

The Marine Corps Engineer Battalion

By John A. Lejeune, Major General Commandant, United States Marine Corps



FOR MANY years, the Marine Corps has carried on certain activities which may properly be designated military engineering, and which have been performed as a matter of necessity in almost every land campaign in which it has engaged. The officers of the Corps were given a sufficient amount of engineering training to enable them to satisfy the needs of comparatively small bodies of troops. If some special type of skill were needed, it was generally possible to find some who could meet the requirement. Thus, on more than one occasion, expeditionary forces have had to take over and operate railroads—locomotive drivers and other necessary personnel have always been discovered among the enlisted personnel. Until recent years, however, no force had been created with engineering as its sole or principal mission.

In 1912 and 1913, the first serious steps were taken to create an organization of Marines for advance-base duty, a function that had lately been assigned to the Corps. As a consequence, it followed that the Marine Corps was required to have at all times a body of troops organized, trained, and equipped, to seize and defend an advance base for the Navy in an overseas campaign. This type of operation necessitated certain special and technical activities, each with its own equipment and trained personnel.

The First Engineer Organization

In June, 1913, Company H was organized at the Marine Barracks, Philadelphia, Pennsylvania, as part of the advance-base regiment. This unit was assigned duties both as an engineer company and a machine-gun company, a somewhat peculiar combination of functions which was afterwards abandoned. Later on in the same year an advance-base brigade was formed at Philadelphia, composed of Brigade Headquarters and the First and Second Regiments, the First Regiment being considered as the fixed defense and the Second as the mobile defense. The engineer company formed part of the First Regiment.

In the winter of 1914, the brigade was dispatched to the Island of Culebra, east of Porto Rico, to carry out advance-base maneuvers in conjunction with the Atlantic Fleet. This work involved the occupation of the Island of Culebra and the mounting of fixed guns, the laying of mines, *et cetera*. The engineer company assisted the fixed-gun companies in the preparation of gun pits, in blasting of magazine sites, and in transportation of the heavy guns to their emplacements, which were frequently high up on forested hills. The company also built light docks for unloading the heavier material.

Upon the conclusion of maneuvers, the training of Company H in engineering was interrupted for the same reasons that had so frequently interfered with the training of the Corps before and after this date. An immediate pressing emergency developed in Mexico which required all the force the Marine Corps could spare. This was the occupation of Vera Cruz in April of that year. Company H performed duty as a rifle company during the whole occupation of Vera Cruz; its name had been changed to the 5th Company in April of the same year.

The Marine Brigade returned to Philadelphia, and the advance-base force was reorganized with the 5th Company and again assigned engineering duty, this time without the addition of machine guns. When disturbances broke out in Haiti, it was again necessary to assemble all available Marines for expeditionary duty in that country. The 5th Company served as a rifle company in Haiti and the following year in Santo Domingo, taking part in General Pendleton's campaign against the insurgents in the interior of the island. The company resumed its training in Philadelphia as an engineer company, except during the months of 1918 and 1919 when it was dispatched to Cuba as part of the brigade then occupying the eastern part of that island.

The Battalion Formed

In October, 1920, the engineer company, with other advance-base units, was transferred to the Marine Barracks, Quantico, Virginia. Here, on February 7, 1921, the Engineer Battalion was organized, consisting of battalion headquarters and the 5th and 12th Companies. The battalion was transferred to the

First Regiment on April 1, 1921, but was disbanded the following month, the two engineer companies remaining in the regiment without a battalion organization. The following April, the First Regiment was disbanded and, shortly after, the engineer companies were again formed into a battalion, a headquarters company being organized in June. Since that period until November 16, 1927, the organization has remained intact.

However, the various units frequently took part in maneuvers away from Quantico, performing engineering duties in each case, these maneuvers being sometimes held in the neighborhood of Quantico and in other instances farther off, as at Gettysburg, Pennsylvania, and Sharpsburg, Maryland. In the winter of 1924, the 5th Company took part in the maneuvers of the United States Fleet, forming part of the Marine Corps Expeditionary Force which occupied and defended the Island of Culebra against the attacking forces composed of most of the units of the fleet.

