

P R E F A C E .

This history, compiled from official records, personal diaries, and photographs, is dedicated to the memory of the 104th (Combat) Engineers, 29th Division, U.S.A., A.E.F., and the members who so splendidly served in its ranks during the greatest conflict our country ever participated in.

Sacrifice, endurance, devotion to duty and pride in branch of service characterized its development as a regiment and conduct under fire, thus creating proud traditions which have been placed in the keeping of those who now serve under the same standard in the National Guard regiment of today.

Therefore, if placing this record of service to Country and State conveniently available to veterans and the citizen soldiers of this regiment will perpetuate the memory of its splendid achievement, the purpose of assembling the data has been attained.

ORISON M. HURD
COLONEL C.E., N.J.N.G.

WILLIAM F. FIRTH,
LT. COLONEL C.E., N.J.N.G.

HISTORY

104TH ENGINEERS

U.S.A., A.E.F.

* * * * *

General Orders, No.9, Headquarters 29th Division, Camp McClellan, Anniston, Ala., 15th September 1917, stipulated that "In compliance with par. 2, G.O. 101, W. D., 1917, this division will be reorganized in conformity with requirements of Tables of Organization, Series A. August 1917" and further required that "The 104th Engineers will be organized from all Engineer troops, augmented by one Chaplain and six companies of Infantry recommended by the Commanding Officer 57th Brigade, from Infantry units of New Jersey. Any further personnel required, will be obtained by transfer of suitable officers and men from the Division. The senior officer on duty with Engineer troops will organize the 104th Engineers in accordance with Table 22. "



TROOP TRAIN PASSING THRU BLUE RIDGE MOUNTAINS, VA.
"HEADIN SOUTH" SEPT. 1917.

This G.O. No. 9, along with other details further stipulated that the personnel for the prescribed order of organization must be assigned before any further organization was attempted; that as a rule new units would be created from one or more units of existing organizations, consolidating, adding to or subtracting from, as the case may dictate, and that when transfers were made, the enlisted men would take with them, their clothing and such tentage, equipment and transportation as would be equitable and just.



ORIGINAL SITE 57TH INF. BR. HGTRS. CAMP MC CLELLAN,
ANNISTON, ALA. SEPT. 1917.

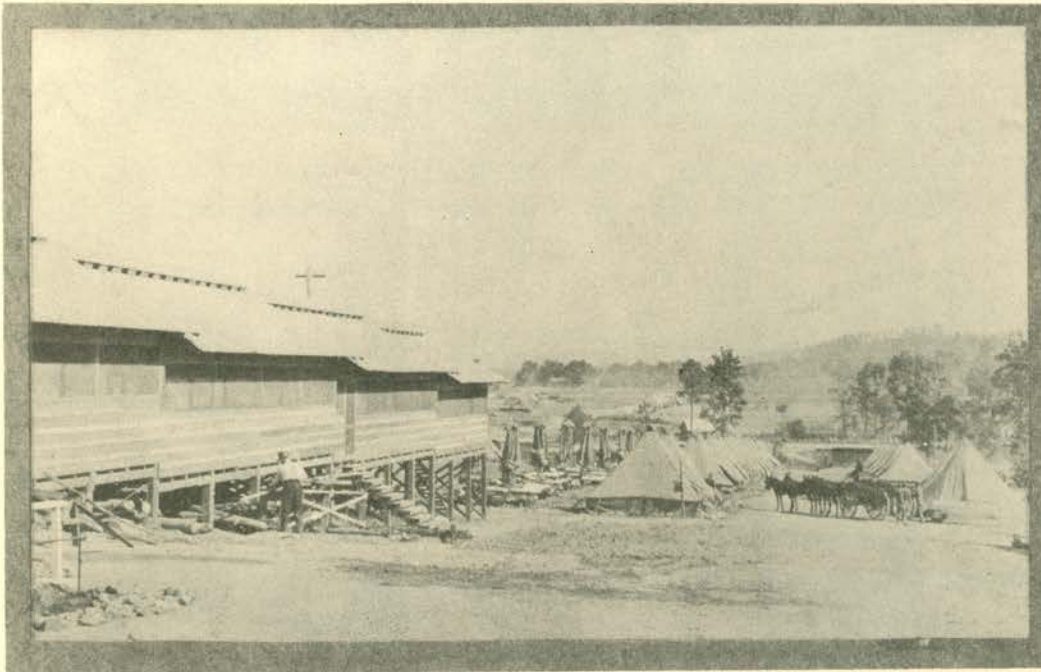
On 4th Oct. 1917, the 57th Infantry Brigade, 29th Div. issued G.O. No. 4 which designated the six Infantry companies that were to be transferred intact to the Engineers and also provided for the personnel required to bring the regiment close to authorized strength by the transfer of additional men from the companies of this Brigade.



A SMALL SECTION OF THE RESERVATION AT CAMP
MC CLELLAN, ANNISTON, ALA. SEPT. 1917.

As first organized as a regiment, the 104th Engineers was commanded by the senior Engineer Officer, Lt. Colonel Walter W. Crosby, N.A. The 1st Bn. was composed of companies A, B and C of the 1st Bn. New Jersey Engineers, recruited to nearly full strength by the transfer of men from the 57th Brigade, Major Frederick A. Reimer, Commanding, and the 2nd Bn., Major Alexander MacGlashan, 4th N.J. Infantry in command, was formed as follows: Co. D, from Co. G, 2nd N.J.

Inf. and Co. K, 1st N.J. Inf.; Co. E, from companies L, 4th N.J. Inf. and L, 3rd N.J. Inf.; Co. F, from Co. F, 5th N.J. Inf. and Co. I, 3rd N.J. Inf. This formation of the regiment resulted in one battalion, the Second, being composed of entirely Infantry units; and the other, the First, of Engineer Troops recruited in New Jersey and of men transferred from the Infantry as suitable Engineer soldiers. With a view of more equal distribution throughout the regiment of men with engineer training and experience to provide for the specialists called for in Tables of Organization, regimental G. O. No. 27 was issued 17th Nov. 1917, calling for the transfer from one company to another of officers and men which involved nearly one sixth of the command and resulted, after much work incident to moving, changing of records, property accounts and responsibility, in what may be termed the first permanent organization of personnel and units of the regiment.



NEW JERSEY INFANTRY UNITS DESIGNATED TO FORM 2ND BN. 104TH ENGINEERS, 29 DIV. U.S.A., BREAK CAMP IN PREPARATION FOR MOVEMENT TO ENGINEER AREA, CAMP MC CLELLAN, ANNISTON, ALA. OCTOBER 1917.

This, it will be observed, was the authority, so necessary in the Army, for the organization of the 104th Engineers, the source of personnel and a start at least, in the way of equipment, for the men were only partly equipped as to clothing and ordnance but such other equipment as was "equitable and just" at this stage in the formation was decidedly limited.

On 6th October 1917, when transfer was accomplished of the six Infantry companies to the Engineers, the regiment was established in a section of Camp McClellan assigned to it and started functioning as an active unit of the 29th Division. At this time the companies of the 1st Bn. were located in a canvas camp on the regimental site, Company C having just returned from construction work on cantonment at Camp Dix, N.J.



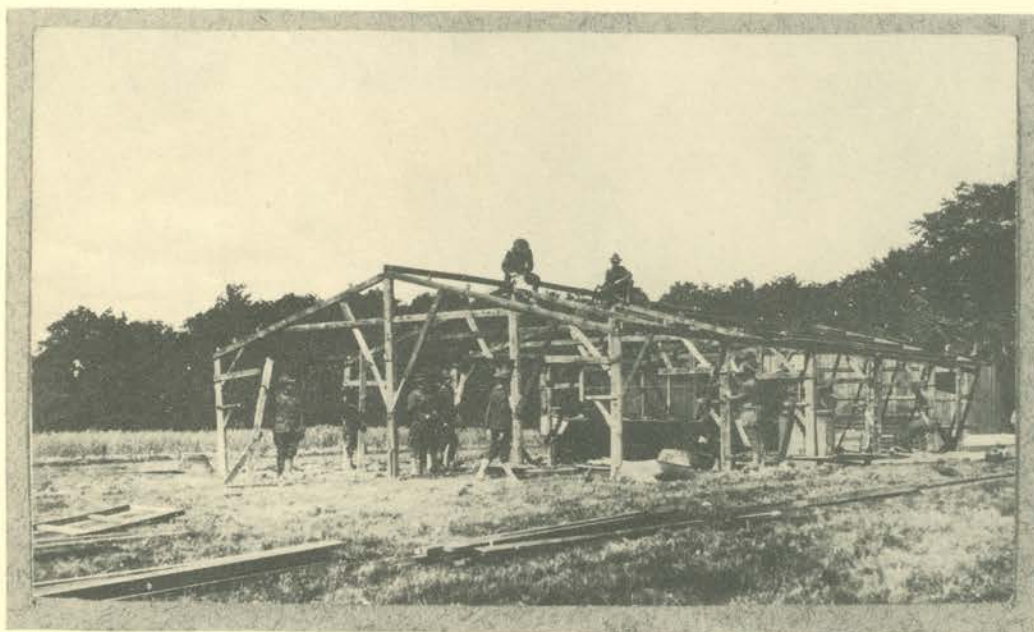
COTTON STUBBLE AND STANDING TIMBER MAKE WAY FOR THE
ENGINEER CAMP SITE, PARADE GROUND AND TRAINING AREA.
OCT. 1917.

After considerable work on grading and drainage, the tearing down and removal of old buildings and clearing of trees, brush and cotton stubble, an equally suitable camp was prepared for the 2nd Bn. Work had also been started on the clearing and grading of the site for the large drill field and parade ground which, throughout the months of training at Camp McClellan, was the scene of many drills, inspections, parades and reviews in which the regimental transportation and that of the Engineer Train frequently participated.



ENGINEER MESS SHACK AND KITCHEN AT HEAD OF COMPANY STREET. TYPICAL
DEVELOPMENT AFTER CLEARING AREA. CAMP MC CLELLAN, ANNISTON, ALA.
OCT. 1917.

During the early stages of getting settled in the new area, to be exact, on 12th October 1917, Colonel C. W. Otwell, Corps of Engineers, the first Colonel of the regiment arrived and assumed command. Then in compliance with G.O. 26, Hqtrs. 29th Div., 20th October 1917, the 104th Engineer Train was organized. Lieutenants G. E. Wilkinson and Thomas R. Creede were transferred to the Train from the 104th Engineers and the enlisted personnel of 83 men obtained from the 54th Depot Brigade. A little shifting about and considerable work in grading and clearing, provided a location in the regimental area for the train personnel and the construction of stables was immediately started for the transportation which arrived later.



CONSTRUCTION OF ENGINEER STABLES AND CORRAL FORMS PART OF CAMP DEVELOPMENT ACTIVITIES.

The first of November 1917 found the newly organized Engineer regiment housed under canvas in a presentable, well located and constructed camp on a site which, but a month before had been a wooded, cut over stump and cotton stubble area. In addition to establishing itself in this camp of its own construction, the regiment by this time was well launched into the intensive training schedule that was to prepare it for participation in the combat overseas. The divisional training schedules were followed in so far as they pertained to Engineer troops, officers and N.C.Os attended the various Divisional Schools that had been established. As soon as one assignment of students completed a course another stepped in to take its place until all had completed the work. Regimental schools were organized and special instructors detailed to cover subjects required for Engineers but not covered in the divisional schools. An extensive trench system was laid out where every type of construction entering into modern trench warfare was developed. There all members of the command were trained and instructed by actually building the various types of trenches, wire entanglements, shelters, dugouts, revetments and camouflage. The trench area afforded a never ending source of work and opportunity for training which was used from the beginning until time of departure of the regiment for overseas.



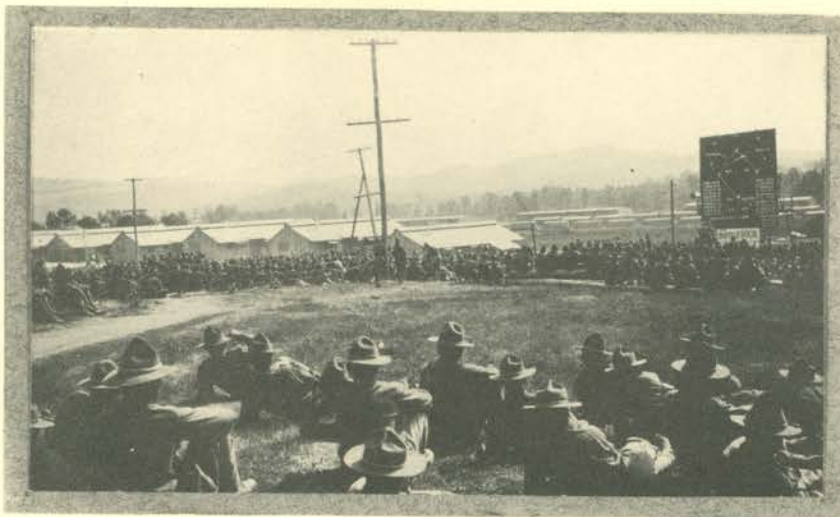
Saturday morning Field Inspection included company competition in every phase of Engineer training activities. (1) A "SHOW DOWN" FIELD INSPECTION. (2) SPAR BRIDGE ERECTION SPEED. (3) TEAMSTER COMPETITION, FOUR AND SIX HITCH, IN CONTROLL AND MANEUVER. (4) HEAVY SPAR BRIDGE. (5) BARBED WIRE.

To become proficient in one class of work was only an incentive to repeat the operation under different conditions, under cover of darkness or during adverse weather conditions for example. Our troops built the trenches and then occupied them, sleeping and messing there, experiencing every condition and discomfort of trench life made as nearly realistic as was possible without the "Hun" or the tormenting "Cootie".



TRENCH AREA DEVELOPMENT, CAMP MC CLELLAN, ANNISTON, ALA.
OCTOBER 1917.

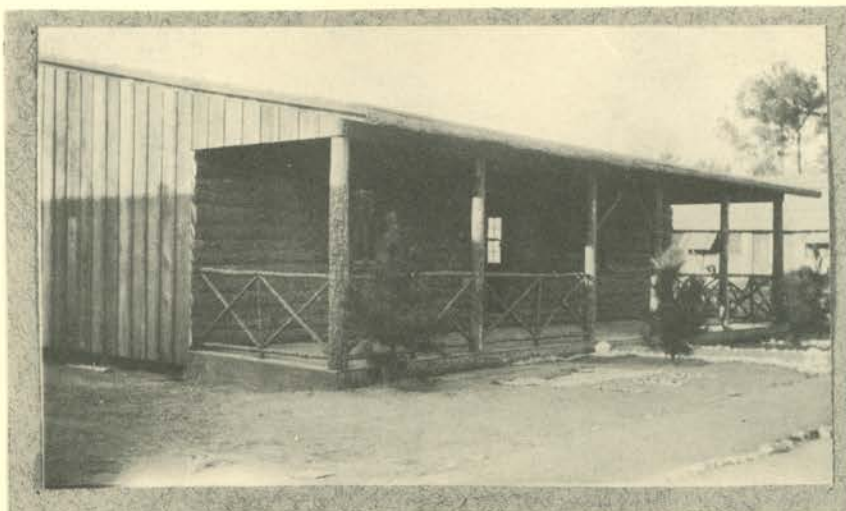
This strenuous training, drill, target practice, marches, schools, working in and occupying the trench area continued day and night regardless of weather conditions until the command left Camp McClellan for overseas. As though to assist in the hardening process, and to inure the men to the hardships that must be endured later on, the weather co-operated with training activities by breaking all previous records. That section of the "Sunny South" experienced the most severe winter in the memory of the oldest inhabitants. High winds accompanied by heavy rains in a combination against which it was impossible to weatherproof tents, no matter how well pitched. Sudden drops in temperature to below freezing and at times below zero occasioned real suffering for the men who at that moment did not have the complete issue of clothing or shoes while sheltered under canvas. During the early part of the winter men were actually confined to quarters due to the only pair of shoes issued being beyond further repair and entirely lacking the necessary protection to preserve the health of the owner. Later replacements were made available and this condition corrected.



TIME OUT FOR BASEBALL. ELECTRICAL PLAY BOARD OPERATED FOR THE 29TH DIV. U.S.A., AT CAMP MC CLELLAN, ANNISTON, ALA. DURING WORLD SERIES GAMES 1917.

The severe weather conditions were accountable for numerous irregularities, prejudicial to good order and discipline, such as tardiness and at times absence in attendance at Reveille, occasioned by the fact that shoes were frozen fast to the floors of the tents at night, when a sudden drop in temperature too close to zero, followed a soaking rain. Or again when during a severe storm on night of Jan. 10, 1918, numerous tents were blown down including one of the Hospital tents and records were scattered to the four winds, never to be found again, necessitating the re-inoculation of numerous unfortunate owners of lost records. The hardships which the men endured that winter due to one circumstance or another must have been experienced to be fully appreciated, yet with it all there was comparatively little complaining or grouching. The difficulties of a rapid mobilization and the gradual perfection of equipping agencies seemed to be generally understood.

One of the bright spots during the strenuous training activities was the large Regimental Exchange, built and operated by the regiment. Here the men could procure, at reasonable prices, necessities and luxuries. This active "exchange" was the scene of frequently presented shows, boxing, wrestling and other kinds of athletic contests. It was a paying proposition, performed a splendid service and was a big factor in keeping up the morale and spirit of the men.

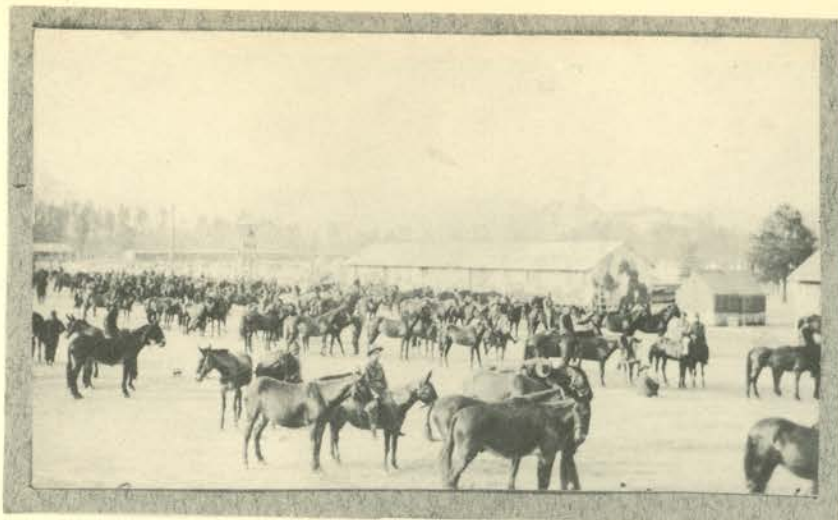


104TH ENGINEERS OFFICERS CLUB BUILT FROM SALVAGED MATERIAL BY MEMBERS OF THE REGIMENT.

From the beginning there had been no difficulty in obtaining officers and men. With the arrival of 182 men on 6th November 1917 from the 76th Division, the regiment had over 92% of its authorized strength. The active strength of the regiment never fell below 85% during its training period in the U.S.A., and by assignment of replacements, just before leaving for overseas in June 1918, the personnel was practically completed. During the training period in the States, no less than 101 officers were assigned or attached to the regiment, more than twice the authorized personnel. Changes occurred during this period occasioned by death, discharge, resignation, promotion or transfer affecting every grade except that of Lt. Colonel.

To Colonel Ralph T. Ward, C.E., U.S.A., who assumed command of the regiment on 4th February 1918 and took it overseas, belongs the major share of credit for its training and preparation for service in the A.E.F.

While man power was always available, this could not be said of equipment and supplies, other than rations. During the first few months there was a shortage of all classes of equipment. Until after first of the year 1918, when additional combat wagons were obtained, the engineering equipment consisted of six Brown type tool wagons, of the 1st Bn. which were distributed at the formation of the regiment so as to provide each company with one wagon. Eventually the complete animal drawn transportation and animals were secured. The matching of weights, shades and sizes in each company transport section finally produced a display of animal drawn transportation second to none in the entire Division.



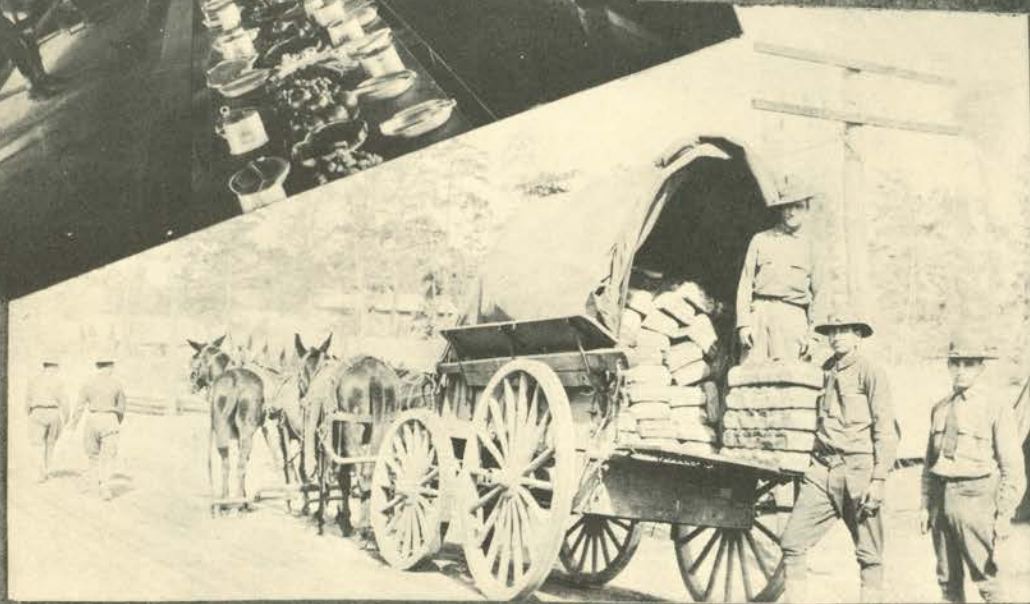
THE ENGINEER CORRAL IS TURNED OUT FOR VETERINARY INSPECTION, CAMP MC CLELLAN, ANNISTON, ALA.

