen appendices containing very useful and interesting statistical data, and a separate index for the volume.

Army and Navy officers will discover much to complete their knowledge of the operations covered in this volume, and their perusal of it will surely increase their undertsanding of our Air Services.

WITH MY OWN EYES. A Personal Story of Battle Years. By Frederick Palmer. The Bobbs-Merrill Company. New York. 400 pp. $3.50.

By Major General H. D. Todd, Jr., Retired

The eyes of few people in this world have seen what Mr. Palmer's eyes have seen and of such people but a small number could so interestingly describe what they saw.

The book, in addition to being a valuable history, is also to some extent an autobiography. At the age of fifteen Frederick Palmer climbed the stairs to the editorial rooms of the struggling young *Morning Post,* located in an old building down by the railroad station in Jamestown, New York, and asked the Editor, Ben Dean ——, "if he could write something for the paper."

The countless readers of Mr. Palmer's writings owe thanks to Mr. Dean. The kindness and consideration with which he acted toward a poor young boy were undoubtedly important factors in shaping Mr. Palmer's career and they also expressed an attitude toward life which if it were more general would make this a far happier world. Next, we find Charles A. Dana of the New York *Sun* and also Curtis Brown of the New York *Press* helping Mr. Palmer on his way. In fact, throughout the book, the author tells of the great assistance and many courtesies extended to him often by men in high position, and he continually expresses his appreciation of the treatment accorded him.

Much of this treatment was undoubtedly due to his ability, his personality, and to the evident possession of a great amount of tact. His first war was the Greco-Turkish war of 1897. As was his custom, he endeavored to make personal contact with all ranks. This enabled him to produce a story with a personal touch often lacking in reports of military operations. Moreover, in this particular war, he fortunately was able, before actual fighting began, to visit both of the hostile camps and thus make "an estimate of the situation" beyond the power of any one not so fortunate.

We next learn of Mr. Palmer having to decide between following the fortunes of Gomez and his Cuban insurgents or accompanying the Klondike relief expedition. He chose the latter, but the doctors nearly stopped him. They

frankly informed him that he not only had a heart lesion but an aneurism of a carotid artery. This fact is noted because, if true, and the diagnosis was confirmed by several physicians, Mr. Palmer's subsequent career appears miraculous. After successfully enduring hardships that would have worn out, if not killed, many men with normal hearts, he goes to the other extreme in climate and joins our forces in the Philippines. Here he becomes a great friend and admirer of Admiral Dewey. He knew him "on and off duty and in all his moods" and Mr. Palmer looks back with a singular affection for him among the many eminent men of the author's acquaintance.

The personal touch so evident through the book gives a most intimate description of the lot of our soldiers while they "beat up the jungle." The Army owes a great deal to Mr. Palmer for his accurate, intimate and sympathetic account of what our soldiers encountered and endured throughout the Philippine Insurrection. Having from sheer luck lived through countless engagements in Luzon, Mr. Palmer accompanies the relief expedition to Peking. It is doubtful if anyone not in that advance to the Chinese Capital could do justice to the efforts and suffering of the officers and men of the allied forces, and of those who made that march through the heat and dust from Tientsin to rescue the Legations, there are few indeed who could write about it as does Mr. Palmer.

After the relief this restless energetic person crosses Siberia by rail, walks across the Isthmus of Panama in what he calls the "see for myself" spirit and then goes to the Balkans where in 1903 serious trouble was in the air. His chapter on "Kings and Atrocities," giving as it does the inside news from that region, is both interesting and illuminating.

Most men would now have called it a day, particularly if they had started years before with a "heart lesion and an aneurism of a carotid artery," but not Mr. Palmer.

Early in the winter of 1904-05, as he read the despatches from the Far East he "could hear the faint rustle of silk as the Japanese Samurai tied up the sleeves of their kimonos before taking the ancestral swords from the racks for a desperate duel," and he immediately made plans for joining the Japanese forces in what was considered "the first great test of modern arms and tactics." Again, we have the close up of a campaign and in addition an account of very frankly conducted conversations with the Japanese leaders.

Believing that there was little more to see after the defeat of the Russian fleet, Mr. Palmer returns to the United States and from 1905 until 1914 lived what he considers a tranquil life.

This among other adventures includes a voyage as far as San Francisco on the flagship of the United States fleet that went around the world. It also included accompanying the Bulgarian Army in 1912 during its attack with Serbia and Greece against Turkey. Still leading his "tranquil" life, conversing one day with the Mexican Villa and another day with Carranza, Mr. Pal-

mer on July 30, 1914, received a telegram from the editor of *Everybodys'* stating that war in Europe seemed inevitable. While he could not believe such a thing possible he immediately started for Europe where he eventually became an important factor in a war described by Villa as being very uncivilized! Until the United States entered the war Mr. Palmer was with the British troops. Then to his great surprise and with many misgivings, the man who had spent his life being censored became the Chief Censor of the A.E.F.

SPIES AND THE NEXT WAR. By Richard W. Rowan. New York. Robert M. McBride & Co., 1934. 311 pages, illustrated. $2.50.

Mr. Rowan tells us that over 600 persons have been tried for espionage in the last two years, and there are many more spies at work today than there were during the greater part of the World War. The secret agent of the next war is being taught not only to purloin secret documents, spy on enemy activities and forward information back home. The deeds of spies in the next war will make those of their predecessors seem like child's play. The *espion* of the next war will be a merciless *saboteur*. He is being taught how to delay, if not destroy, supplies, wreck railroads, ships, factories and public buildings by the use of incendiary or explosive bombs that have the appearance of coal or harmless looking pencils. His mission will be to destroy whole cities by starting epidemics. Wholesale death will be distributed by bacteria cultures carried in innocent looking fountain pens; cartridges will carry epidemic germs in glass tubes that break upon impact. The epidemic war will be picked up from where it was dropped in the "last" war. The author states that the Central Powers contemplated spreading an epidemic through France and Italy, and only their collapse prevented agents from carrying out the plan.

Not all of the book deals with spies of the future. The author has included a study of the method of disseminating propaganda, and also an excellent review of the deeds of spies of the past. Their methods are described and illustrated. Spies had many ways to convey their information. Botanical and entomological sketches hid drawings of fortifications; what appeared to be a child's drawing of a doll concealed a written, uncoded message; messages in code were represented by the stitches in a glove, by scratches on the inside of the lids of food tins, by the arrangement of stamps in a collector's album, by musical notes, by the contents of bottles on a shelf, and by the all but unbeatable "stencil" code. One industrious spy encoded a message of 1,600 words underneath a postage stamp. Another clever gentleman invented a pipe with a turning bowl. He carried his message in the bowl of his pipe, and, if cornered, had simply to turn the bowl and light his pipe. Spies soaked articles of clothing in secret ink, hid containers of it in candles. They carried small cameras in the false bottoms of buckets. Many other methods are described. The author has also inserted brief character sketches of celebrated *espions*.