Interruptions to Training and Organization

The calendar year 1927 brought heavy drafts on the Marine Corps for expeditionary duty in two places. A revolution broke out in Nicaragua and to protect American lives and property, it was necessary to dispatch a brigade of Marines to that country. The perennial civil war in China also endangered Americans and other foreigners and a brigade of Marines was needed there also. The 5th Company was included in the latter force and arrived in Shanghai on May 20, later being transferred to Tientsin, where it is now stationed.

As appropriations allow only an enlisted strength of eighteen thousand in the Marine Corps at the present time, the detail of so many troops on expeditionary duty caused a reduction in the forces at home much below their authorized complement. This was especially true at Quantico. This post is, to a large extent, still under construction, and the presence of a substantial force is needed merely to keep it in repair and operate the necessary utilities. As a result of this emergency, the remaining engineer troops at Quantico were disbanded as such on November 16, 1927, and converted into a maintenance company. However, it is intended to re-form the Engineer Battalion as soon as circumstances permit, as a part of the East Coast Expeditionary Force. Tables of organization for the battalion in this status have been prepared but they may be modified under certain contingencies.

It will be seen from the foregoing historical outline that it has been very difficult to carry out a continuous program of engineering training in the Marine Corps. This has been due principally to constant interruption by expeditions in which the engineer companies usually served as infantrymen. The present duty of the 5th Company in China is the first example of expeditionary service where the engineers continued functioning in that capacity.

Functions of Engineer Battalion

While serving at Quantico, the Engineer Battalion performed many duties which could perhaps be described as post service; examples of this type of work are operation of the power plant, the waterworks and central heating plants and sanitary facilities; and the construction and upkeep of roads throughout the reservation. Building and repairing barracks were also assigned to the organization. In addition to these duties, the personnel received instruction in building bridges, demolitions, and the construction of wire entanglements and other obstacles. The battalion also maintained and operated a map reproduction plant in connection with the Marine Corps Schools. Practical and theoretical training of officers and non-commissioned officers has been largely carried on by schools within the battalion. Officers are selected for the duty largely on account of having had former experience or training of a kind related to engineering.

The mission of the Marine Corps as a whole, of course, largely determines the mission of the Engineer Battalion. The kind of duty with which the Marine Corps is usually associated in the public view is expeditionary service in more or less backward countries of the West Indies and Central America. Many expeditions of this kind have been dispatched in the last few

years as indicated at the beginning of this article. There is a certain similarity in all duty of this kind, although, of course, local conditions vary considerably.

As a rule, the scene of operations is a country having poor communications and especially lacking in roads which can be used by motor vehicles; docks, if any exist, are apt to be in poor condition and not strong enough to receive very heavy material; railroads, where there are any, are also often in bad repair. Frequently, there is a great deal of difficulty with water supply; power plants are probably of antique construction and perhaps not functioning. Most of these utilities are essential to the success of a military occupation and it is necessary to make them capable of use by our forces. Even if certain of them, such as power plants, are still in operation, it may be necessary for military reasons to replace the employees with personnel from our own forces. Such activities are the peculiar province of engineers. If, in some instances, the manual labor is performed by civilians, supervision by engineer personnel is essential.

No very clear distinction can be drawn here between the work performed by the pioneer platoons of organized regiments, and an engineer company officially so designated. At present, for example, there is, unquestionably, engineering work being performed by the 2d Brigade of Marines now in occupation of Nicaragua. However, there is no engineer company attached to that force.

Expeditionary Missions

This short discussion has so far referred particularly to minor operations. In major campaigns involving overseas operations, the mission of the Marine Corps, expressed briefly, may be said to be "to seize such advance bases as the Navy shall require, defending them until relieved by Army troops assigned for that purpose." In such a campaign, it is contemplated that each Marine infantry division will have one engineer battalion composed of battalion headquarters and headquarters company and three engineer companies, a total of three hundred and ninety-one officers and men. As the duties of this battalion will be closely associated with, or a part of, the tactical operations of the division, it may properly be considered a combat unit and its equipment and training will be governed largely by this consideration.