However, the shortage of motor transportation in the Engineer Train was a matter of deep concern and seriously retarded training activities of the regiment during training period in the States. No more than a very small percentage of this motor transportation was ever available. Gradually the shortage of clothing was corrected and each succeeding inspection revealed a steadily diminishing shortage list in all classes of equipment and supplies, until finally when time arrived for departure overseas, the officers responsible for this development found the regiment and Train 100% equipped not including motor transportation and animals which were turned into the Remount Depot at Camp McClellan.

On 25th of May 1918, Headquarters 29th Division issued "Confidential General Orders No. 25", announcing that "all units of this division will be sent to Port of Embarkation, date of departure and place to be verbally announced." This date found the 104th Engineers and Engineer Train ready, trained and equipped for overseas service. The long looked for order to move had been received and training and instruction activities now gave way to those of packing up and the preparation of the great volume of prescribed paper work, passenger and other lists and rosters.



THE LONG GRIND OF TRAINING COMPLETED, THE 29th DIV. U.S.A, 30,000 STRONG, PASSES IN REVIEW BEFORE AMERICAN AND FOREIGN MILITARY OFFICIALS AT CAMP MC CLELLAN, ANNISTON, ALA. PRIOR TO EMBARKATION FOR OVERSEAS
MARCH 1918.

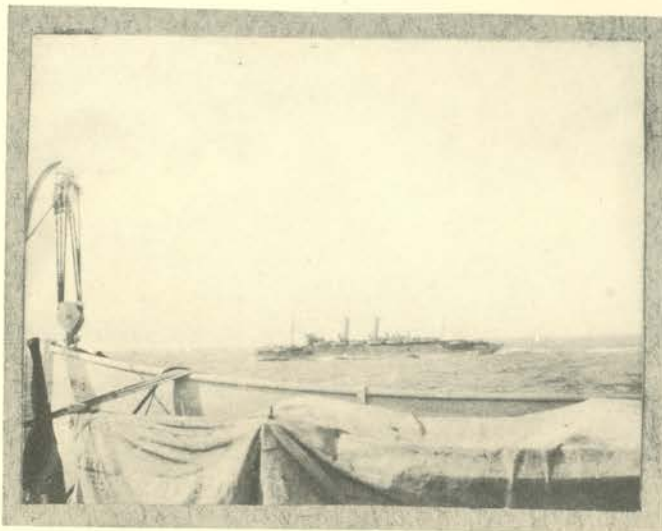


104TH ENGINEERS AT CAMP MCCLELLAN, ALA. No. 1 SAPPING. No. 2 FOOTBALL.
No. 3 SPAR LASHING. No. 4 THANKSGIVING DAY MESS. No. 5 THE BAKER CALLS.

The regimental saw mill and shop at the Engineer Park, which until now had been working for the most part on requisitions for material for the trench area, dimension timbers, galley frames and sheeting, now worked night and day making packing crates and boxes of a specified standard size. 1900 of these crates and boxes were required to move us and provided the shipping containers for regimental property, equipment and supplies of every description except a very limited amount to be shipped as baggage and that actually carried by the men. These boxes were carefully marked as prescribed for identification, loaded aboard cars and never seen again except for a few odd boxes which eventually found their way to France and reached us at about the conclusion of combat service. This necessitated the re-equipping of the command after its arrival in France.

On a sizzling hot day, 14th June 1918, the 104th Engineers and Train left Camp McClellan, Ala. in three sections over the Southern R.R. A small amount of baggage, records and the men's barracks bags moved with the troops, but the regimental freight went by other trains and did not reach the port for movement aboard ship with the organization. Early the morning of 17th June 1918, before sunrise the troop trains arrived at the Terminal of the Delaware, Lackawanna, and Western R.R., Hoboken, N.J., after an uneventful trip, broken only by a lay over at Laurel, Maryland, from early the morning of the 16th until 6 o'clock that night. Immediately on arrival at Hoboken, the troops were marched along a restricted route thru the Terminal Station, to a waiting ferry boat in the south ferry slip where a medical inspection of every man of the command was made resulting in the loss of a few men by transfer to attending surgeon.

A quick ride aboard the ferry brought us to Pier 8, N. Hudson River, Hoboken, immediately in front of the famous Stevens Castle where the U. S. S. No. 93 (Northern Pacific) was moored and before noon the entire regiment and Train had been checked up the gang plank on the way to France. It was not, however, until about 4 o'clock afternoon of the 19th of June that the North Pacific cleared from Hoboken, after a heartbreaking delay of over two days to hundreds of men denied the opportunity to go to their homes but a few minutes ride away by car or a few hours by train.

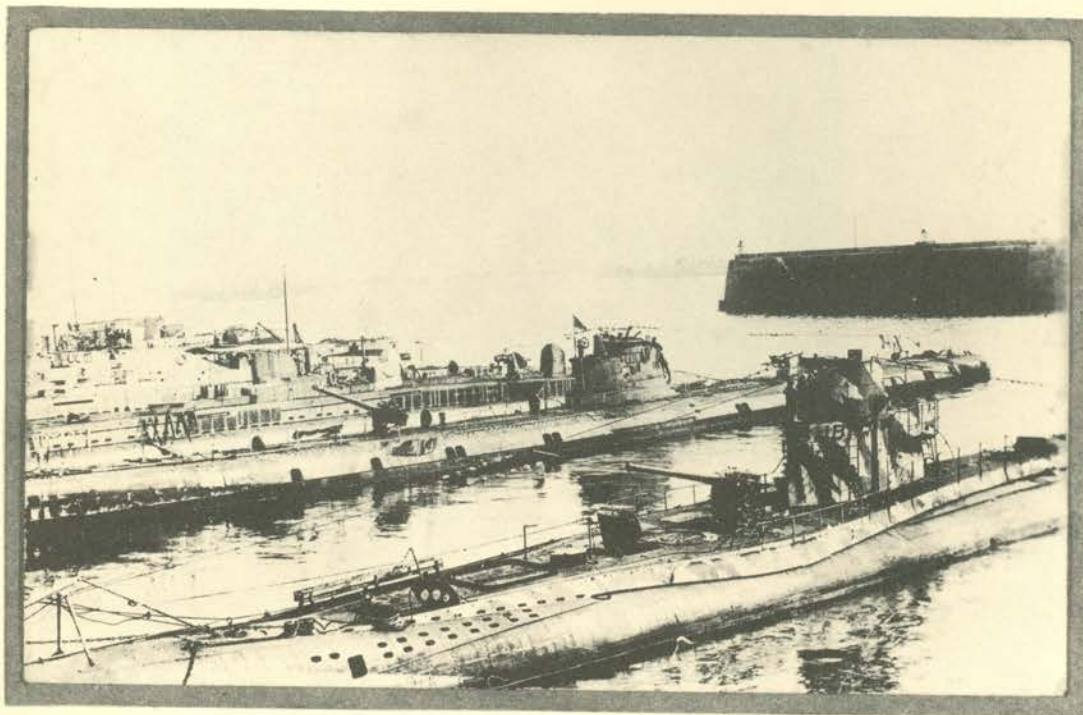


S.S. GREAT NORTHERN TAKEN FROM OUR SHIP
S. S. NORTHERN PACIFIC WHILE AT SEA. BOTH
SHIPS WERE FAST AND MAINTAINED POSITIONS
INDICATED FOR ENTIRE CROSSING WITHOUT CONVOY.

Over 70% of those aboard were from New Jersey, so this delay was a real test of discipline and demonstrated that the command was "set" for the job ahead. The orders "once aboard ship to remain there", were observed except in a few cases where O.D. was exchanged for Navy Blue for a hurried round trip across the gang plank.

In addition to the Engineer regiment and Train the ship also carried the 317th Military Police and Trench Mortar Battery of the 92nd Division (Colored).

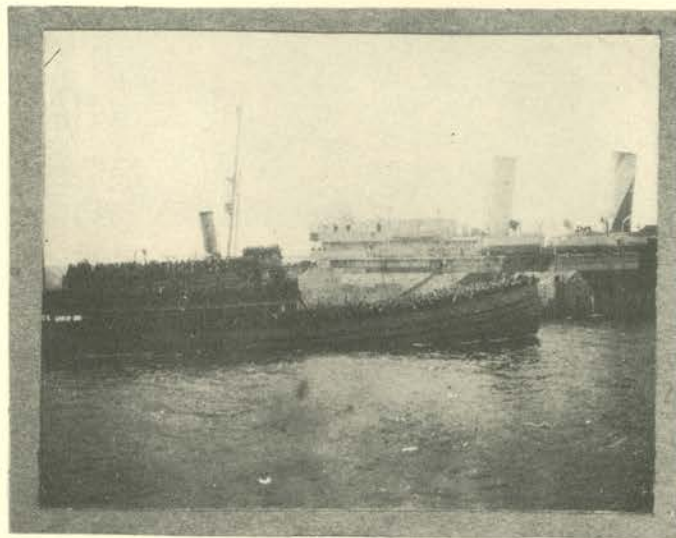
About dusk, the convoy of destroyers and planes that had accompanied us out of New York, turned back, leaving the Northern Pacific and her sister ship, Great Northern, also loaded with troops, to race across the Atlantic until they were picked up again at 10:45 morning of 25th June 1918 by a convoy of four well camouflaged destroyers whose every appearance and action indicated an ability to cope with any submarine that might make an appearance.



"U" BOATS AT BASE ANCHORAGE, BREST, FRANCE, JULY 1918.

On the afternoon of 26 June 1918, the Northern Pacific dropped anchor in the harbor of Brest, France, after a fast run of just seven days almost to the hour after leaving Hoboken. The voyage across was rather uneventful with good weather and a comparatively smooth sea prevailing. The routine aboard ship in rather cramped quarters was disturbed by the frequent abandon ship drills sprung at all hours of the day and night. The only excitement of note was just after dinner the afternoon of the 23rd day of June when both the Northern Pacific and the Great Northern, about two miles abreast, began firing in quick succession at what was at first thought to be a submarine but later proved to be only a floating buoy.

Within a few minutes after anchoring in the harbor of Brest, lighters came along side and details from the regiment and the 317th M. P. Company, and Trench Mortar Battery of the 92nd Division (Colored) were soon at work unloading a cargo of baggage, barracks bags, rations, aeroplanes and boxes containing thousands of gas masks. Before noon of the next day, the cargo was unloaded, but it was not until 6 o'clock the afternoon of the 27th June 1918 that the last boat load of men left for shore. Before that last boat load landed, the Northern Pacific was on her way back to the States for more troops.



104TH ENGINEERS MOVING ASHORE FROM S. S.
GREAT NORTHERN IN HARBOR AT BREST, FRANCE.

The companies and detachments were formed along the streets leading to the docks at Brest, the baggage loaded into trucks and the command marched through the outskirts of the City to Pontanazen Barracks. The regiment arrived at the Barracks between 8:30 and 9: o'clock that evening and was quartered in the conical tent camp previously pitched, just outside the Barracks wall. Rations were issued that night and a very limited supply of cooking utensils were secured and issued to each unit for the preparation of meals during our stay of seven days in this camp.

On 28 June 1918, we received 78 men from replacement Engineers who were assigned to various companies per R.S.O. 82, 28 June 1918. This addition raised the regiment above its authorized strength and more than replaced losses that had been occasioned by various causes on leaving the States. On 30 June 1918, the last bi-monthly muster was held giving an accurate check of the personnel of the regiment at the very start of its service in France.



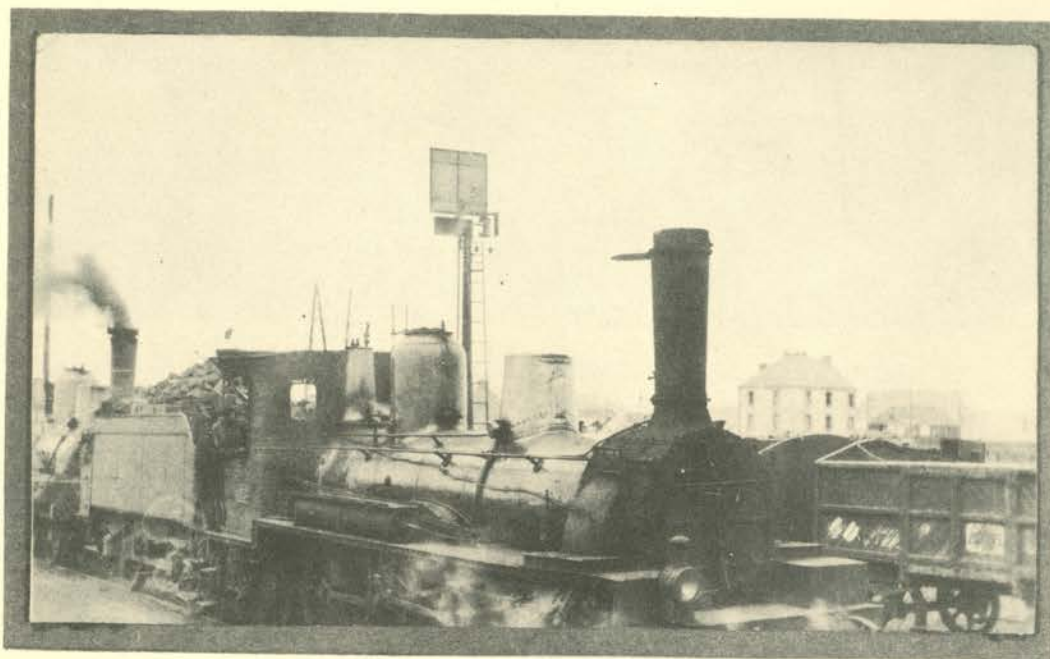
SUNDAY VISITORS FROM NEIGHBORING TOWN OF LOMBEZELEKE LOOK THE REGIMENT OVER AFTER ARRIVAL AT PONTANAZEN BARRACKS, BREST, FRANCE.

During our stay at Pontanazen Barracks every advantage was taken of the limited facilities for cleaning up and preparing for the move "up" which we knew must come soon. Drill, exercise and recreation consisted almost entirely of tactical marches or walks for two or three hours daily along the roads leading from the camp and away from Brest. Under orders from the Commanding General of the Port, details varying in strength from 100 to 1000 men worked daily at the docks in Brest, loading and unloading, sorting and guarding freight and baggage of every description including coal.

A provisional battalion made up of officers and men from Hqtrs., Co.'s A, B, C and D under command of Major Orison M. Hurd, participated in the fourth of July parade at Brest. Representing the American Army, it received a silk flag made and presented by the citizens of Brest to the American E. F. This flag was to remain in our possession but a short time for in compliance with orders from C.G., Port of Brest, it was turned over that night to his representative, Colonel Burnside, by our Colonel R. T. Ward. The sincere welcome accorded by the enthusiastic and appreciative French populace to the American troops parading that day with those from many other lands, will long be remembered by all who marched that fourth of July morning at Brest.

Our expectations of a "Rest Camp" were not realized at Pontanazen Barracks. Most of the men slept on the ground with nothing under them but shelter halves and a blanket. Owing to the limited supply of fuel and the scarcity of cooking utensils, rations were prepared with great difficulty and the meals were poor. The sanitary conditions were deplorable. The contents of the bucket type latrines were sprinkled over the streets by the leaky "Honey Wagons" in which it was carted. Then, dried by the sun, it was distributed over the camp by the wind which prevailed in the afternoon. Our pride in Army sanitary measures was shaken but our confidence in the value of typhoid and para-typhoid inoculations was greatly strengthened by the fact that after our experience here, no typhoid developed.

On the morning of the 5th July 1918 at 6:00 o'clock, the regiment, less Co.'s E and F and the Engineer Train which preceded it morning of the 4th July 1918, left Pontanazen Barracks, marched into Brest and entrained for what was to be our first training area.



RECONDITIONED FRENCH TROOP TRAIN LOCOMOTIVES PLACED IN SERVICE FOR THE EMERGENCY.

The command was loaded into first, second and third class passenger coaches and the standard "40 Homme - 8 Cheveux" box cars. Three days rations were issued and we started at 9:00 o'clock on a slow long three days journey across France, the monotony of which was tempered somewhat by the novelty of traveling under new conditions for the first time in a foreign country and by short stops for exercise at the coffee stations.

The entire command detrained in the tenth training area at Maatz, Haute Marne, the first section with Companies E and F and the Engineer Train on the afternoon of 5 July 1918, and the remaining units at 18:00 o'clock 7th July 1918. Regimental Headquarters, Hqtrs. Detachment and the Train remained at Maatz; Co. A was three kilometers away at Frandchamp; Co.'s B, C and D marched two and a quarter kilometers for billets at Coublanc; while Co.'s E and F had gone into billets at Leffond, some five and a half kilometers from station at Maatz.



TROOP BILLET AT COUBLANC (HAUTE MARNE). THE LIVE STOCK WAS TEMPORARILY REMOVED.

In this area we were introduced for the first time to the French methods of billeting and quartering troops as approved and legalized by the law of 3 July 1877 and subsequent laws. Troops proceeding to an area for billets were preceded by a billeting party of the necessary number of officers and N.C.Os, depending upon the size of the command and number of towns to be occupied. This party reports to the town Major or Mayor, as the case may be, who furnishes information concerning billeting accommodations of the town, the billets themselves being marked to indicate room for so many officers, men and horses. The French laws provide in principal that the troops be billeted or quartered in houses, establishments, buildings, stables or any kind of shelter belonging to private individuals, communes, departments or to the State and all these accommodations were usually crowded to the limit. Upon arrival of the troops, they are met by the advance party which makes the assignments and conducts the men to their billets. As a rule officers had comfortable billets with good beds for which the government paid the owner one franc per night. In some cases the N.C.Os were provided with beds, the compensation for which to the owner was 20 centimes per night. In the great majority of cases, owing to the limited accommodations for the number of men that must be provided for, the quarters varied from comfortable rooms in the houses of the inhabitants to shelter in sheds, barns and hay lofts. The rate was five centimes per night for each soldier provided with shelter.

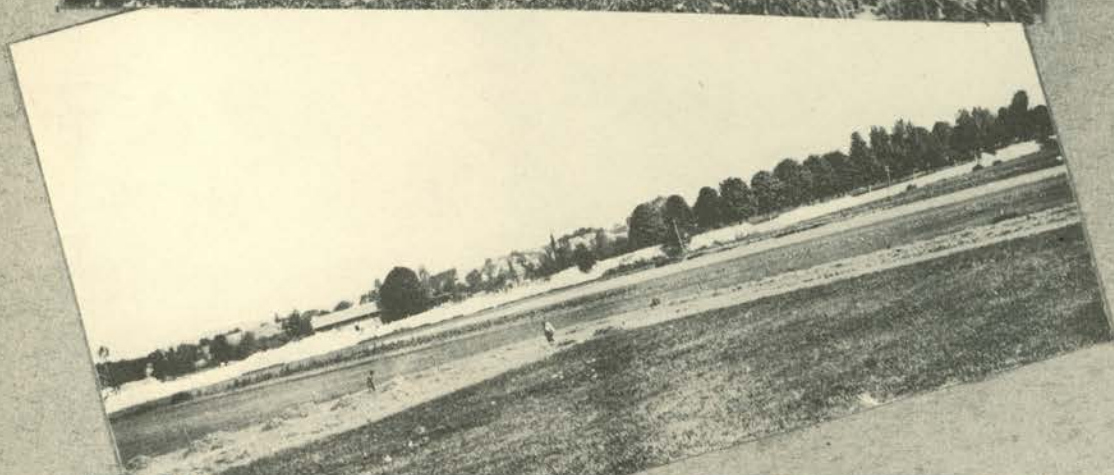
During our tour of duty in France we were billeted in many towns and villages for periods varying from a single night or two to several weeks and in our last billet 1919, for several months. This method of quartering troops while continually on the move worked very well in a general sense. Men were billeted quickly and it was indeed surprising how the smaller villages would absorb hundreds of men with little or no outward indication of their presence, a consideration of vast importance in the concentration of men in an area, without the knowledge of the enemy, preparatory to a drive or an attack.

After a day or two in this tenth area to get settled in our billets, the regiment started in on the "First Phase" training program for troops of the American Expeditionary Forces. General principals were announced from G.H.Q., the details were prescribed by Division and Regimental training bulletins and instruction schedules.

A concerted effort was made to locate and if possible obtain the regimental equipment that had been secured after so much work and so carefully packed, marked and shipped from Camp McClellan, Anniston, Ala. An officer was directed to Brest for this purpose but it was soon learned that it was not the policy to equip units in France with their original property. The officer was recalled and the re-equipping of the regiment with all classes of needed property started. At the end of about ten days stay in this area we had no engineer property but had a beginning in the way of transportation, - four horses, two wagons, one motorcycle side car and one bicycle. This transportation was to be gradually increased and changed by transfer and losses but never during our service in the field, was the regiment or Train transportation sufficient to move us as a unit without doubling back for a second haul unless augmented by assignments from Engineer Train or assisted by truck assignments from Division Quartermaster. There was always a shortage of transportation both horse drawn and motor that made our frequent changes in station difficult problems.

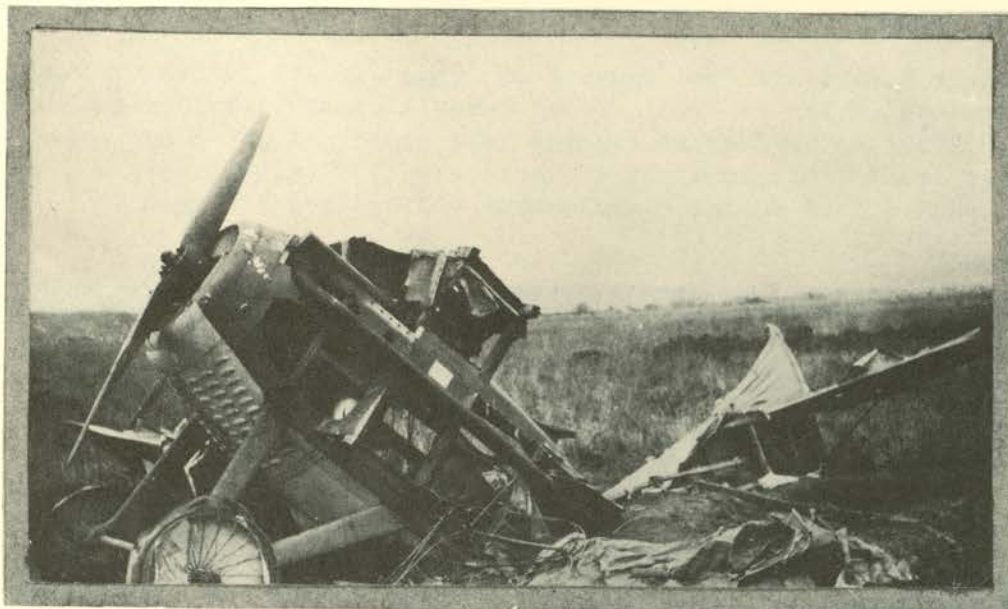
We had just started the second week of the training schedule in this area when on the afternoon of the 16 July 1918, Field Orders No. 1, Hqtrs. 29th Division of the same date was received, ordering a change of station to a new area and the preparation of the Division for an active campaign. Instructions were to reduce the personal equipment of men to a minimum and officers' baggage was limited to a fifty pound bedding roll. Government property in possession of the men not to be taken was salvaged, their personal belongings placed in barracks bags which were later collected by a detail left in the area for that purpose and together with officers' locker trunks, placed in storage at Champlete, not to be returned again to the owner until about January 1st, 1919.

At 7:00 o'clock morning of 17 July 1918, Hqtrs. at Maatz and Co.'s B and C, which had marched over from Coublanc nearby, were on the way thru Grandchamp, there to be joined by Co. A, to the entraining station at Chalindrey, Haute Marne, a march of about fifteen kilometers from Maatz. These units entrained, left Chalindrey at 17:00 o'clock and arrived at La Chapelle-"sous-Vaux", Belfort at 2:00 o'clock morning of 18 July 1918. A march of six kilometers brought them to Giromagny where they bivouacked in the fields for a few hours and then into billets after daylight. The Engineer Train and Co.'s D, E and F from their respective stations marched to Chalindrey during afternoon of 17 July 1918, entrained and left there at 21:00 o'clock that night. This section detrained at Belfort 5:00 o'clock morning of 18 July 1918 and marched to Lepuix, 16 kilometers, for billets, arriving about noon.



WITHIN SOUND OF THE GUNS, ALSACE, FRANCE.
 (1) PEACEFUL COUNTRYSIDE IS PREPARED FOR A DEFENSIVE POSITION
 WITH BARBED WIRE. (2) COURLEVANT, WITHIN RANGE OF ENEMY GUNS,
 WORKS ITS FARMS TO THE LIMIT. (3) A TYPICAL FRENCH VILLAGE
 WASHING POOL.

This change in station from the tenth training area to billets at Giromagney and Lepuix in the Belfort area, involved an eight hour trip by train and a 21 kilometer march for Co.'s E and F before entraining and was accomplished in less than 24 hours. The march involved in this movement under heavy pack including overcoats will long be remembered by rank and file as an exacting test of stamina and endurance in which the regiment "measured up" in a manner particularly gratifying to higher command.



ENEMY AIR PATROLS MADE DAILY ATTEMPTS TO PENETRATE REAR AREAS TO OBSERVE TROOP MOVEMENTS. THIS BOSCHE DID NOT CHECK IN ON RETURN FLIGHT.

Our stay in this area north of Belfort lasted but a few days. It was here, however, much to the regret of the entire command, the regiment lost Colonel R. T. Ward by transfer on 19th July 1918 to the 1st Army as G-3. Upon the departure of Colonel Ward, Major Alexander MacGlashan was in command of the regiment until return of Lt. Col. W. W. Crosby, 1st Aug. 1918 from Army School at Langres.

While here the Supply Officer roamed afield in search of badly needed supplies and equipment and at the Fontaine railhead managed to connect with a considerable portion of the regiment's requirements in this respect. A complete issue of gas masks was made, tested in an improvised gas chamber and carried as part of the individual equipment from that time on.

The receipt of 63 additional horses and 15 Escort Wagons made it possible on leaving here 24 July 1918, to move at least part of our equipment with regimental transportation. A few nights later a foraging expedition to the Fontaine Railhead, which had been evacuated under shell fire, added considerably to this equipment and a later check of equipment on 31 July 1918 indicated we had more transportation than we were destined to have for remainder of the combat period. Our transportation now assumed the proportions of an active regiment of combat engineers with 318 horses, 30 of which were gas casualties and unserviceable, 30 wagons, 7 rolling kitchens, one Dodge car, 5 motorcycles with side cars and

16 bicycles. From practically nothing in the way of transportation on leaving the tenth training area on 17 July 1918, by the end of the month we were fairly well supplied with animal transportation. We lacked motor transport and had little or no engineer equipment. During this time the Engineer Train had received an assignment of tools, 109 horses, 17 wagons and one motor truck. In these quick moves, most frequently far removed from supply base, the acquisition of provisions and fuel was more often a supply problem which called for tactics not strictly routine or honest but if it produced results, food cooked and men fed, ethics could wait for a later date for an accounting.

On our arrival at Giromagny, we learned that the 29th Division was to go into the Center Sector, Haute Alsace, between Belfort and Mulhouse and that we were to relieve the 107th Engineers then engaged in various engineering work in this sector. Accordingly, officers from the regiment visited the various units of the 107th Engineers to familiarize themselves with the work before taking it over.



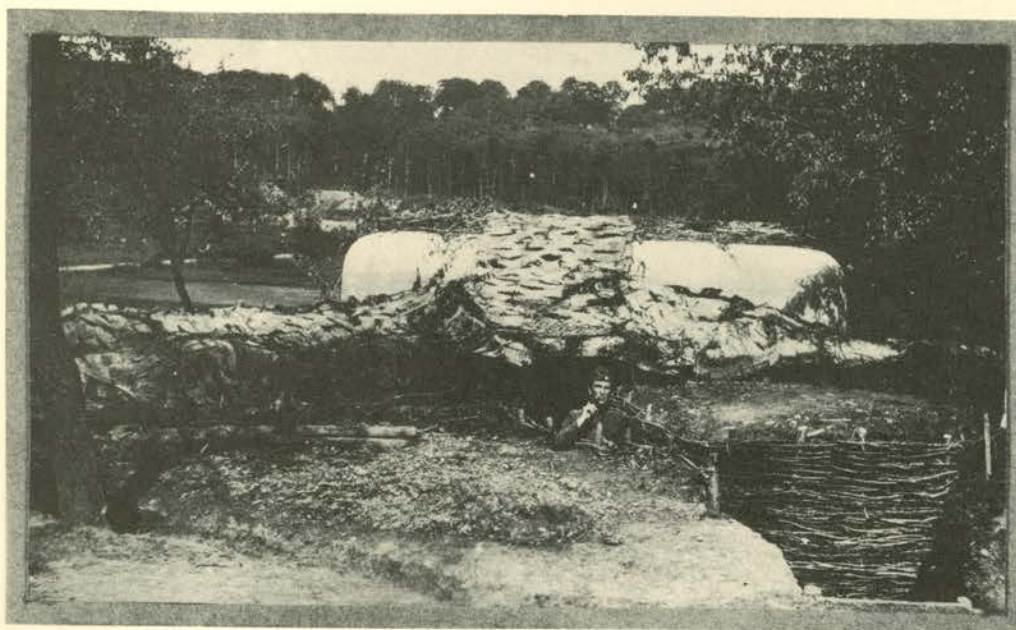
THE REGIMENT MADE ALL MOVES AT NIGHT TO AVOID ENEMY OBSERVATION AND RESTED DURING DAYLIGHT HOURS IN BIVOUC CAMPS IN WOODS.

On the afternoon of 24 July 1918, Co. A left Giromagny for La Collogne to erect stables for the American Veterinary Service there and on night of 24-25 July 1918, Co.'s D, E and F moved in compliance with Field Orders #2, Hqtrs. 29th Div. from Lepuix to Anjoutey; leaving there night of 25-26 July for their respective stations, Battalion Hqtrs. to Rougemont; Co. D to Soppe-le-Bas, one half company to Guewenheim and half to Hecken; Co. E to Vauthiermont and Co. F to Bourback-le-Bas. In compliance with Field Orders #3, Hqtrs. 29th Div. 25 July 1918, Co.'s B and C moved afternoon of the 25th July from Giromagny to Chevremont and from there night of 26-27 July to Grosne and then on night 27-28 July, Co. B to its station at Courtelevant and Co. C to Fullern. Field Orders #2 sent Regimental Hqtrs. to Boron but on the march there the night of 25-26 July from Giromagny it was learned there were not accommodations for all troops assigned to Boron, so after spending remainder of that night and following day at Fontainelle, a change in orders sent Hqtrs. Det. to Magny night of 26-27 July and Regimental Hqtrs established at Chevremont.

These changes in stations involving night marches starting on the afternoon of 24 July 1918 and completed early morning 28 July 1918, found units of the regiment in twelve different widely scattered stations stretching for 30 kilometers or more along the front of the Alsace Sector.

At this time the entire 29th Div. was operating under orders of the 40th French Army Corps and had no sector of its own. The French orders covering disposition of the Engineers, attached one battalion to each of the two sectors of Divisional Infantry. In each battalion one company was to be employed in front of the Position of Resistance in the front line, under orders of the General commanding the sector and the other two companies were to work in the Position of Resistance under orders of the General commanding the Corps.

The front line companies were each to be instructed and assisted in the work by a company of French Engineers and the other companies instructed by half companies or sections of French Engineers stationed with or near them. At this time Co.'s C and D were the front line companies employed on installation of advance communications for the sector, interior organization of the ground and the clearing of the field of fire for combat groups. The other companies were engaged for the most part on shelters, the instructions from French authorities being to give priority to this work.



ENGINEER INTERIOR ORGANIZATION OF THE GROUND. COMPLETE TRENCH SYSTEM CONSTRUCTED FOR EMERGENCY OCCUPATION. ALSACE, FRANCE 1918.

Having completed work on the stables at La Collogne, Co. A moved night of 1-2 Aug. 1918, to Elbach and from there to Streuth. On 1 Aug. 1918, Hqtrs. 1st Bn. was established at Suarce. Lt. Col. Walter W. Crosby, returned from school at Langres, assumed command of the regiment until 3 Aug. 1918, when Colonel F. J. Dent arrived to take command.

The plan of defense Center Sector Haute Alsace after it was taken over by the 29th Division still left the 104th Engineers, less Co. C and Co. D under orders of C.G. 40th Army Corps (French) except in case of general attack when all companies under orders of French authorities were to be placed at disposition of the C.G. 29th Div. Co. C, less a detachment at Retzwiller, was under orders of the C. G. 57th Brigade for work in Position of Surveillance in the South Sub Sector and Co. D was under orders from C. G. 58th Brigade for work of the same character in the North Sub Sector and demolition of the bridge at Uberkuemen.

The detachment of Co. C at Retzwiller consisted of 1 officer, 9 N.C.Os and 25 privates and was charged with the demolition of 2 trestles and a bridge at Manspach, a bridge at Dannemarie, at Valdieu and a viaduct at Ballersdorf. A detachment from Co. D had charge of the demolition of bridge at Uberkuemen. All structures were loaded and set for demolition. In case of general alarm, charges were to be set off and roads cut by mine craters. Special orders covering this demolition work were issued by the French, details assigned each structure and carefully drilled on proper execution of assignment in event of emergency and these special demolition groups remained on this assignment until we left the sector.

Just prior to the last change of stations occasioned by the 29th Div. taking over the sector on 9 Aug. 1918, considerable engineer equipment was received. Also additional wagons and company water carts so the regiment was now fairly well equipped with exception of motor transportation, which never exceeded 1 passenger car and 5 second hand motorcycles with sidecars for the regiment and one 3 ton truck and a motorcycle for the Engineer Train, while in this sector. Most of this transportation was out of service for greater part of the time due to no provision being made for repair or replacement parts making close supervision of work over the wide area in which the regiment was operating, a difficult problem. Finally was forced to revert to mounted courier system of communication between units, operated by 12 mounted couriers whose total daily travel amounted to about 180 kilometers.

On 16 Aug. 1918, a service memorandum from 40th Army Corps required all companies of the regiment to be assembled in the sector held by 29th Div. by 20 Aug. 1918 and outlined the work to be taken up by each company. Co. A moved night of 18-19 Aug. from Streuth to Wolfersdorf, to work on the Position of Resistance; Co. B moved same night from Courtlevant to Montreux-Vieux where it was to be employed on work of organization of Division P.C., Brigade P.C.'s., and Regimental P.C.'s. Companies C and D were in position and engaged in engineer works under orders of the Brigade Comdr. with detachments in charge of demolition work. Co. E at Vauthiermont was to remain there and be employed starting 19 Aug. on the defensive organization of Centers of Resistance Vauthiermont and Haut Bois and Co. F then at Bourbach-le-Bas moved night of 18-19 Aug. to Guevenatten to start work on the 19 Aug. on the defensive organization of the C.R.'s. Haut Bois and Kreuzwald. At about this time the two Bn. Hqtrs. also moved, the 1st Bn. from Suarce to Wolfersdorf and 2nd Bn. from Fontaine to Guevenatten so as to be close to their respective commands. The only other changes in station during August occurred at night on 31 Aug. when Co. B at Montreux-Vieux relieved Co. C at Hagenbach and Badricourt where they had been working on the Position of Observation since the division took over the sector and this unit then went into billets at Novillard without definite assignment of engineering work.

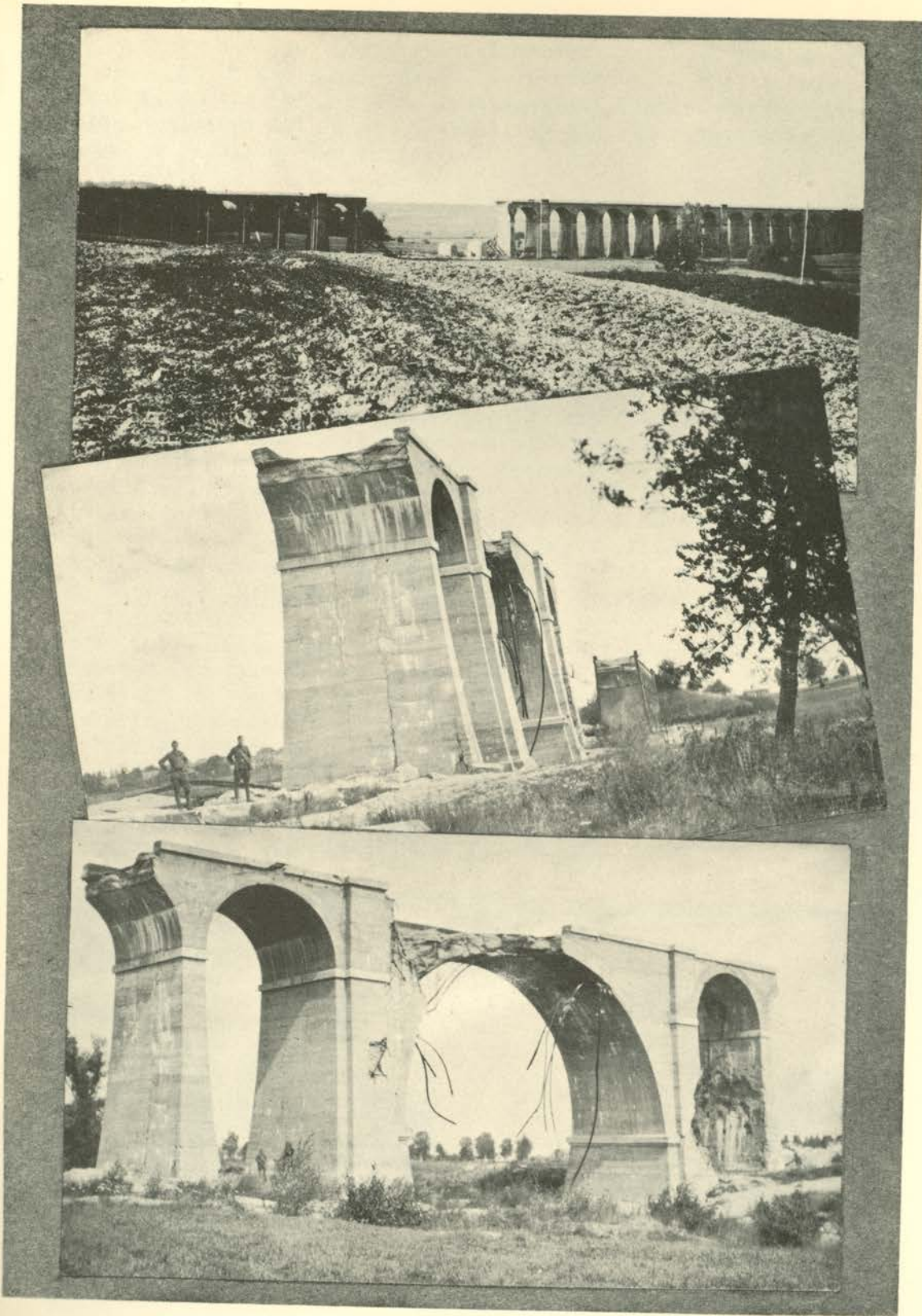
During the entire month of August the regiment had two companies working in front lines on Position of Observation and the other companies on Position of Resistance. This work, designated by French authorities but carried out by our methods and under our supervision, consisted of the construction of deep and light shelters, machine gun replacements, trenches, wire entanglements, camouflage, clearing field of fire, road maintenance and repair, demolitions for French operations and Army Corps and Division Engineer Dumps.

The scope of this work may be determined from a short reference to statistical records - 4750 cubic meters of excavation, building and placing of 1208 galley and dugout frames, 7650 square meters of galley and dugout sheeting, 5000 square meters of log and sandbag revetment, running of 185 cubic meters of concrete on block house construction, 8000 cubic meters of earth moved for trench construction and 40,000 square meters of French high barbed wire. When it is remembered that this work was done under war conditions and on an occupied front with the enemy in places but a few hundred meters distant in their own position, one can well imagine it was an active assignment for the Engineers along this "quiet" Alsace front.

Work of this character continued during September until the Division left the Sector. The only changes in stations and assignments of work occurred on night 10 September 1918, when Co. D then at Uberkeumen and Hecken, which until then had been on the front line, exchanged quarters and work with Co. E at Vauthiermont, and Co. C, then at Novillard, moved night of 13-14 Sept. to Elbach for work on the P. R.

During our stay in the Alsace sector the lines were comparatively fixed, both sides holding and improving their positions. The action consisted of raids from both sides along various sections of the front except for one heavy localized gas attack by the enemy and the intermittent shelling of towns and positions for short periods. Co. D. was driven out of its position at Vauthiermont twice as result of heavy night shelling by the enemy, directed at a large French Engineer Dump in their vicinity. Direct hits eventually set the dump on fire and a large amount of engineer supplies and equipment was destroyed. A detachment of five men from Co. D, Corpl. William J. Masterson, Pvt. 1st Cl. Richard Stearn and Pvts. James H. Garnet, Charles H. Kehoe and Edward A. McEvoy detailed at the Maria Engineer Dump were subjected to a heavy gas attack early morning of 30 Aug. 1918. These men were all gassed to some extent by a direct hit at shelter entrance. Hospitalized at La Chappelle.