Assuming that the operations involve landings on hostile shores against resistance, engineering intelligence of the theater of operations will be, of course, necessary, and thorough study of all the available material must be made beforehand to obtain the necessary data. The information desired includes all available knowledge of the terrain from the foreshore to the limit of the contemplated operations. Information of the foreshore must include such information as the character of the tides, currents, and prevailing winds, the nature of the bottom, the description of the beach with its obstacles, bars, reefs, or artificial obstacles, and the openings through such obstacles. It is probable that landings will be conducted on more or less open beaches where no provisions exist for the landing of troops, armament, food, or stores.

As a general rule, no personnel of the Engineer Battalion will accompany the first wave. The pioneer platoons of the assaulting regiments will, of course, accompany their units and they will, until relieved by detachments of the Engineer Battalion, carry out the work of "shore parties." The functions of shore parties are to supervise labor details, clear the beach of hindrances to landing, and prepare the necessary utilities for unloading material from boats. They may also have to supervise the construction of shelter against shell fire. It is quite possible that the beach has been lined with mines, entanglements, and underwater obstacles, all of which will have to be removed or destroyed. A wharf or pier, even if a very primitive one, must be built and gear rigged for the lifting and moving of heavy material. Perhaps small breakwaters will have to be constructed if the beach is exposed to prevailing winds.

Of course, all this work can not be performed between the landings of the first and second waves. It is contemplated that the regularly detailed landing parties will land with the second wave. Assuming the division landing on a two-regiment front, at least two landing parties will be required and one platoon of engineers will be the maximum assigned to each party. At the most, one company of engineers would be required for this duty and the Battalion of Engineers less one company would remain intact for later phases of the operation. Inclusion of engineers in the first wave, aside from the neces-

sary work they carry on at the time, insures an early survey of the terrain and an estimate of future needs. Details can be worked out before the beach is encumbered with large amounts of material.

The first essential in carrying out the mission of the attacking force is to establish a beach head. The tactical principles affecting a beach head are the same in essentials as those of a bridgehead and need not be discussed here. The "jump off" from the beach head will be made as soon as possible. The succeeding operations will then be carried on as are other military operations ashore and the duties of the Engineer Battalion will be similar to those of the corresponding unit in Army forces. If, however, the advance from the beach head is repulsed or the enemy attacks it, the Engineer Battalion will assist in organizing it for defense.

After the advance base has been seized, it is not expected, as stated before in this article, that the Marine Expeditionary Force will be responsible for its defense for more than a comparatively brief period. During that time, all precautions must be taken to prevent its recapture by the enemy. The engineer troops will be responsible for their proper share of the work of preparing the temporary defense. It must be emphasized, however, that such work will be of a temporary nature. The operation of the utilities of the advance base itself will presumably be handled by the Navy Civil Engineer Corps. The duty of the Engineer Battalion will therefore be restricted to the needs of the organization to which it is attached.

Engineer Equipment

The engineer equipment of the Battalion has been determined with the fact necessarily kept in mind that transportation space is limited and, therefore, the equipment carried must be neither too bulky nor too heavy. For certain types of expeditions, additional material would probably be obtained. On the other hand, under other circumstances, the list might be reduced in some particulars as, for example, by including a lesser amount of motor transportation.

When an engineer company is serving apart from its battalion, as is the case now with the 5th Company, more equipment is carried than is provided in the table, as the battalion quartermaster and his stores are not available:

Blacksmith's tools—machine sets, complete.....	2
Blocks, automobile, Pull-U-Out.....	21
Carpenter's equipment, sets, field, complete.....	3
Demolition equipment, sets, field, complete.....	2
Drafting equipment, sets, company, complete.....	2
regimental, complete	1
Illuminating equipment, set, complete.....	4
Knives, clasp	137
Pliers, side cutting, 8".....	40
Rules, folding, 4-foot.....	40
Tape, metallic, 50-foot.....	8
Intrenching equipment, infantry.....	2
Map duplicator	2
Map reproduction equipment, sets:	
Blue printing, complete.....	1
Duplicator	1
L	
M Truck, FWD	7
Offi	
Truck, tank, gas, 750-gallon capacity.....	1
C	
Truck, water purification unit.....	1
R	
Truck, wrecking and spare parts.....	1
Pho	
Signal Equipment—	
C Arrestor, protector, telephone, AR-6.....	2
R Batteries, BA-1	10
Pio	
Fuses, monocord switchboard, M-36.....	8
Pip	
Headsets, P-11	2
Sig	
Insulators, porcelain, No. 5½, split, IN-37.....	500
Sur	
Kits, soldering, EE-19, complete.....	1
Tin	
Knives, electricians'	15
Veh	
Panels, infantry marking, AL-87.....	16
A	
Pliers, 6", side-cutting.....	15
B	
Reel carts, RL-16.....	2
C	
Screws, F. H. B. 2½ No. 8, gross.....	4
K	
Set, monocord operators, EE-64.....	1
M	
Switchboard, BD-9, monocord, telephone, 4-line, complete	2
M	
Switchboard, units EE 2, monocord, telephone, complete	2
T	
Tape, friction, TL-83, lbs.....	5
T	
Tape, rubber, TL-94, lbs.....	5
T	
Telephones, EE-5	4
T	
Tool sets, service, TE-4	1
Wire	
Wire, W-44, (miles).....	2

When We Worked for \$8.80

By THE ORIGINAL "SPUD" MURPHY

WELL, SIR, here is a short sketch of the life of a real old-time Marine. You know in the old days Marines did not have so much of a chance of going around the same as they have now. Their duty was a few years aboard ship and shore duty, but then we did not have the Philippines, Guam, Cuba, nor the Virgin Islands. That all came after the Spanish American War was over. I shipped for the first time in the outfit October 1, 1891, at Boston, Massachusetts, for the large monthly pay of \$8.80 for one year, after that I received the full pay, \$12.80. I was transferred from Boston, Mass., in 1892 to Portsmouth, N. H., soon after I went as one of the guard on the gunboat "Machias," when she just went in commission. She was to go to China, but as near as we got to getting there was New York. They found she was top-heavy and put her out of commission so that I was in Brooklyn Barracks for about a year. Was transferred to the old receiving ship "Vermont," which lay at the Cob dock. Our Marine captain was the late Colonel Mahoney. I was discharged in Brooklyn and shipped over in 1896. Now, in those days you did not get any furloughs the same as they do now. The Marine Corps was only 2,000 strong. Why, if you were absent any time (which was often the case in those days) you got a few days B. & W., and 3 months extra police work on the wood pile. Now I happened to be out of those Leathernecks on the wood pile. At that time the old battleship "Maine," afterwards blown up in Havana harbor, was lying in the yard. They wanted seven privates to fill up the guard; I was one of the seven that volunteered to go. The seven of us went before the old major in the morning at office hours. I was the only one that was fourth class. The old man looked over our record books; everyone was alright until he came to mine. "Murphy," he says, "you're fourth class, I see by your book. We want first class men for this ship. I see you whitewashing trees around the barracks, so you had better continue the good work." I found out later I was very lucky to be fourth class. The next ship to come to the yard was the "Cincinnati."