Members of the demolition detachment of Co. C at Retzwiller took part in three Infantry raids on enemy positions, the assignment of the Engineers being to move up in advance to open passages through enemy belts of wire with Bangalore Torpedoes. During one of these raids night of 31 Aug. 1918, with the 115th Infantry, Pvt. 1st Cl. Robert B. Volk - 1271247 and Pvt. George J. Bauer - 2069384 were killed; Corp. Spencer Blood - 1271247 and Pvt. John Doherty - 1271203 were missing in action and have not been heard of since; Sgt. James Haring - 127166, Pvt. 1st Cl. J. T. Ryan - 1271348 and Pvts. Benedetto Rappa - 1271341, John Winegar-845872, wounded. The Engineer detachment in this raid consisted of 17 men, two sections of 8 men each with Sgt. Haring in charge directing both sections from a position between and slightly in advance. Immediately after lifting of Artillery preparation and barrage, the Engineer sections leading the raid rushed forward with

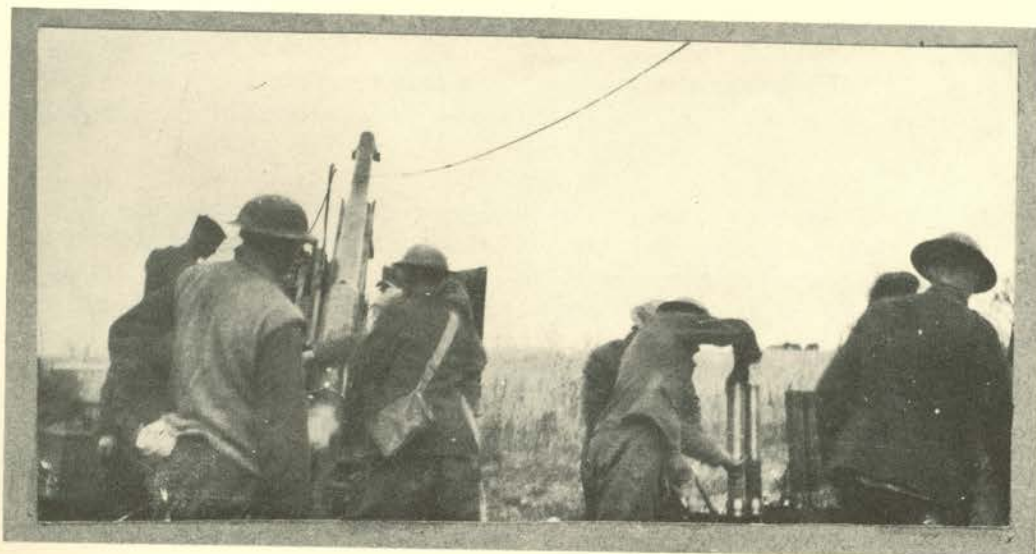


CONCRETE RAILROAD TRESTLE CROSSING WIDE VALLEY AT
BADRICOURT, ALSACE, FRANCE, DESTROYED DURING COMBAT
OPERATIONS WHICH RESTORED ALSACE-LORRAINE TO FRANCE.

the torpedoes. They had just about reached their objectives when enemy high explosives boxed them in and a hit caused the explosion of the torpedoe carried by the right section. Corporal Blood, leading right section was hit by rifle fire before the explosion but in all probability the other casualties among the Engineers were the result of the explosion.

Following this raid, experiments were conducted back of the lines to determine if it were possible to set off a Bangalore torpedoe by a severe shock, rifle fire or any means other than the special detonators supposedly required for the particular type of explosive used in them. Numerous shots had no effect other than to drill holes through the casing but finally one shot did explode it, very much to the surprise of the French, familiar with its use. This type of torpedoe was of French manufacture and issue and it was the accepted theory they could not be detonated in this manner. In the face of this experiment another raid was planned by 113th Infantry a few days later and after the experience of the previous raiding party and the knowledge that these torpedoes could be detonated with a shock no greater than a hit from rifle fire, clearly demonstrated that the Engineer section who volunteered for this assignment measured up to the highest standard of the Corps and it is fitting that their names should be inscribed herein and made a part of this record:- Sergeants John J. Brown and Stephen M. Fischer, Corporal H. G. Piggin, Pvts. 1st Cl. Alek Kalemek, Harry Dodd, Hans T. Hansen, H. Madrid and Albert S. Snyder, Pvts. Edward J. McGrath, Robert Shell and Charles J. Wells, all of Co. C.

On 16 Sept. 1918, Hqtrs. 40th A.C. (French) announced that the 29th Div. was to be relieved from the Center Sector Haute-Alsace by the 38th Div. (French) and the 88th Div. (U.S.) and on 19 Sept. Field Orders No. 9, Hqtrs. 29th Division was issued covering the details of relief that was to start on the 21 Sept. and to be completed by the 23rd on which date the Division was to be assembled in the vicinity of Belfort preparatory to entraining for another area. The Engineers worked up to noon on 21st and on night of 21-22 Sept. all units of the 1st Bn. moved from their respective stations on the P. C. and P. R. to Novillard for billets and at the same time units of the 2nd Bn. moved to Denney.



We were now to make our first move by train after having been re-equipped with engineer, quartermaster, ordnance property, etc., and provided with our transportation. The enlisted personnel was within 1% of authorized strength, but we were short of officers - Col. R. T. Ward and Capt. C. G. Calrow, to the 1st Army; Lt. Col. Walter W. Crosby and Capt. E. P. Efferts to the 7th Corps; Capt. Hugh M. Gillespie and 1st Lt. Charles R. Martin sent back to the States in the formation of new divisions and Lts. K. B. Jones, G. H. Schlotterer, L. C. Skeen, W. A. Balwre and O. S. Purk transferred to 101st Engineers. Col. E. J. Dent was the only officer to reach the regiment in replacement. Special duty, school assignments and detached service cut the available officers for duty to 28.

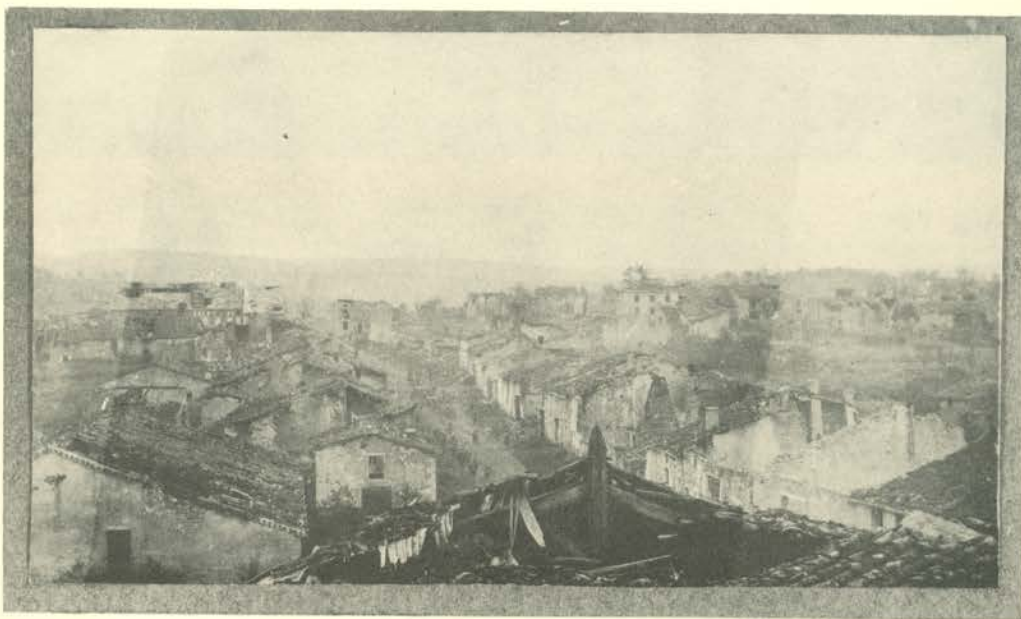
On 23 Sept. 1918, all units of the regiment and Engr. Train marched into Belfort from their stations, Petit-Croix, Novillar and Denney and entrained for another sector. On this movement the regiment with transportation, required practically all the space on three standard French trains. Part of the Engr. Train travelled on a fourth section.

On arrival next day at three different detraining stations, the Commanding Officers of trains were impressed with the importance of keeping this troop movement as secret as possible and were instructed to keep troops and transport off roads during daylight hours. Instructions were to unload quickly as possible and get the men and transportation into nearby woods for concealment until after dark, when march to billets could be started.

Regimental Hqtrs., Hqtrs. Det., a detachment of 75 men from Co. D and the Engineer Train detrained at Sommeille Nattancourt about noon on 24 Sept., unloaded in less than an hour and hurried into hiding in a nearby woods, marched out that night 26 kilometers to billets at Marats-le-Grande, arriving at 2:40 morning 25 Sept. 1918. The train, transporting the 1st Bn. left Belfort at 20:00 o'clock night 23 Sept. 1918, arrived and quickly unloaded at Mussy, 14:30 o'clock afternoon 24 Sept., troops and transportation marched to the Bois-de-Chene about 10 kilometers away and after rest of three hours resumed march to Marats-le-Grande arriving at midnight. In the meantime the 2nd Bn. entrained and left Belfort between 24:00 and 1:00 o'clock 24 Sept., detrained at 18:00 o'clock at Revigny and bivouacked for the night in the woods 3 kilometers East of Lemont. Leaving here 12:00 following day this Bn. marched 15 kilometers to billets at Marats-le-Petit, arriving at 18:00 o'clock.

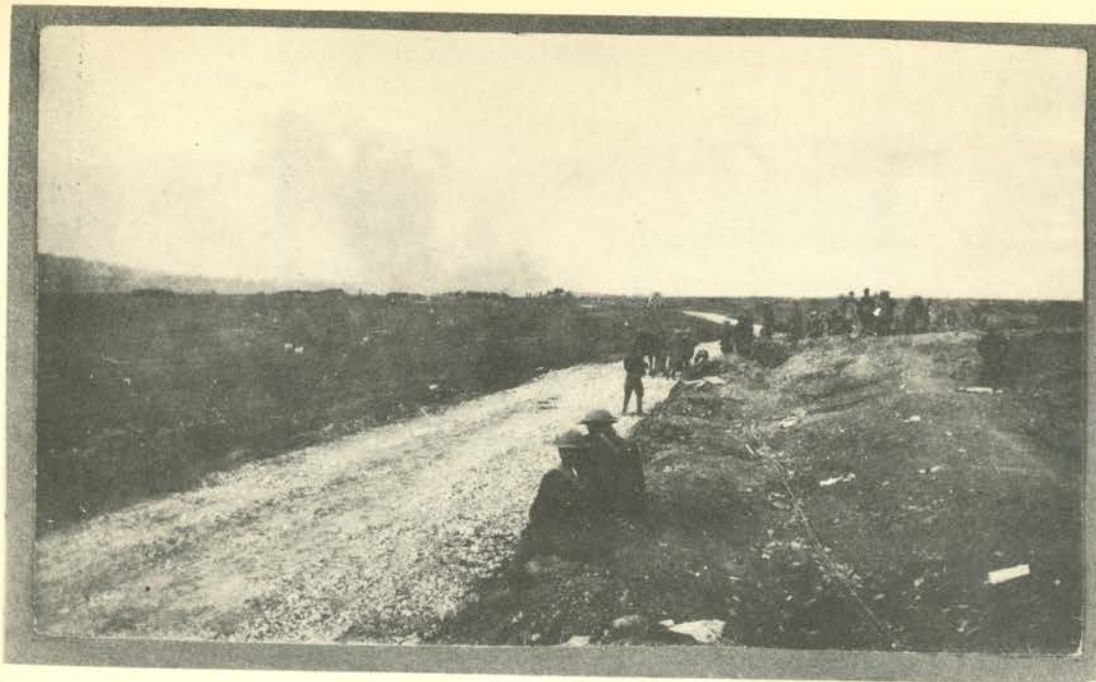
The billets allotted at Marats-le-Grande were supposed to be sufficient for 3/4 of the strength of the units that had arrived late night of 24 and early morning of 25 Sept. About 6:30 - 25th orders were received that the division was to be concentrated in about one-third of the area assigned to it and room was to be made here for about 1000 Infantry due to arrive within an hour. Men tired from the grind of a hard night's march were routed out again and on the move; Co. C. to Marats-le-Petit and by the shifting of other units, the Battalion of Infantry was accommodated. Streets and open spaces were kept absolutely clear of any indication of troop concentration, which was strictly enforced to 26 Sept. when messages and orders arrived from Division Hqtrs. covering movement of the Division by bus to the front.

Long lines of motor buses were parked for miles along the roads leading out in all directions from the towns and villages crowded with troops. In order to be ready at a moment's notice to embus the four companies of the regiment at Marats-le-Petit marched over from there and bivouacked in the woods near Marats-le-Grande morning of 26 Sept. Instructions were issued covering in detail the method to be followed in embusing when orders were received to do so. In addition to regular pack each man carried two days rations and 220 rounds of ammunition; distributed among members of each squad were 3 pick mattocks, 3 shovels, 1 axe, a hatchet and a pair of pliers and, in addition to these tools, each platoon carried aboard the bus a crosscut saw, 3 R.R. picks and 13 pounds of nails and spikes.



RECICOURT, FRANCE, AFTER ALLIED OCCUPATION. THIS TOWN WAS PRACTICALLY LEVELLED TO PROVIDE MATERIAL FOR ENGINEER RECONSTRUCTION OF ROADS TO FACILITATE THE ADVANCE.

At 21:00 o'clock night of 26-27 Sept. 18 the regiment less mounted section of Hqtrs. Det. and company service platoons accompanying transportation, was ordered to embus and in less than an hour had moved to their assigned bus sections and loaded awaiting orders to move out. The order to move did not arrive, however, and troops remained aboard the buses all that night and all of the following day until dark when the men were permitted to pitch shelter tents in the fields close to the buses. At 1:20 morning 28 Sept. orders were received for the regiment to move out immediately by bus to vicinity of Recicourt, to debus there and march to Avocourt, for road work under the Chief Engineer 5th U. S. Corps.



ROAD FROM RECICOURT TO AVOCOURT REPAIRED BY ENGINEERS. ENEMY GAS COUNTER ATTACK DEVELOPING IN BACKGROUND. ENGINEERS OBSERVING WIND EFFECT FOR DIRECTION OF DRIFT.

The shelter tent camp was struck and regiment moved off in less than an hour for Recicourt where the buses arrived shortly after 7:00 o'clock, unloaded and marched 10 kilometers to Avocourt. Officers were sent ahead to report to Engineer Officer in charge of work at Avocourt for reconnaissance of road from there to Very known as the 91st Division road, assigned to the regiment to open up and keep open for traffic.

The First Army had jumped off at Avocourt morning 27 Sept. and had driven the enemy from the strong system of trenches that they had held and improved for the past four years and which crossed the road we had been assigned to less than a kilometer north of Avocourt. Immediately following the attack Engineer troops had opened up a trail across what had been No Man's Land by hurriedly filling and bridging shell craters, trenches and tank trap pits just sufficient to permit the Artillery to move up and had started uncovering the old road that had been almost obliterated by action and disuse. The morning of the 28 Sept. 1918, when we arrived here, a little over 24 hours after the attack, the roads into Avocourt from the south were crowded with transport and troops. The single street or road leading through the destroyed town that branched out in four directions at the north edge of the town, was jammed with troops, motor and horse transportation of every description, ammunition, supplies and empties furiously hammering their way back to refilling points for all calibres of ammunition replenishment, with all roads under constant indescribable conditions thru which these columns moved, slowly but relentlessly to the completion of their missions. Columns of troops and lines of traffic must cross each other at this intersection of roads, necessitating the alternate stopping of each for even periods of time.



COMPLIMENTS FROM FRITZ TO SAM. SHELL
CRATER FROM ENEMY BOMBERS, VICINITY OF
AVOCOURT.

The traffic jam in the town was distributed to the four roads to some extent after leaving town but here the very poor roads that could be traversed with great difficulty in but one direction were constantly being blocked by attempts at two way traffic, the bogging of trucks or wagons in deep ruts or shell holes or disabling of vehicles or animals by shell fire. Avocourt was the gate way or "neck of the bottle" for this sector and the enemy's artillery had not omitted this consideration in its dispersion of shell fire.

When the engineer companies moved into Avocourt morning of 28 Sept. 1918, packs were unslung and work on improving roads started immediately to keep the solid and seemingly endless stream of traffic in motion.

Co. C' left in the town to widen and improve the road by filling in shell holes and removing the debris of destroyed stone buildings, worked here with considerable difficulty because of the maze of traffic, in some places four lanes abreast. The other companies were distributed at first along one and a half kilometers to the north on road to Very. The men worked night and day there being no time for rest while the big "push" was under way. To further complicate matters a heavy rain set in during afternoon of the first day in this combat zone and thereafter the engineer work was carried on in a sea of mud. From just a

passable road where man power excelled every other means of traffic movement, the road was gradually but steadily improved so that by night of the second day progress had developed to the point where half the command worked while the others curled up at the side of the road for rest with the ever pounding light flashes and actual rocking of the earth from heavy gun fire as a soothing lullaby.



NIGHT AND DAY THE ARTILLERY CONSTANTLY POUNDED AWAY AT ENEMY POSITIONS.
GUN CREW IN ACTION NEAR VERDUN.

Hundreds of cubic meters of rock were dumped on the road, carried there at first by hand and sacks before the trucks could reach the area to assist. Practically all of the demolished building material of the entire town of Avocourt was dumped on this road to elevate it above the quagmire. Quarries were opened along the road where available when other sources of supply began to fail, drainage system improvised, road surface widened to increase flow of traffic and troops, bridges across shell holes constructed, trenches and tank trap pits straightened and strengthened with additional timbers and rails salvaged in area, until they would safely carry the heavy tractors and siege guns moving up to advanced positions. From what appeared to be a hopeless task in the beginning, there developed a heavy metalled road capable of standing the gaff for some time to come, by the time we again changed station 5 Oct. 1918.

Over this road traffic in increasing volume moved with regularity. The spirit with which the men worked night and day when every minute counted was inspiring. The movement to the rear of wounded and prisoners urged them on with a grim determination to keep going as long as strength lasted, and the plea of the Artillery Officers for a passageway to positions for their guns did not go unheeded.

Artillery reports later included reference to quick relief of traffic congestion and road repairs at this point, in permitting them to co-ordinate their positions and fire power on schedule time, thus sustaining progress of the Division in the attack.

During the first days and nights along this section of the road net there were numerous blockades due to poor traffic regulations, the absence of turnouts, and to vehicles entering the sector from opposite directions, thereby blocking this one way road. It early became apparent that in addition to building the roads, the Engineers must also direct the traffic over them. Traffic regulations, that worked incidentally, were placed in operation. The "Order of the Paddle" was instituted. A wooden paddle, too large to be placed in a pocket, was made and labelled "91st Division Road Open For Traffic From This End". As long as this paddle was in possession of the M. P. at Avocourt, he was permitted to send north bound traffic over the road and when, for any reason, it was desirable to pass a south bound convoy, the column was cut, the paddle handed to a mounted messenger who followed the last vehicle in the north bound convoy through to the corresponding block point at the north end, the paddle turned over to the M. P. at this end and the south bound convoy allowed to pass, the paddle going back again to Avocourt with the last vehicle when the process was reversed.



ROAD FROM AVOCOURT TO CHEPPE. REPAIRED WITH BARE HANDS DURING NIGHT TO MOVE ARTILLERY INTO POSITION THEN ENTIRELY RECONSTRUCTED WHEN EQUIPMENT COULD GET THROUGH.

During the first two days in this section when work was the heaviest and most difficult, the men were on short rations having nothing but the two days "iron" reserve rations carried by each man when he embarked at Marats-le-Grande. A thousand rations were salvaged from an unguarded dump during night of the second day, which relieved the situation until following evening when our supply train managed to break through with the first real issue and our contact with rear supply base remained more or less constant thereafter.

Due to failure of our transportation and rolling kitchens to arrive until several days after the troops, coffee was made in two "disabled" rolling kitchens found in the vicinity and prepared in containers of every description picked up around the area which constituted the only hot food to reach the men for the first three days in this position. Our transportation, which had been combined in one train, left Marats-le-Grande morning of 26 Sept., made satisfactory progress until it reached Esnes, within but 5 kilometers of destination at Avocourt, where it was not permitted to take to the road to the west into Avocourt, reserved for east bound traffic only, and directed the long way round, by Malancourt, through traffic jams and shelled roads. Finally, with men and animals at the point of physical exhaustion this transportation rolled in afternoon 2 Oct. 1918.



ROAD THROUGH ARGONNE FOREST TO AVOCOURT. SECTION OF THE FOREST REDUCED TO UNDERBRUSH BY CONSTANT SHELL FIRE.

On this same day, S.O.#342 Hqtrs. First Army was issued announcing that the 29th Div. (less 104th Engineers) was relieved from duty as Army Reserves and assigned to the 17th (French) Corps., and that the 104th Engineers would be relieved from 5th (French) Corps on the 5 October 1918, to join its Division under orders to be issued by C.G. 17th (French) Corps.

The afternoon 5 Oct. 1918 we received orders that we were relieved from 5th (French) Corps and would move that night to vicinity of Cumieres-Marre-Chattancourt and would send an officer to report to the Chief Engineer 17th Army Corps at Regret, under whose orders we were to cooperate, for assignment of station and duties. Orders complied with and at 19:00 o'clock night of 5-6 Oct. 1918 we were on the march through Avocourt to our new station east of there in valley of the Meuse. Troops and transport were moving through Avocourt that night in every direction and while our regiment cleared around 20:00 o'clock, it was not until after 1:00 following morning that our transportation cleared over three kilometers from where we started, up the hill on edge of the town on road to east of Esnes.