She was short a few men for to fill up her guard, so I happened to catch her and I am proud to say that our Marine officer in charge of the guard was First Lieutenant Lejeune, our present Major General Commandant. We sailed from New York for South America, we were around that station for some time when news came that the "Maine" was blown up in Havana harbor, so I was a lucky Mick, since only one man out of the seven that volunteered escaped, his name was Billantany, now dead. Soon after we received orders to proceed to Key West. We remained there for a few weeks with the fleet when war was declared between the U. S. and Spain. We left Key West with the fleet and was assigned to blockading duty off Morrow Castle. We were in the bombardment of Matanzas and after the war we went into Havana harbor, and hoisted the American flag on the mast of the old "Maine," which showed out of the water. We proceeded to New York where all the Marines were taken off the ships. The first battalion of Marines was then formed in New York Navy Yard and soon was off for the Philippines. I happened to get in Captain Fuller's Company, now General Fuller. At that time we took out some young lieutenants such as Porter, Dunlap, Reed, Butler and a few more, all now high ranking officers. We sailed from Frisco on the old "Newport." The officer in command was Colonel Pope, now dead. We also had the 4-5 Light Battery, U. S. A., under Captain Ralley, when we landed in Cavite, P. I. The only troops there was the Fourth Infantry and Texas Volunteers. We were not long there when we got into our first fight in a place where the insurgents were pretty well entrenched. The Army was supposed to attack from the rear, but they lost their direction and the Marines finished the job themselves. The officer in command was Colonel George Elliott, now retired major general commandant. We had a few minor scraps right along but nothing to amount to much. Our next orders was for a battalion of Marines for

China. We got three hours' notice to get our 3-inch field pieces and Colts automatic guns and everything ready for the firing line. If you don't think we got there on time, just tell it to the Marines. We were on our way in less than three hours. We landed in Taku, China, and camped over night. Next morning we proceeded up the Pei Ho River and landed in New Tientsin, a European city. Old Tientsin, which is only a few miles away is the old Chinese wall city. We laid around for some few weeks without anything happening, waiting for reinforcements before bombarding the city. Soon after we landed the 9th U. S. Infantry came along, also 4 & 5 Light Battery of artillery under command of Captain Ralley. The Marines were under command of Colonel Mead, since dead, also Major Wallace Cates. We soon received orders to join the allied forces and take old Tientsin. We bombarded for one day and night before we could get in, then we laid off for a few days before starting off for Pekin. On the way there we ran into a lot of small forts. Ralley's Battery did good work on them. Finally we reached Pekin where they hoisted the white flag and surrendered at the same time. Poor Captain Ralley was shot when everything was practically over. We got orders to leave Pekin for Taku. Now, we hiked all day and at sundown we made our flop on the ground until morning in any old kind of weather. Finally we reached Taku and went aboard ship and back to the Philippines again. We were about five months in China. After landing in Cavite again the company I was in was ordered to a place called Isabela, one of the southern Islands. Some time after my enlistment expired I came home by way of the Suez Canal on the old meat boat Cugo. It took six weeks to reach New York. I was discharged and reenlisted in New York and the next ship I went on was the "Mayflower." That was in President Roosevelt's time. I was about one year on her and got transferred to Washington Barracks for duty. I was order sergeant for the admiral of the yard for two years. I was discharged in Washington Navy Yard, stopped out for ten years until the World War, before the U. S. got into it. I shipped over again so I thought I would get over seas, but unfortunately I did not. I have now about three years and a few months to finish my thirty years.



SERGEANT MURPHY
In uniform of the
"Old Marine Corps."

THE MARINE CORPS ENGINEER BATTALION

(Continued from page 5)

Truck, FWD	7
Truck, tank, gas, 750-gallon capacity	1
Truck, water purification unit	1
Truck, wrecking and spare parts	1
Signal Equipment—	
Arrestor, protector, telephone, AR-6	2
Batteries, BA-1	10
Fuses, monocord switchboard, M-36	8
Headsets, P-11	2
Insulators, porcelain, No. 5 1/2, split, IN-37	500
Kits, soldering, EE-19, complete	1
Knives, electricians'	15
Panels, infantry marking, AL-87	16
Pliers, 6", side-cutting	15
Reel carts, RL-16	2
Screws, F. H. B. 2 1/2 No. 8, gross	4
Set, monocord operators, EE-64	1
Switchboard, BD-9, monocord, telephone, 4-line, complete	2
Switchboard, units EE 2, monocord, telephone, complete	2
Tape, friction, TL-83, lbs	5
Tape, rubber, TL-94, lbs	5
Telephones, EE-5	4
Tool sets, service, TE-4	1
Wire, W-44, (miles)	2