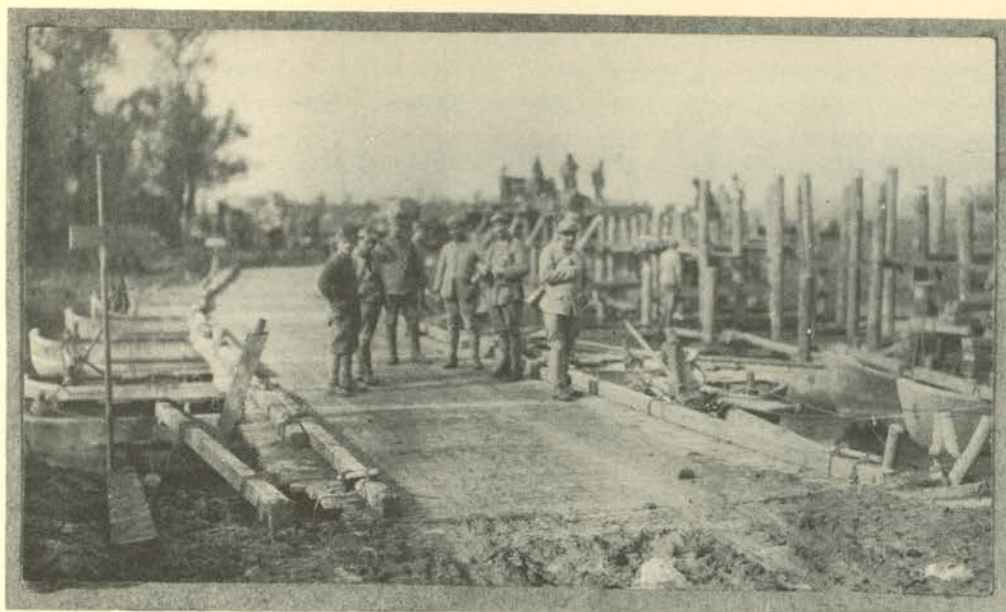
Throughout the march that night, men frequently dropped out of column, vomiting or because of violent intestinal disorder. So much cold uncooked food, soaked to the skin from incessant rain and exposure night and day in raw weather, exceptionally hard work and the eternal mud of No Man's Land had finally lowered their seemingly endless store of vitality. A large part of the command was sick.



MARRE, FRANCE. REFILLING STATION UP AS LINES ADVANCED AND ENGINEERS IMPROVED AND MAINTAINED ROAD CIRCULATION FACILITIES WHICH WERE FREQUENTLY DESTROYED BY ENEMY SHELL FIRE.

The Engineer Train, Regimental Hqtrs. and all the company transportation went into camp that night in the Bois Bourrus some ten kilometers east of Avocourt, Co. A and B marched 16 kilometers, going into the Gallowitz tunnel, west of Cumieres and Co. C and D, E and F had about 14 kilometers march this night to such shelter as could be found in the shot up town of Marre.

It was known about this time that the 17th (French) Army Corps was to make an attack in a northern direction on East bank of the Meuse with the object of gaining possession of the Cotes-de-Meuse, between the Meuse and the Theinte. The 33rd (U.S.) Division was to follow the East bank of the river, with the 29th Division on right of the 33rd Div. and the 18th (French) Division on right of the 29th Div. The attack started morning 8th Oct. 1918, the 29th Div. jumping off just north of Samogneux. The primary mission of Engineer troops was maintenance of routes of communication within combat zone.



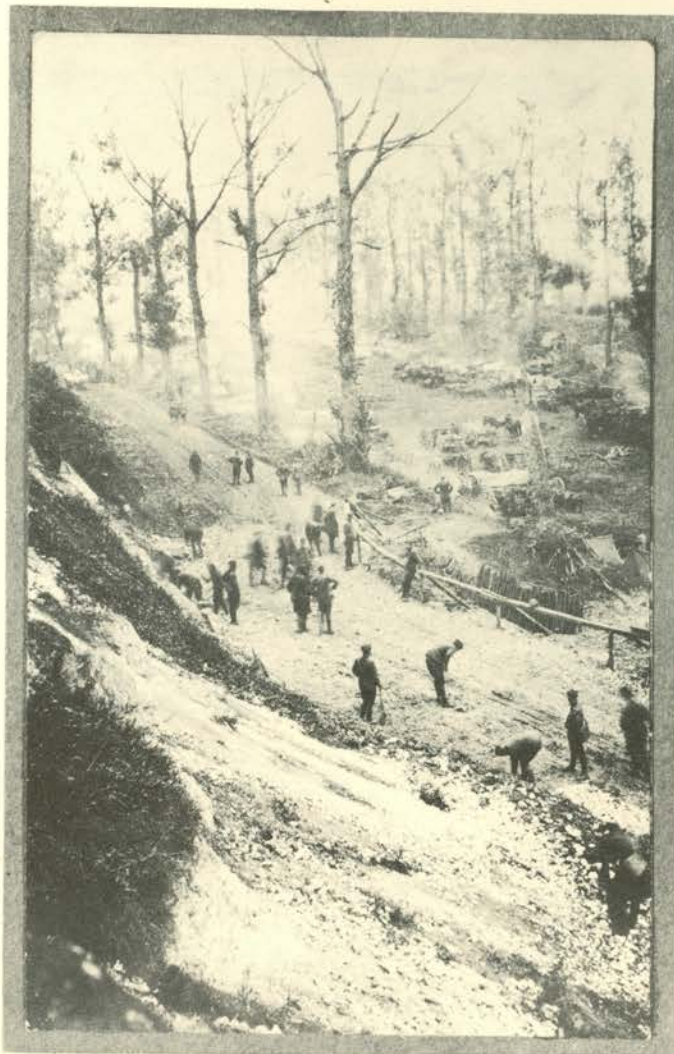
PILE BRIDGE OVER MEUSE RIVER NEAR FORGES TAKEN OVER BY FRENCH ENGINEERS WHEN WE MOVED UP ON NEW ASSIGNMENT.

The 2nd Bn. Engineers was at the disposition of the Chief of Engineers of French Army Corps for work on the Marre-Cumieres-Forges and the Cote-de-l'oise-Regneville roads. The 1st Bn. Engineers, Train and a battalion of Infantry were to be employed on roads in combat zone of the 29th Division area, with priority to the Samogneux-Brabant and the Brabant-Malbrouck-Cote 338-Etraye roads.



ROAD FROM SAMOGNEUX TO BRABANT REBUILT WITH MATERIAL OF DEMOLISHED HOUSES OF BOTH TOWNS. CONSTANT MAINTENANCE REQUIRED DUE TO HEAVY SHELL FIRE.

For the short period between our move from Avocourt and 8 Oct. 1918, day of attack, the companies all worked on the roads Marre-Cumieries-Forges and Cote-de-l'oisie Regneville. The roads along the Cote-de-l'oisie were under direct enemy observation and heavy shell fire so the initial work here was done on nights of 6-7 and 7-8 Oct. 1918, and consisted of preparing temporary crossings over trenches, detours around deep shell holes, and other bad sections, and clearing wire to remove obstruction for forward displacement of light artillery on morning of 8 Oct. Road was staked and lined out with white tape as a guide for troops and artillery at night and removed before daylight when forward displacements ceased



RESULT OF ENEMY MINING ON BRABANT ROAD.
SIDE OF HILL WAS BLASTED OUT FOR FILL.

On afternoon of 8 Oct. 1918, 1st Bn. Hqtrs., Co. A and B moved from the tunnel near Cumieries to Samogneux, arriving at 18:00o'clock and bivouacked about 300 meters north of the town just east of the Samogneux-Brabant road. Co. C moved from Marre the following afternoon also going into bivouack near Co. A and B. Co. D and E moved same morning from Marre to tunnel vacated by Co. A and B. Regimental Hqtrs., the Engineer Train and the 1st Bn.'s transportation left Bois Bourrus at

11 o'clock 8 Oct. 1918 for Samogneux vis Marre-Cumieres-Regneville road. They were delayed in clearing Marre for several hours and after a slow trip to the road fork on the Cote-le-l'oise north of Cumieres because of traffic congestion all along route, were held up again until light artillery batteries went out of action. These batteries were firing directly over the road making passage in front of them impossible. This was the first transportation to move up on this route behind the attack. After a hard and difficult march it arrived at Regneville at 2:30 o'clock morning of 9 Oct. 1918. Men had to dismount and lead teams and mounts over last three kilometers to get around obstructions. Concussion from nearby hits of shell fire dumped over four wagons, stunning horses and men but all eventually reached destination without casualties.



DESTROYED LOCK OF THE RHINE - RHONE CANAL NEAR FORGES. FILLED IN TO FACILITATE TRAFFIC CIRCULATION.

On morning of 9 Oct. regimental P. C. was established in a shelter at the north edge of Samogneux where the Division had jumped off and engineer companies all hard at work on same character of road construction, repair and maintenance that had been carried out at Avocourt. The companies of 1st Bn. working on the Samogneux-Brabant road while 2nd Bn. under the French were working on the Marre-Cumieres-Regneville road.

On the Marre-Forges road the work at first consisted largely in removing mud to make road less slippery. Later the road was improved by widening. From Regneville to the junction of this road with the Cumieres-Forges road there existed little more than an earth track. In the destroyed towns of Samogneux and Brabant removal of debris from roads and providing road drainage was the principal task. At Brabant Co. A was occupied principally in dropping standing building walls to the inside to prevent them from falling to roadway and obstructing traffic. All this material was later moved out in all directions for road repairs, the town practically levelled and lost to identity.



CLEARING THE ROADS AND PULLING DOWN TOTTERING WALLS IN FORGES.

Between Samogneux and Brabant a former Grande Route was located and uncovered and found to be in fairly good condition except for a few small shell holes and usual accumulation of dirt and mud as result of long disuse of the road. The craters were crossed partly by cribbing and filling and by widening on the up-hill side, with persistent pick and shovel work the deciding factors.

From Brabant to the Bois-de-Consenvoye for a considerable distance the narrow macadamized road had been destroyed or obstructed by enemy trench systems and required reconstruction and a vast amount of work if it was to be kept open for traffic during wet weather. Priority was given to opening of roads and movement of traffic, then to improvement and widening.



ROAD FROM BRABANT TO MOLLEVILLE. A ROAD TO AN ENGINEER WAS JUST ANOTHER JOB.

On 16 Oct. 1918 Co.'s D and E moved from Gallowitz Tunnel to a bivouack about 1½ kilometers from Regneville along the road they were working. On 11 Oct. 1918, Co. D came back to the regiment, moved to Brabant and the following date into the Bois-de-Consenvoye. By 13 Oct. 1918, the Samogneux-Brabant road was in very good condition and it was evident that in the section assigned to the regiment, the maximum effort must be directed to the Brabant-Cote-338-Bois-de-Consenvoye road. Accordingly, Co. A moved to Brabant, Regimental Hqtrs. P.C., Hqtrs. Det. and Co. C moved following day to the trench area about 400 meters east of Brabant. The move of Co. F on 15 Oct. 1918 from Marre to vicinity of Co. E bivouack and the establishment of the Regimental P.C. in a trench shelter on Malbrouck Hill on 16 Oct. 1918 completed the general shift of units to positions of better advantage with respect to type of engineering work and special assignments.



ALL THAT REMAINED OF SAMOGNEUX AFTER BUILDING MATERIAL HAD BEEN USED FOR ROAD REPAIR.

Co. A was working and near Brabant, Co. B had most of the Samogneux-Brabant road, while Co. C and D actually were rebuilding the Brabant-Cote 338 road, in places constructing a heavy telford base and surfacing with stone from salvaged building material out of Brabant and quarries opened up in vicinity. Companies E and F operated under the French, and were employed on the Cumieres-Regneville road.

On 18 Oct. 1918 Hqtrs. 17th Army Corps issued orders the work on the Cumieres-Cote-de-l'oise road must be pushed to early completion for assignment to 29th Division trains and traffic in order to relieve congestion on the Vacherauville - Samogneux road where traffic volume was exceeding road capacity.

On 21 Oct. 1918 road from Cote-de-l'oise to Samogneux was turned over by the French to the 29th Division for maintenance. Co.'s E and F were relieved by the French and returned to the regiment at the same time. With the regiment again, intact, 2nd Bn. was assigned task of improving and maintaining this road with 1st Bn. continuing present assignments.



(1) BEGINNING OF THE END. YOUNGSTERS APPEAR IN RANKS OF PRISONERS. (2) AN ENEMY PLANE BROUGHT DOWN AT SAMOGNEUX. (3) FOOT BRIDGE OVER NORD CANAL.

Co. D moved afternoon 21 Oct. 1918 from Bois-de-Consenvoye to the trench area near Co. C at Brabant, and on 24th to Regneville to assist with work assigned to the 2nd Bn. On 25 Oct. 1918 regimental P.C. and Hqtrs. Det. moved to shelters along railroad embankment about 500 meters north of Regneville, making the last shift in stations for units of the regiment while in this sector.

During its stay of 25 days in October employed in the Meuse-Argonne sector along both banks of the Meuse, the regiment's work on over 20 kilometers of road had varied all the way from scraping mud and opening up drainage to complete new construction of numerous sections. A stone arch bridge with 18' span, just north of Samogneux was practically destroyed 18 Oct. from heavy shell fire. This bridge was replaced by a timber structure built in quick order by details from Co.'s B and D without delaying traffic except to extent of confining passage to one lane during course of reconstruction.



DEAD MAN'S CORNER AT SAMOGNEUX. MACHINE GUN UNIT RESTING UNDER COVER OF HILL BEFORE MOVING INTO POSITION.

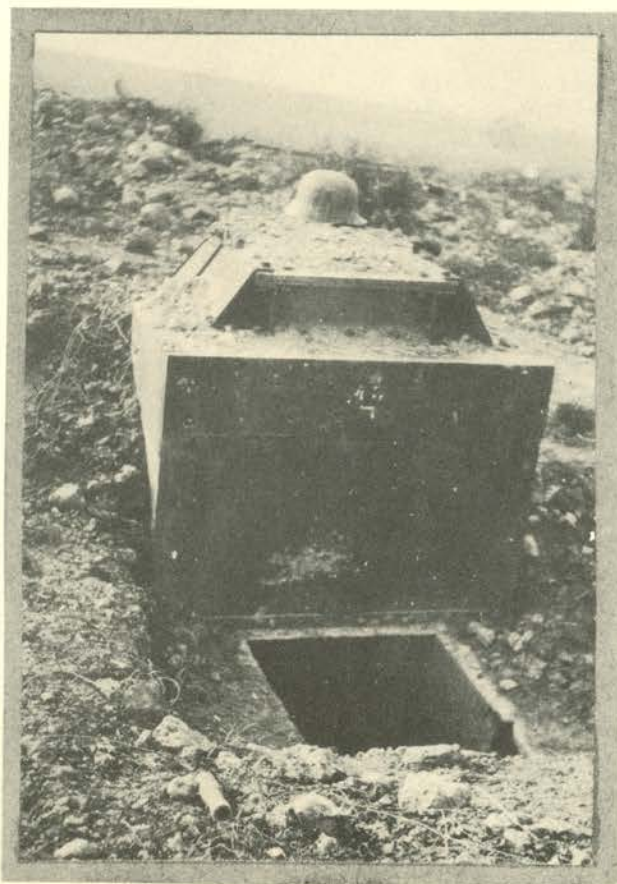
From time to time throughout this operation, the regiment was called upon for bridge and road reconnaissances, and the location, character and capacity of all shelters in the sector. One detachment operated with the Infantry removing enemy traps. It removed obstacles in the Bois-de-Consenvoye and also repaired the 60 c.m. railroad within the area.

On two occasions the regiment was held in Division Reserve. At 18:40 o'clock night 24 Oct. 1918 orders were received from Division Hqtrs., that the regiment was to be held in readiness for immediate use during the night. Officers and runners were sent to the Brigade P.C.'s, reserve ammunition supply moved up from Samogneux to Brabant and the regiment discarded its tools and rested on its arms that night waiting for the order to "move in". During the last few days in the sector platoons from Co.'s A and B worked with the Infantry Brigades in the front lines organizing the position and were engaged in this work when the Division was relieved and retired from the sector.



BRABANT LEVELLED BY GUN FIRE FROM BOTH SIDES. WELL
REMEMBERED AS A HOT SPOT.

The roads and towns in this area were under constant shell fire and gas concentration with the result that while engaged here the regiment and Engineer Train sustained the heaviest casualties of their combat zone service.



GERMAN MACHINE GUN NEST SHOWING ENTRANCE
FROM REAR. FRITZ DOESN'T LIVE THERE ANYMORE.

On 27, 28 and 29 Oct. 1918, Hqtrs. 29th Division issued Field Orders No. 24, 25 and 26 announcing that the Division was to be relieved by the 79th Division and covered the movement out of the sector by marching to the vicinity of Verdun, thence by bus to billeting area.

The 2nd. Bn. marched out night of 28-29 Oct. 1918 to Houdainville on east side of the Meuse about 5 kilometers south of Verdun, boarded bus convoy there afternoon 29 Oct. and arrived Neuville-sur-Orne morning of 29th and were assigned billets. Regimental Hqtrs., 1st Bn. and Engineer Train marched out night 30-31 Oct. to Houdainville, embused noon 1 Nov. and reached Neuville-sur-Orne at 17:00 o'clock that afternoon. Regimental Hqtrs. remained at Neuville and 1st Bn. marched to Mogneville for station. During this movement the Engineer Train and all regimental transport were concentrated at Houdainville. They left there afternoon 31 Oct. 1918 and arrived at new billeting area 2nd Nov. 1918, the company transportation joining their respective units and Engineer Train to Vassincourt.

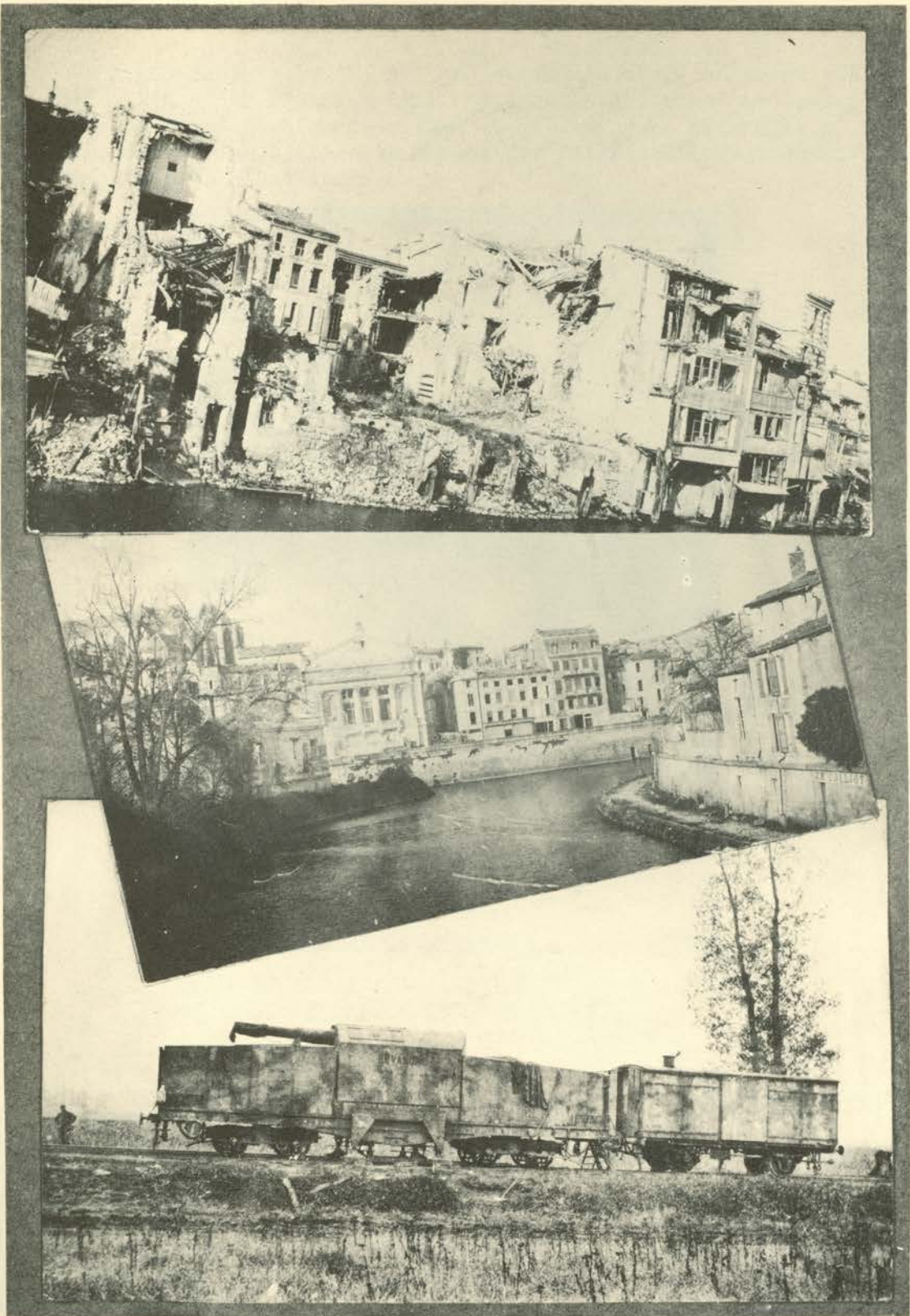
Our stay in these billets was just long enough to start cleaning up after over a month's participation in the Argonne-Meuse offensive. On 4 Nov. 1918, the entire regiment and train moved to Sommelonne and the units were all together once more in one station, for the first time since leaving Brest early in July.

The "cleaning up" which had been interrupted by the last move was resumed here and the regiment initiated a training schedule of drill, practice marches and inspections to rebuild tired bodies, vitality and organization for further combat employment.

At 19:00 o'clock the night 10 Nov. 1918, a Warning Message was received announcing that the 29th Division had been transferred to and would join the 2nd Army which at that time was starting to advance. Message No. 1 started the move on the following day and was received at 23:00 o'clock. In the meantime the officers had been assembled and preparation made for a start with minimum delay after orders were received as to where and when we were to go.

Sommelonne was astir that night with the preparation for our move back to active front line assignment. Field Orders #27, issued at Division Hqtrs. a few minutes before midnight and Orders #22 covering details of the movement were received between 3:30 and 4:00 o'clock in the morning. At 9:00 o'clock 11 Nov. 1918, we were packed and ready to move out when a message was received stating that pursuant to telephonic orders First Army, the move called for in Field Orders #27 was cancelled and that the Division would remain in present billets. The confirmation of the rumors of the preceding day concerning an Armistice found us under orders to and just starting to join the Second Army.

Drill and instruction schedules were followed until in compliance with Field Orders #28, Hqtrs. 29th Division 16 Nov. 1918, we made preparations to move by bus to the Bourbonne-les-Bains area. The withdrawal of buses controlled by the First Army necessitated a change in movement of those who were to have moved by bus transportation. On 18 Nov. 1918, the regiment left Sommelonne; the 2nd Bn. marched to Maulan and all the other units billeted for the night at Nante-le-Grande.



ONNE PASSE PAS - THEY SHALL NOT PASS. VERDUN. (1)
 EFFECT OF ENEMY SHELL FIRE ON INTERIOR OF CITY. (2)
 LOOKING EAST FROM MAIN ENTRANCE GATE. (3) RAILROAD
 HEAVY ARTILLERY PLAYED AN IMPORTANT PART IN THE DEFENCE.

On 19 Nov. 1918, all units except Co.'s E and F, which followed the next day, marched over to Ligny-en-Barrois (Meuse) and entrained there on three trains for Bourbon-les-Bains, the 11th Training Area. All units detrained at Jussey (Haute-Soane) except Co.'s C and D which detrained at Vitrey. The companies of the 2nd Bn. marched from detraining station to Barges for billets and Regimental Hqtrs., 1st Bn. and the Train to Blondfontaine.



LOADING AND SUPPLY ACTIVITIES AT ENGINEER
SUPPLY BASE, BLONDEFONTAINE.

On the last move to the entraining station another innovation among numerous methods previously used for moving the regiment, was initiated. On 14 Nov. 1918, the 29th Division had released practically all of its draft animals to Divisions assigned and moving up with the Army of Occupation and on 16th the Engineer Regiment released all of its animals to other units for the important movement of kitchens and ration wagons with troops. Consequently on leaving Sommelonne our wheel transportation of 87 vehicles was entirely without animals to move them. Obtained 3 F.W.D. ammunition trucks from Division Q.M. train and by lashing three or four wagons to each motor truck in tandem, repeated trips placed our transportation at the Ligny railhead and loaded aboard flat cars, a few minutes ahead of train time.

The fact that this phase of the movement was entirely at night merely added complications to the problem successfully completed.

Upon arrival in the 11th Training Area, it was anticipated that we would remain at this station for some time, so preparations were made to provide as comfortable quarters as possible for the winter.

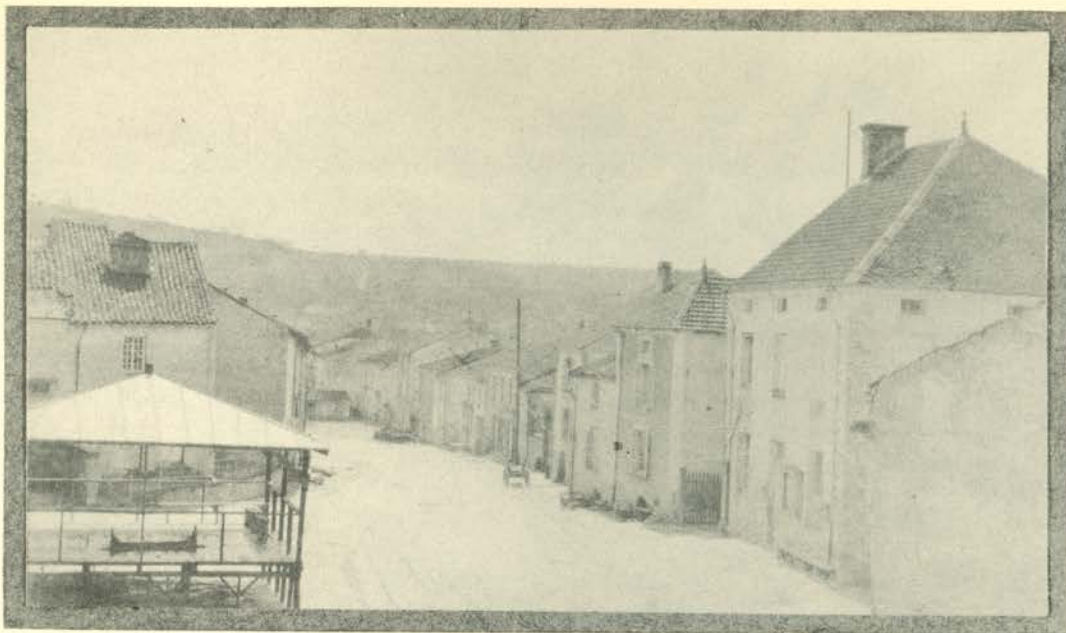
A schedule of training and engineer work on repair and maintenance of roads in area was placed in operation. Quarries were opened at various points and operated with German prisoners under Engineer supervision. Inclined narrow guage railroads were set to convey trap rock from quarries to road side for distribution by truck. Steam boiler stone crusher in operation at another quarry and the noon whistle from this unit was a reminder of home in that quiet French countryside. Lumber, crushed stone and other bulk material arrived in car load lots at Vitrey railhead. Portable barracks were built in the Division area where required, boxing



BLONDEFONTAINE, REGIMENTAL HEADQUARTERS AND SUPPLY BASE. LOADING EQUIPMENT ON TRUCKS IN PREPARATION FOR MOVEMENT BACK TO COAST AND EMBARKATION FOR HOME.

rings set up, billets repaired and made comfortable, six sections of Engineer pipe fitters and plumbers moved by truck about the Division Area installing and maintaining portable hot water shower baths; a generator was salvaged from a distant Army base, repaired and set up in one of the buildings in Blondfontaine and an electric light system installed and serviced in all villages occupied by units of our regiment.

The Engineer Train moved its entire transport daily to railhead at Bourbon-les-Baines for forage, rations and supplies. The entire Division was serviced for every conceivable need, bridges repaired or rebuilt, roads resurfaced and drained, veterinary stables constructed at Div. Hqtrs., etc.



BLONDEFONTAINE AFTER DEPARTURE OF ENGINEERS.

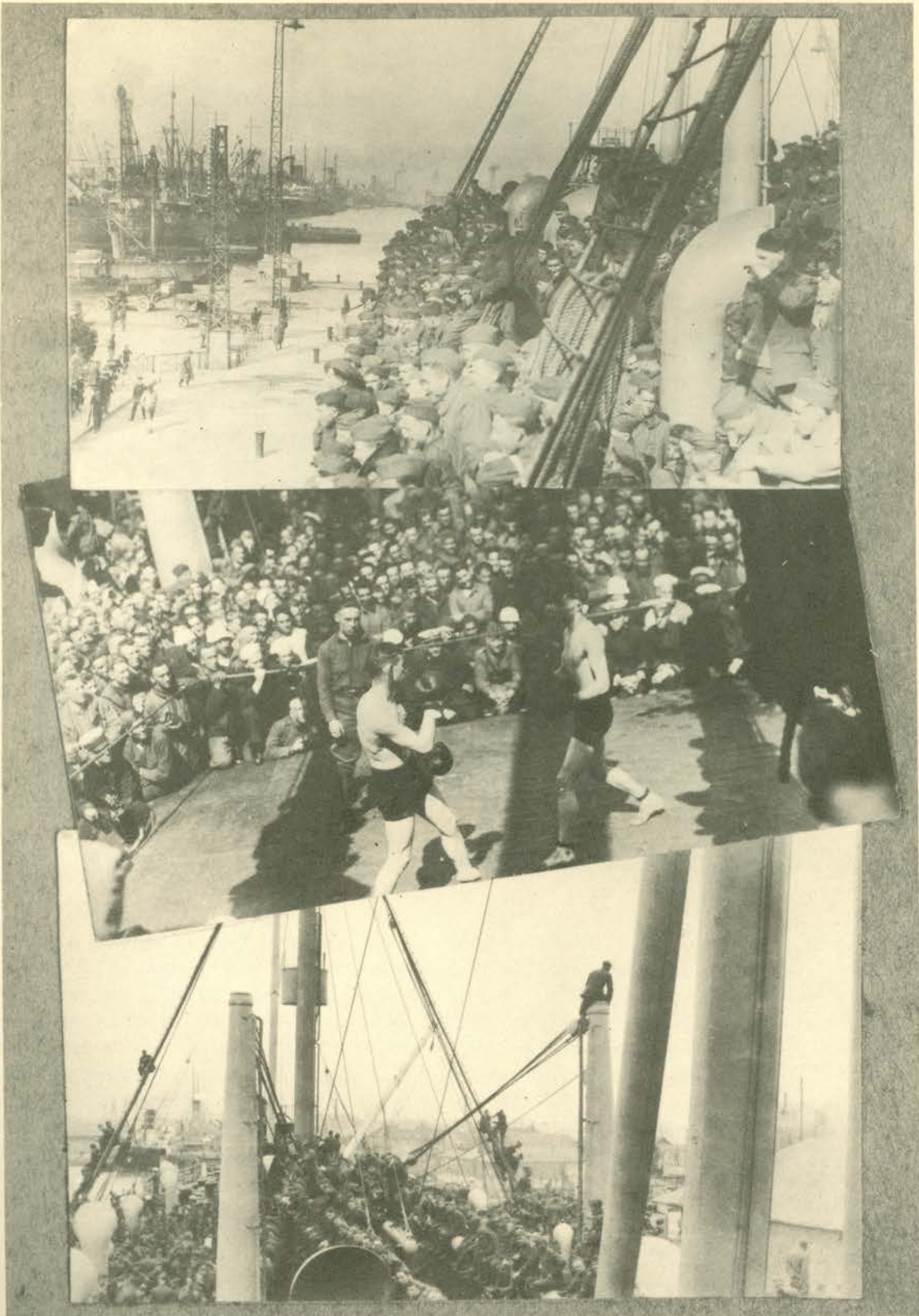
The work seemed endless but it moved along quietly, with precision and efficiency.

Time kept pace with the work and the frequent rumors of moving home finally ran their course and the real order to start reached us early in May 1919.

Tools, equipment and transport were ordered turned in to Army Supply Base Is-sur-Tiele and the regiment entrained for the long grind across France to Port of Embarkation at St. Nazaire (Le Mans Area).

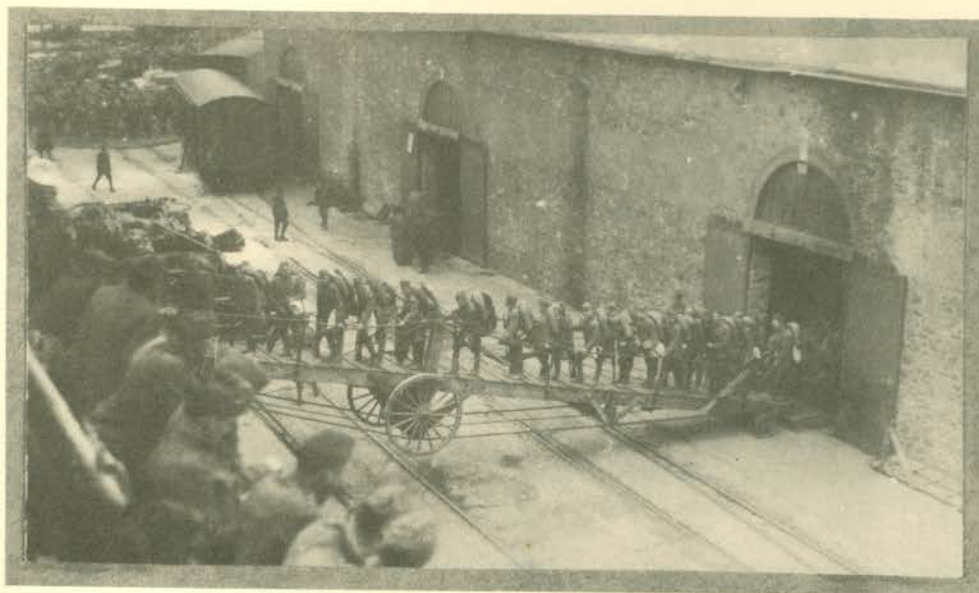


ENGINEERS ARRIVE AT ST. NAZAIRE DOCKS FOR EMBARKATION.



FINIS LA GUERE AND BOUND HOME ABOARD U.S. S. S. MANCHURIA. (1) PASSING THROUGH LOCKS AT ST. NAZAIRE. (2) WITH THE WAR OVER THE ARMY AND NAVY ENJOY A PRIVATE SCRAP. (3) PROVING THE RULE THAT A SOLDIER IS A GUY WHAT WANTS TO BE SOME PLACE WHERE HE AIN'T.

Remained at the embarkation camp outside City limits of St. Nazaire for about one week while the volume of records were prepared for clearing the Port and finally on 11 May 1919, the hike up the gang plank of the S.S. Manchuria started, and at last we were really on the way home. The ship cleared the locks of the Port in the fading hours of the afternoon and in a short time was well out to sea, with the menace of the U-boats only a memory.



UP THE GANG PLANK OF THE S. S. MANCHURIA FOR THE TRIP HOME.

A pleasant and uneventful crossing placed us at dock in Hoboken morning 22 May 1919 and after a short trip to Camp Merrit (Closter, N.J.,) were assigned barracks for the preliminary phases of demobilization. A succession of home-coming parades followed in Newark and Trenton with the final assembly of the regiment at Camp Dix (Wrightstown, N.J.) where discharges were finally issued and members returned to their respective communities as civilians on or about 5 June 1919, while officers departed for Washington, D.C., for further orders. Thus passed into history the 104th Engineers, 29th Division U. S. Army, American Expeditionary Forces, whose membership hailed from every State in the Union, with the exception of Florida and South Carolina.

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HISTORY
104TH ENGINEERS
N.J.N.G.

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When the National Guard regiments of the various states had been called into Federal Service following Declaration of War by the United States against the Imperial Government of Germany and her Allies in 1917, the National Defense Act required that State Militia be organized for local security during absence of National Guard regiments in active service.

At the conclusion of the World War, the reorganization of the National Guard regiments followed in proper order with the mustering out of the State Militia units.

Prior to this time the New Jersey National Guard had never included a regiment of Engineers and the New Jersey state military authorities desired that the reorganized National Guard of the State retain the divisional and unit designations of the war time regiments in which its citizens served.

However, the other States principally represented in the 29th (war time) Division, namely - Maryland, Virginia, New Jersey and District of Columbia, had similar ambitions for the designation of their National Guard, and a compromise was finally effected whereby New Jersey was to retain the war time numerical designation of units in a newly designated 44th Division, while the 29th Division was to include units organized in vicinity of Washington, D. C.

Under this arrangement the reorganization of the war time 104th Engineers in the New Jersey National Guard was authorized and a number of the New Jersey Engineer officers of overseas service were consulted for the purpose of reorganizing the regiment.

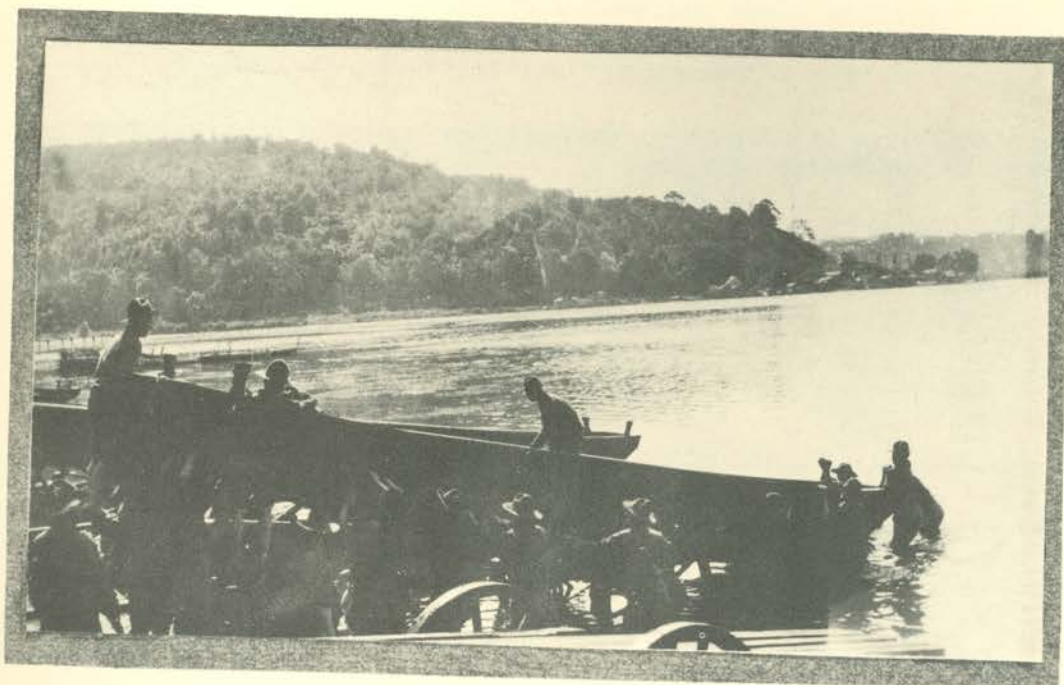
Recruiting activities started in 1920 at Englewood, N.J. under Lieut. Colonel Orison M. Hurd, at Hoboken, N.J. under Capt. William F. Firth and at Newark, N.J. under Capt. Benjamin F. Day.

The organization of the units and formation of 1st Bn. Engineers, N.J. N.G. was completed with the Federal recognition of Co. A., Hoboken, N.J., 8 March, 1921; Co. B., Englewood, N.J., 29 June, 1921; Co. C., Newark, N.J., 27 June, 1921 and Bn. Hqtrs., Englewood, N.J., 11 July, 1921.

During the recruiting activities basic training had been instituted in all the units under organization and this was intensified following Federal recognition and the issue of uniforms and equipment. The following months developed a marked improvement in both appearance and performance to such an extent that the maximum strength was attained in the early summer months.

Arrangements had been completed to coordinate the 1921 Field Training Period of the Battalion with that of the 102nd Engineers N.Y.N.G. at Camp Smith, Peekskill, N.Y., late in August of that year.

The movement to Camp Smith was accomplished without incident, the Battalion being mobilized by chartered trolleys at New Jersey side of 125th St. Ferry, thence to New York where a special train moved the organization numbering 327 officers and men to Camp.



LAUNCHING THE PONTOON BOATS AT
CAMP SMITH, PEEKSKILL, N.Y. 1921.

During activities in Camp Smith the unit training of the organization was conducted independently of the 102nd Engineers and coordinated so as to have the use of their equipment. In all other formations the Battalion conformed to Camp schedule for parades and ceremonies as a third Battalion of the 102nd Engineers.

The training schedule was intensive in character and covered basically most of the phases of field engineering it was possible to include in daylight hours. The response of the organization to the demands of an intensive training schedule was most gratifying and was reflected in comment of Commanding General, 2nd Corps Area, Governor's Island, N.Y., 28 Sept. 1921 to Commanding General, N.J. N.G., transmitting report of Lieut. Colonel Paul S. Bond, C. E., Senior Instructor N.Y.N.G. during period of encampment 21 August to 4 Sept. 1921, quoting extract as follows:

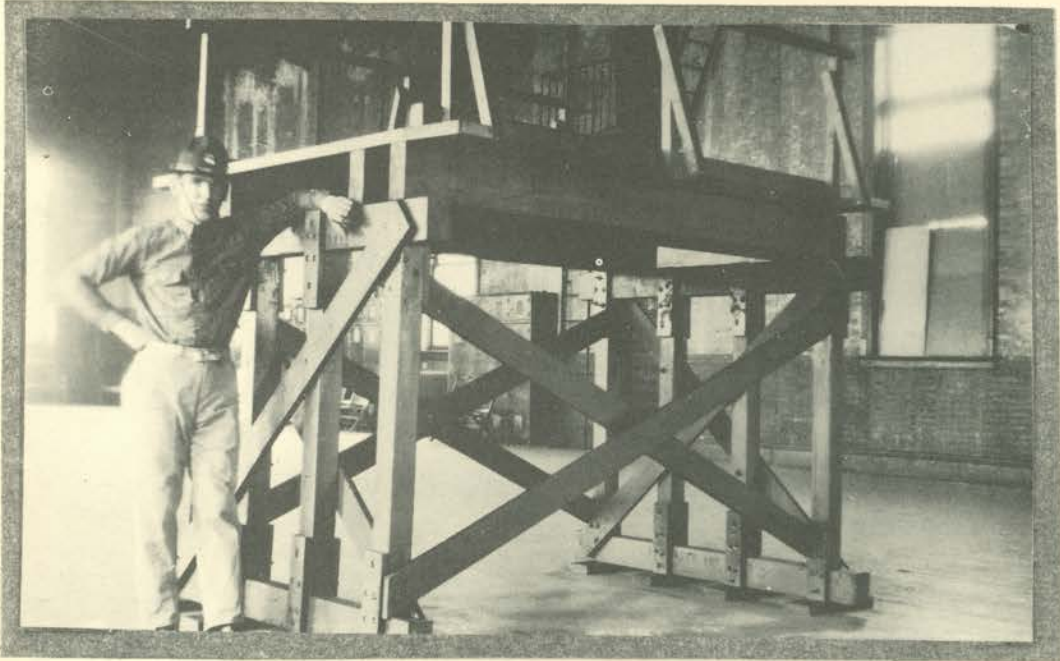
- " (a) Considering that the organization is so new and has had so little time for training, its showing at the Camp is regarded as most creditable. The officers performed their duties in a generally satisfactory manner, and the men indicated a great willingness and keen desire to accomplish their various tasks, more often actually exceeding the extent of respective requirements. "



MOVING THROUGH THE ORGANIZATION DETAIL OF PONTOON BRIDGE DRILL.

Following the return of the Battalion to unit home stations, a complete issue of Engineer tools and equipment arrived and an Armory Training schedule of engineer instruction was promptly initiated.

Civilian interest in the character of training, athletic competition and social activities accentuated recruiting to such an extent that early expansion of the Battalion to a regiment followed in due course.



STANDARD TRESTLE BRIDGE REDUCED DIMENSIONS FOR ARMORY TRAINING.

The organization of Co. D. at Hoboken was accomplished by transfer of the necessary enlisted personnel from Co. A. at the same station, with Federal recognition of the new unit dating from 17 November 1921.

Newspaper publicity opened a recruiting drive in Jersey City, N.J., early in October 1921, with quarters established in the old 4th N.J. Infantry Armory, with the organization designated as Co. E., completed and Federally recognized 6 December 1921.

Co. F. was acquired at Englewood, N.J., by transfer of the necessary enlisted personnel from Co. B., at the same station, and Federal recognition granted as of 2 June 1922.

Headquarters and Service Co. was recruited at Englewood, N.J., with Federal recognition dating from 11 April 1922.

With the organization and Federal recognition of 2nd Battalion Headquarters at Hoboken, N.J., 9 June 1922 and Regimental Headquarters at Englewood, N.J., 10 June 1922, the 104th Regiment (Combat) Engineers, N.J.N.G. assumed its place in the line of succession to history and traditions established by the overseas regiment of the same designation.



ENGINEERS OPERATING ARTILLERY PIECES AT SEA GIRT, N.J.

The first change of station as a regiment was the troop train movement in August 1922 to Sea Girt, N.J. for the Annual Field Training period. The usual camp routine and engineer training followed in order with the principal effort directed toward technical development. Due to limitations of the reservation a considerable part of the engineer training was restricted to assimilated conditions. All units of the regiment did participate in the construction of a pile bridge built across Stockton Lake at the southern boundary of the reservation. Timber was felled, shaped and scored by a forestry detail a considerable distance from camp and transported by truck to the bridge site. Construction progressed steadily under conditions entirely strange to a new regiment, the men wading in mud and water up to their shoulders to set piling and secure bracings, but they gave every evidence of enjoying the work thoroughly. After completion and use by the organization, the demolition details demolished it in sections with explosives.

Intensive disciplinary drills and frequent regimental formations quickly developed a smooth functioning organization and the first regimental training period was concluded in a highly satisfactory manner.

In the fall of 1922 the redesignation of some of the units was considered necessary to improve the composition of Battalions and facilitate administration. These changes finally fixed the unit stations with Regt'l Hqtrs., H. & S. Co. (with Band Section), Hqtrs. 1st Bn. and Co. F. at Englewood, N.J., while Co. C. was established at Dumont, N.J. effective 19 June 1925, and Co. B. at Newark, N.J. The 2nd Bn. Hqtrs., Companies A and D at Hoboken, Co. E. and Medical Detachment at Jersey City.

Every military unit is proud of its origin and history, which is a frequent topic of company room discussion, and is, therefore, indicated as a matter of permanent record:



FIELD INSPECTION 104TH ENGINEERS AT SEA GIRT, N.J.

104TH ENGRS. Organized as 1 Bn. Engrs. 16 May 1917.
 (Englewood, N.J.) F-(World War) 20 June 17 (Co. B 25 July 17); redesignated 1st Bn. 104th Engrs. 29 (Blue and Gray) Div. 15 Sept. 17; Regiment completed by transfer of units 1, 2, 3, 4 and 5 Inf. 6 Oct. 17; Service in France with 29 Div., the 5th Corps, U.S. Army and 17th French Army Corps; Mustered out 27 May 19. Reorganized as 1st Bn. Engrs. in 1921; expanded to regiment and redesignated 104 Engrs. 1922.

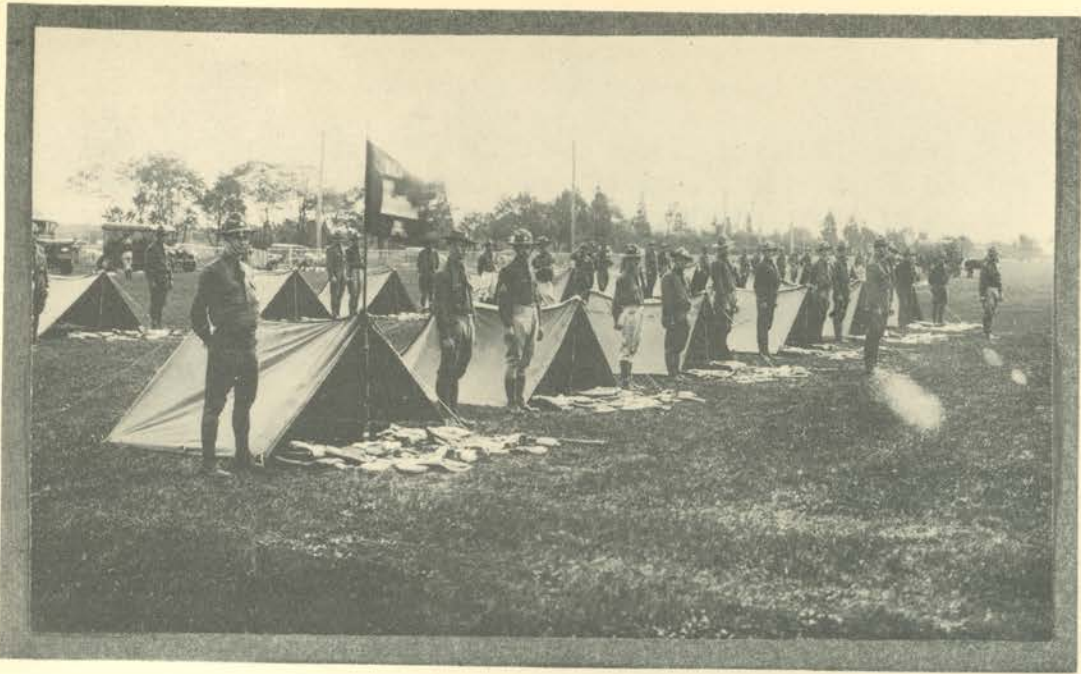


H. & S. CO. 104TH ENGINEERS
FORMED FOR FIELD INSPECTION, SEA GIRT, N. J.

Hq. & S. Co. (Englewood, N.J.) Fed. rec. Hq. & Serv. Co. (less Band Sec.) 1 Engrs. 11 Apr. 22, redesignated Hq. & Serv. Co. (less Band Sec.) 104 Engrs. 20 Apr. 22, redesignated Hq. & Serv. Co. 104 Engrs. 20 Oct. 30. (Note: Band Sec. 1 Engrs. recognized 14 Mar. 22, redesignated Band Sec. 104 Engrs. 20 Apr. 22 and consolidated with Hq. & Serv. Co. 104 Engrs. 20 Oct. 30.)

Hq. 1 Bn. (Englewood, N.J.) Fed. rec. 16 May 17 (World War); Trfd to 104 Engrs. 29 Div. 15 Sept. 17; reorganized Hq. 1 Bn. 1 Engrs. 11 July 21; redesignated Hq. 1 Bn. 104 Engrs. 20 Apr. 22.

Hq. 2 Bn. (Jersey City, N.J.) Fed. rec. 9 June 22.



CO. A. 104TH ENGINEERS
FORMED FOR FIELD INSPECTION, SEA GIRT, N.J.

CO. A. Fr. Co. A, 1 Bn. Engrs. N.J.N.G.,
(Jersey City, N.J.) Newark, N.J. Fed. rec. 24 April
17; Trfd to Co. A, 104 Engrs. 29
Div. 15 Sept. 17 (World War). Fed.
rec. Co. A 1 Engrs. 8 Mar. 21; re-
designated Co. A, 104 Engrs. 20
April 22.



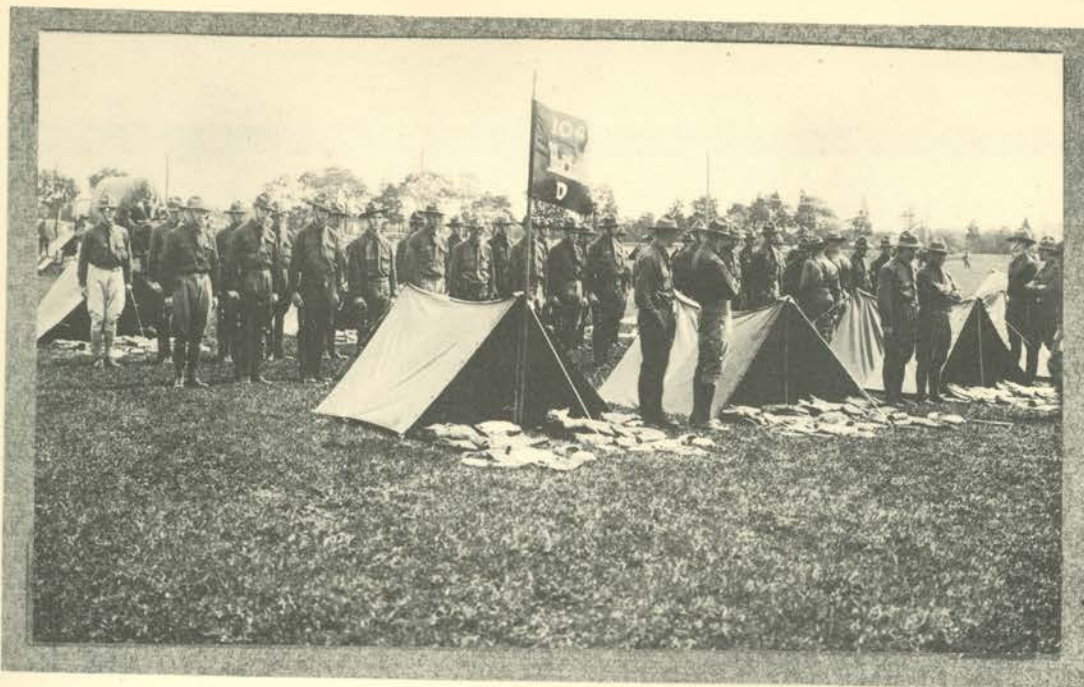
CO. B., 104TH ENGINEERS
RETURNING TO CAMP AFTER OPERATIONS AT GREGORY FARM.

Co. B.
(Newark, N.J.) Fr. Co. B, 1 Bn. Engrs. N.J.N.G. Trenton,
N.J. Fed. rec. 30 Apr. 17; Trfd. to Co.
B. 104 Engrs. 29 Div. (World War) 15 Sept.
17; reorganized as Co. B. 1 Bn. Engrs. and
Fed. rec. 2 June 21; trfd to 104 Engrs.
20 Apr. 22; redesignated Co. E. and changed
to Co. F. 13 Sept. 22.



CO. C., 104TH ENGINEERS
AT SEA GIRT, N.J. WAITING TURN TO ENBUS FOR GREGORY FARM

Co. C.
(Dumont, N.J.) Fr. Co. C. 1 Bn. Engrs. N.J.N.G. Trenton,
N.J. Fed. rec. 1 May 17; trfd. to Co. C.
104th Engrs. 29 Div. (World War) 15 Sept.
17; reorganized as Co. C. 1 Bn. Engrs.
Fed. rec. 27 June 21; trfd. to 104 Engrs.
20 Apr. 22.



CO. D., 104TH ENGINEERS
FIELD INSPECTION, SEA GIRT, N. J.

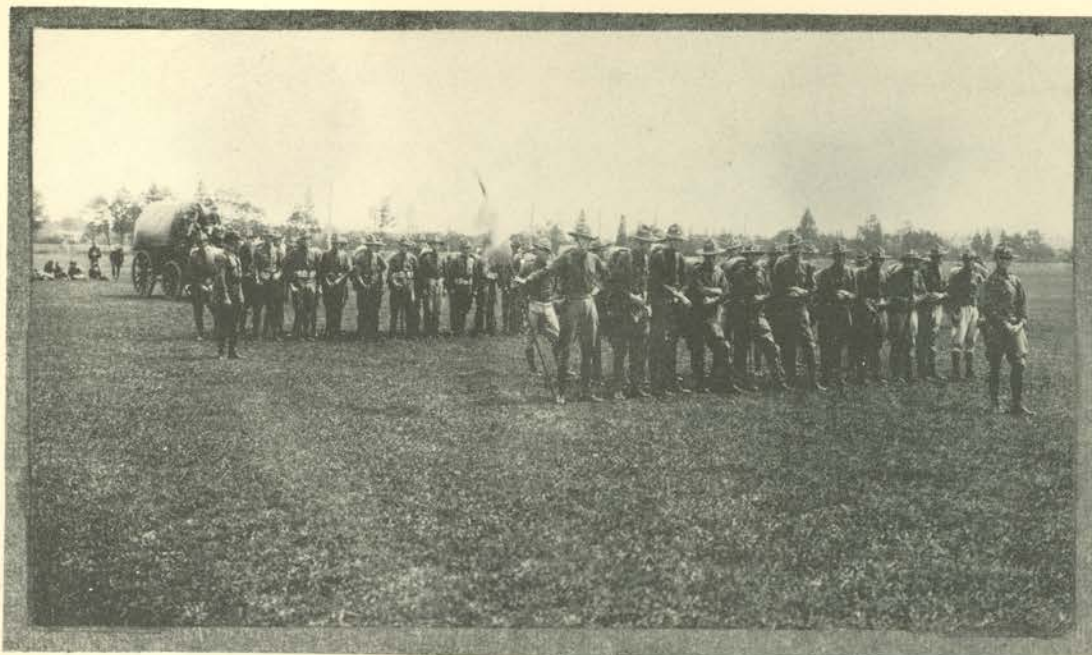
Co. D.
(Jersey City, N.J.)

Organized at Camp McClellan, Anniston, Ala. fr. Co. K. 1 N.J. Inf. and Co. G. 2 N.J. Inf. 4 Oct. 17; Co. K. 1 N.J. Inf. was organized at Newark 21 Feb. 02 and trfd to Co. D. 104 Engrs. 29 Div. (World War) 4 Oct. 17; reorganized as Co. D. 2 Bn. 104 Engrs. and Fed. rec. 17 Nov. 21. Co. G. 2 N.J. Inf. was organized at Turkey, N.J. 9 Apr. 1872 as Co. E. 3 Bn. Inf. ; trfd to Co. E. 7 Inf. Freehold, N.J. 10 May 1872; trfd to Co. G. 2 Inf. 2 May 1899; trfd to Co. D. 104 Engrs. 29 Div. 4 Oct. 17. Company was called into service, War with Spain, 27 Apr. 1898. Mustered in as Co. I. 3 N.J. Vol. Inf. Mustered out at Athens, Ga. 11 Feb. 1899 and resumed National Guard status.



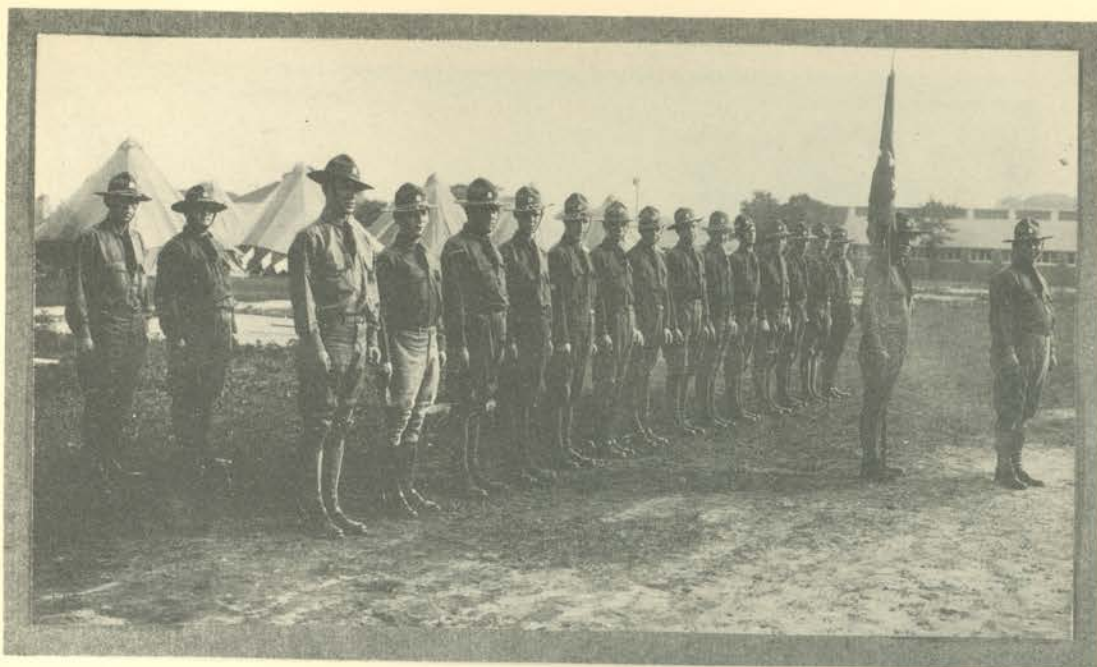
CO. E. 104TH ENGINEERS, SEA GIRT, N.J.

Co. E.
 (Jersey City, N.J.) Organized at Camp McClellan, Anniston,
 Ala. fr. Co. L. 4 N. J. Inf. and Co. L.
 3 N.J.Inf. 4 Oct. 17; Co. L. 4 N.J.
 Inf. was organized at Jersey City, N.J.
 20 Mar. 03 and trfd to Co. E. 104 Engrs.
 29 Div. (World War) 4 Oct. 17. Co. L.
 3 N. J. Inf. was organized at Atlantic
 City, N.J. 24 Mar. 1889 as Co. F. 6 Inf.;
 trfd to Co. L. 3 Inf. 2 May 1899; trfd
 to Co. E. 104 Engrs. 29 Div. 4 Oct. 17.
 Reorganized as Co. F. and Fed. rec. 6
 Dec. 21 and redesignated Co. E. 13 Sept.22.



CO. F., 104TH ENGINEERS, SEA GIRT, N.J.

Co. F.
(Englewood, N.J.) Organized at Camp McClellan, Anniston, Ala. fr. Co. I. 3 N.J. Inf. and Co. F. 5 N.J. Inf. 4 Oct. 17; Co. I. 3 N.J. Inf. was organized at Woodbury, N.J. 4 Mar. 1880 as Co. E. 6 Inf.; redesignated Co. I. 3 Inf. 2 May 1899 and Co. F. 104 Engrs. 29 Div. (World War) 4 Oct. 17. Co. H. 4 N.J. Vol. Inf. War with Spain, was formed from this company. Mustered into U.S. service at Sea Girt, N.J. 18 July 1898. Mustered out at Greenville, S. C. 6 Apr. 1899 and resumed National Guard status. Co. F. 5 N.J. Inf. was organized at Englewood, N.J. 24 Apr. 1872 as Co. B. 2 Bn. Inf. Redesignated Co. F. 2 Inf. 10 June 1892, Co. L. 4 Inf. 2 May 1899, Co. F. 5 Inf. 21 Feb. 1902, Co. F. 104 Engrs. 29 Div. (World War) 4 Oct. 17. This company was called into U. S. service, War with Spain, 27 Apr. 1898. Mustered in as Co. F. 2 N.J. Vol. Inf. Mustered out at Paterson, N.J. (after service with 7th Army Corps at Jacksonville, Fla.) 4 Nov. 1898 and resumed National Guard status. Reorganized as Co. F. 104 Engrs. and Fed. rec. 2 June 1922.



MED. DEPT. DET. 104TH ENGINEERS, SEA GIRT, N.J.

MED. DEPT. DET. Fed. rec. 15 Nov. 23.
(Jersey City, N.J.)

STREAMERS AUTHORIZED:

WORLD WAR
Meuse - Argonne
Alsace.

COAT OF ARMS: Approved 19 June 24.

SHIELD: Argent, five bendlets gules, on a low mount an oak tree fructed proper, within a bordure diminished gyronny of eight azure and gray.

CREST: That for regiments of N.J.N.G.

MOTTO: FACIENDUM EST (It must be done.)

DESCRIPTION: The shield is in the colors of the C of E. The tree represents the Meuse-Argonne operations and the bordure the "Blue and Gray" (29) Div. in which the regiment served during the World War.

DISTINCTIVE INSIGNIA: Approved 3 Apr. 26. Shield and motto of the coat of arms.



THE PONTOON BRIDGE GETS ANOTHER WORKOUT.

The character and scope of training improved with each year. A heavy pontoon train was parked at the Sea Girt reservation for use during Annual Field Training periods and the pontoon bridge and ferry rafts were constructed under both day and night conditions. Flares were used at night to assimilate combat action.

In the earlier years demonstrations were arranged as a part of the Governor's Day ceremony which included Infantry combat problems with the use of tracer ammunition so that visitors could observe the flight and deflection of rifle fire in the operation of the mechanics of unit fire control, followed in succeeding years by a simultaneous demonstration by units and sections of various engineer tasks, concluding with the clearing of the field and a ten minute quick change to dress uniform and formation for parade.

The feature of another year was a pageantry in appropriate costume of military and peasant action in and around a Spanish Block House and defensive works preceding the development of an attack by American troops uniformed and equipped in accordance with regulations in effect during that period of the Spanish-American War. The greater part of the parade ground was usually required for the setting of "props" and employment of military action, providing the camouflage section with an excellent opportunity to apply their training in a practical manner.

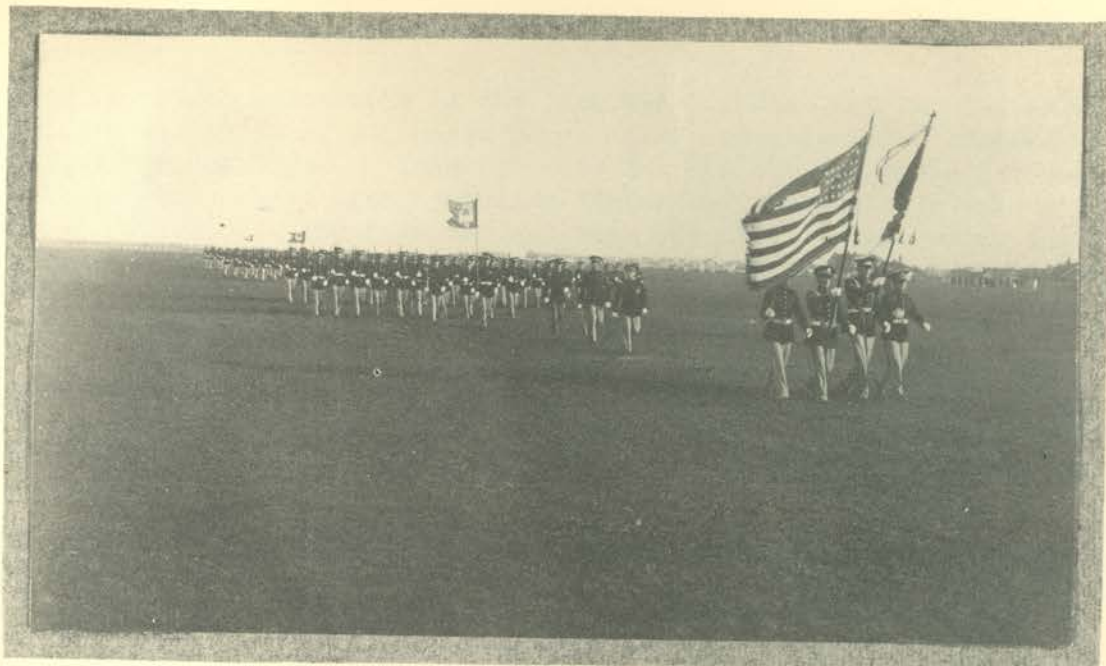
The development of a French Village and military action involving its reduction was the Governor's Day entertaining feature of another Camp period and again the carpentry and camouflage sections created some very realistic sets with the foreign atmosphere enhanced considerably by the acquisition of hay, old farm carts, cows and horses from various sources on the reservation. The vicinity of the village Cafe proved to be a popular rendezvous after retreat with a very definite departure from illusion to reality with regard to refreshments and other typically French peasant customs.



BATTALION BIVOUC CAMP 104TH ENGINEERS
AT GREGORY FARM DURING FIELD ENGINEERING ASSIGNMENT.

In the early spring of another year, a southeast storm at sea closed the sea outlet of the Manasquan River which caused water stagnation of the river and a source of complaints to local civil authorities from residents along the river shore, which eventually reached the Governor, at a time when the 104th Engineers arrived at Sea Girt for their annual Field Training period.

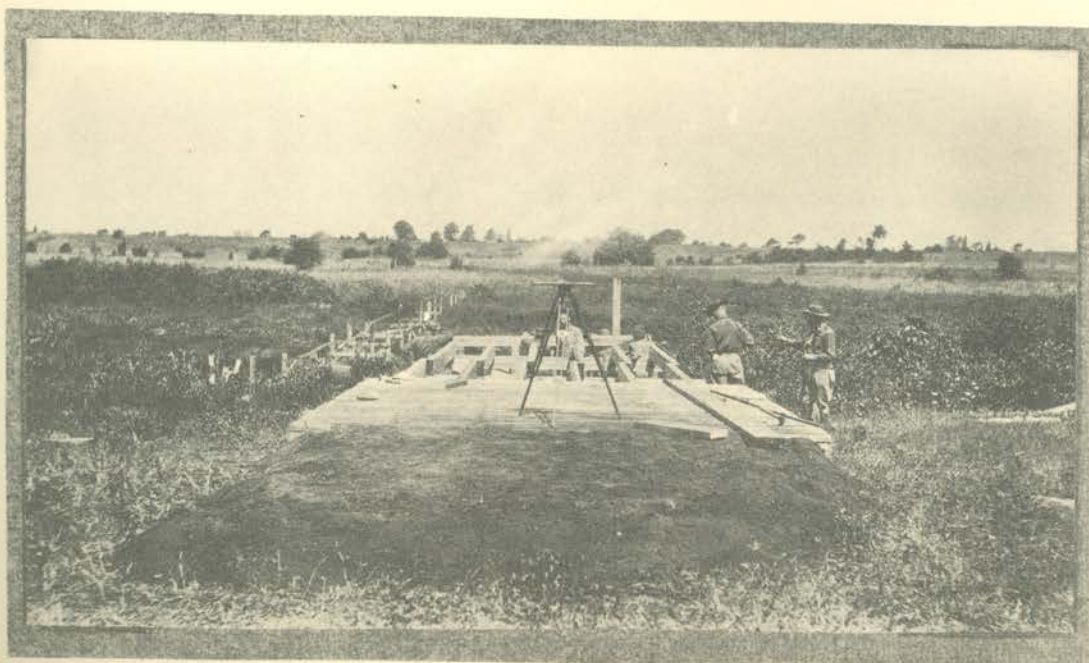
The Commanding Officer of the Engineer regiment was directed to take whatever steps were considered necessary to relieve the situation and open the river outlet to sea. With cooperation of the interested local civil authorities, all available fire engine pumps were placed at the disposition of the Regimental Commander. Plank roads were laid across the sand to river bulkheads and fire pumps placed in position where suction lines were hung and hose lines run out to the proper elevation of sand. The hose lines were operated in a battery of four lines and spaced to include the original width of the outlet. The heavy water pressure developed in this manner cut thru the sand and washed it to sea and progressed to a point where a flow of water thru the outlet had been re-established but the need for the fire apparatus for service in respective towns caused withdrawals and reduction of power to a point where further Engineer operation was without possibility of accomplishment and troops were withdrawn. The change in camp training routine however, and the application to an unusual task, was a feature of intensive interest to the entire personnel.



104TH ENGINEERS EVENING DRESS PARADE AT SEA GIRT, N.J.

The adoption and acquiring of the Engineer Blue Dress uniform was the next event in the progress and development of the regiment and proved a pleasant and bracing change for the men, following a day of heavy engineer tasks in the field.

Progress and development marked each succeeding year to a point where the limits of the reservation at Sea Girt were inadequate to provide the means for further development in the more advanced type of combat engineer training and it was considered imperative that some other facilities be acquired to permit operations under conditions more actual than assimilated.



ENGINEER OPERATIONS AT GREGORY FARM, BRIDGING MARSH SECTION.

A thorough reconnaissance of the area West of Sea Girt terminated with the location of a farm site of 385 acres known as the Gregory Farm, located about 22 miles due West of Sea Girt. This property had all the desirable features of roads, terrain, stream, marsh area, standing timber and camp site to make it ideal for the purpose required. The farm had not been operated in ten years, the farm house and buildings were in poor state of repair. Arrangements were made whereby the State would lease the property for two weeks during Annual Field Training period of the Engineer regiment, without restrictions as to use, except that buildings would not be destroyed or standing timber felled without proper supervision. The regiment first occupied the property for training purposes in 1929 and has continued to use it in each succeeding year up to the present time. One Battalion moves in for advanced engineer training when the other remains at Camp on basic and task organization training.



ENGINEER OPERATIONS AT GREGORY FARM. ROAD REPAIR AND DRAINAGE.

The units are transported by truck and the movement varies from truck transport movement at night under assimilated combat conditions to daylight relief. Regimental combat problems are developed in varying phases each year with Battalions opposing each other or acting in unison so that the manœuvre phase develops on the roads in vicinity of the farm property boundary lines. Some of these problems have opened at midnight on the reservation at Sea Girt with the Battalions assembled and moving off in truck convoy with only a route indicated until sealed orders are opened at an indicated elapsed time for further instructions, which are planned and timed to effect contact for combat at the farm at daylight.

This property has provided an inestimable advantage to the regiment in the development of its training accomplishment and no opportunity has been overlooked in using its unusual facilities to the full extent of the time permitted.

Roads, which originally were a real problem, have been gradually improved by re-surfacing, grading, drainage and alignment.



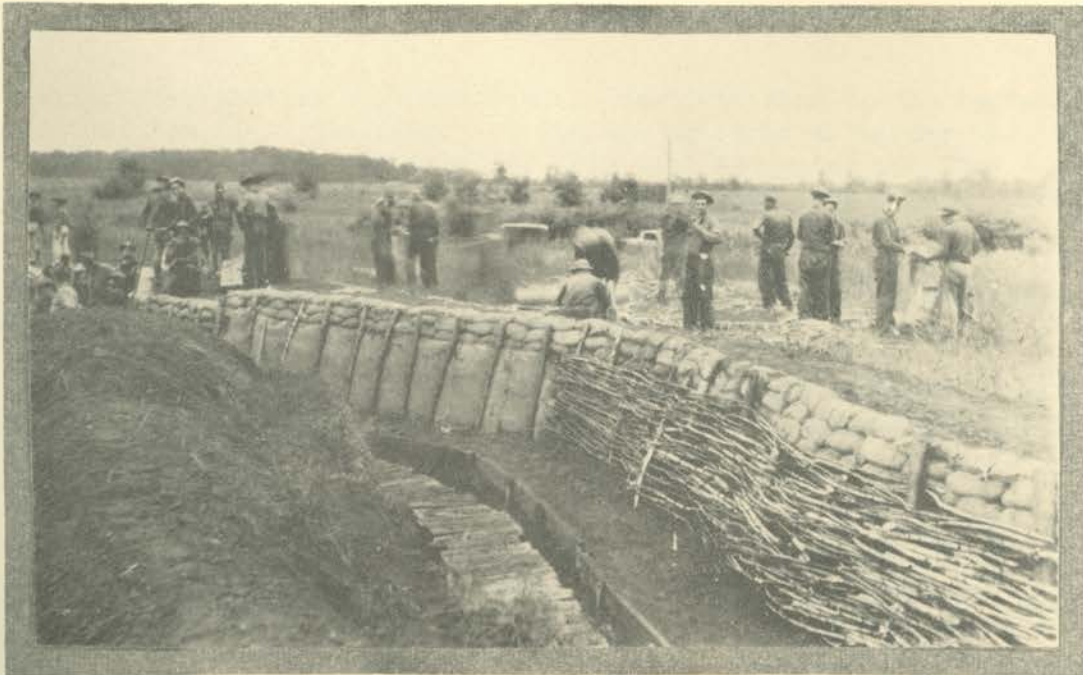
ENGINEER OPERATIONS AT GREGORY FARM.
HEAVY BRIDGE CONSTRUCTION. COMBATING SILT AND QUICKSAND.

Bridges have been built over the stream, varying in type from improvised footbridges from salvaged material, duck board foot bridge with pile supports, re-inforced bridging to heavy timber permanent construction at the road crossing. Quick sand silt and submerged timber have been encountered and overcome in the construction work.



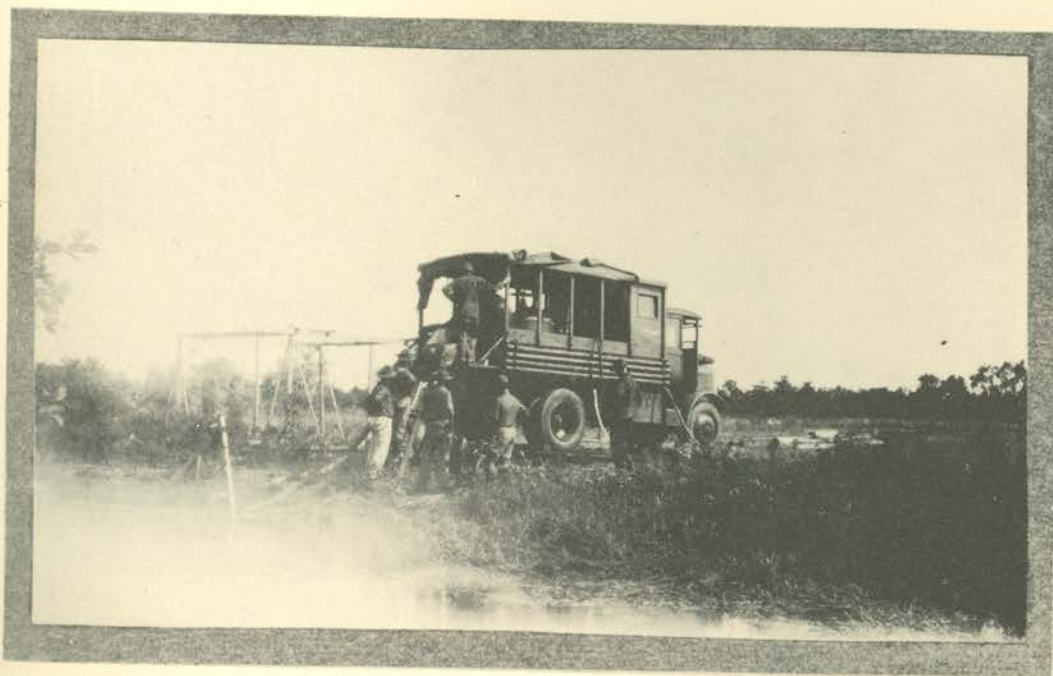
ENGINEER OPERATIONS AT GREGORY FARM.
DEMOLITION DETAILS CLEARING STREAM BED.

Demolition details have cleared and widened the stream bed to increase flow of the stream. Timber has been felled by explosives.



ENGINEER OPERATIONS AT GREGORY FARM.
DEVELOPING TRENCH SYSTEM, EMPLOYING VARIOUS METHODS OF CONSTRUCTION.

An extensive trench system is in the course of development employing the various types and methods of construction. The position is gradually being wired, machine gun positions developed and improved from year to year and field of fire cleared in the organization of the position.

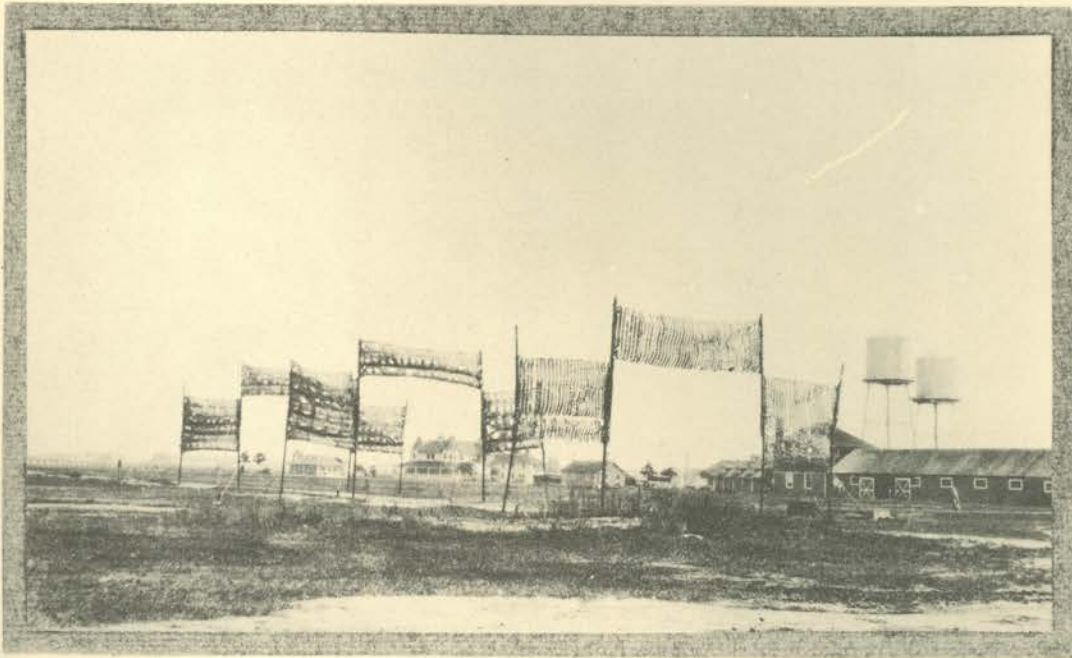


ENGINEER OPERATIONS AT GREGORY FARM.
WATER PURIFICATION UNIT DRAWING WATER FROM STREAM FOR SERVICE TO TROOPS.

A water purification unit has usually been attached to the regiment for this period of the field training. A dam was constructed across the stream to provide a reservoir for the operation of this unit and water purified in this manner was used by troops in the field. It also served to supply water pressure for shower baths rigged up by pipe fitters.

Truck convoy and supply service is operated by Transport Section of H. & S. Co. in daily service from base at Sea Girt.

The acquisition of this farm property for training purposes provided a welcome opportunity for expansion of the scope of engineer training accomplishment.



ENGINEER OPERATIONS AT SEA GIRT, N.J.
CAMOUFLAGE SECTIONS SCREENING A CAMP ROAD.

With the home stations of the various units in the organization located in Bergen, Hudson and Essex Counties, the supervision of Armory training required a considerable amount of time in traveling and delay in action on administrative matters. The absence of adequate Armory quarters for the entire command, restricted regimental formations to the two weeks of Annual Field Training.

The new 104th Engineers Armory now under construction at Teaneck, N.J., where the entire command will eventually be quartered, will eliminate these previous difficulties and provide the personnel with modern accommodations, facilities suitable for the training of an engineer organization, and participation in unit athletic competition.

The future is therefore viewed with interest and confidence that the 104th Engineers N.J.N.G. will continue to progress in development and perfection of training characteristic of its branch of service.

* * * * *

HONOR ROLL

MEMBERS OF THE 104TH ENGINEERS 29th DIVISION U.S.A., A.E.F.,
WHO DIED IN THE SERVICE WHILE OVERSEAS.

Arncke, Henry Jr.	DOC	November 21, 1918.
Abrams, W. M.	DOW	August 7, 1918.
Ablett, Wm. S.	DOW	October 27, 1918
Adams, A. L.	DOW	September 26, 1918
Bauer, George J.	KIA	August 31, 1918
Bonds, James L.	DOC	February 17, 1919
Baer, F. P.	DOC	August 2, 1918
Bloor, Spencer	KIA	August 31, 1918
Bowers, Geo. A.	DOW	January 24, 1919
Bruttell, L. J.	DOW	September 26, 1918
Castmore, Jos. A.	DOW	September 28, 1918
Caldwell, M.	DOC	July 12, 1918
Camden, C.	DON	August 18, 1918
Doherty, J. F.	KIA	August 31, 1918
Davies, A.	KIA	October 19, 1918
Fox, John J.	DOC	February 2, 1919
Flack, Robert	KIA	August 7, 1918
Farris, E. McG.	KIA	September 27, 1918
Galland, Hugh H.	DOC	September 27, 1918
Hill, Horace F.	KIA	October 19, 1918
Jeffers, William J.	DOC	October 19, 1918
Ketcham, Harry	DOC	January 26, 1919
Long, John	DOC	September 1, 1918
McGarvey, Ralph	DOW	October 19, 1918
Osborne, J. S.	KIA	October 6, 1918
Pace, Sam M.	DOC	March 14, 1919
Parkyn, Ed. J.	KIA	October 6, 1918
Poland, H. M.	DOC	March 1, 1919
Price, K. E.	KIA	August 7, 1918
Patton, J. D.	KIA	October 6, 1918
Randle, Frank H.	DOC	February 18, 1919
Reynolds, J. F.	DOC	January 20, 1919
Thoirs, Ray C.	DOW	October 6, 1918
Toms, Stanley	DOW	October 21, 1918
Volk, Robert B.	KIA	August 31, 1918
Zuraitis, Jonas	DOC	February 10, 1919

Note: Capitalized letter abbreviations denote - KIA, killed in action; DOW - died of wounds; DOC - gas, disease or other cause.