CHAPTER VII

THE CAMPAIGN OF 1918

THE elimination of Russia from the war owing to the Bolshevist revolution enabled Germany to set free immense numbers of men and guns and employ forces largely superior to those of France and England combined for operations on the Western Front in 1918.

The great peril to our merchant shipping from submarine warfare was by then being combated with success; and since practically the entire populace of the nations engaged was employed on war work of some sort, troops and munitions had become interchangeable terms—neither could be got except at the expense of the other. The war, in fact, was more than ever one of attrition, a question of whether the Allies or Continental Powers were first exhausted.

The arrival in any strength of troops from America, whose almost limitless resources must eventually turn the scales in such circumstances, was not expected till the autumn; and Germany decided to stake everything on a campaign in the interval, hoping to gain such a decisive victory during the summer as would enable her to dictate terms of peace.

Our casualties at Passchendaele in the previous autumn had been immense. Brigades had been reduced from four to three battalions to maintain the full number of cadres, and on every front the British Empire had borne the chief heat and burden of the fighting during the past year. Germany's plan was, with the aid of the troops recalled from Russia who had been living in comparative quiet, to throw the whole weight of her unrivalled military power against the British Armies which were to be rolled back from the south, their contact with the French army severed, and driven shattered to the sea. After this it would be the turn of France to be dealt with.

The movement of troops across the continent throughout the winter could not be kept hid, and it was obvious that Germany would seek to take advantage of her tem-

porary superiority; but beyond this nothing could be foretold with certainty—neither the whereabouts nor the time of an attack which was anticipated with grave anxiety. All that was possible was to make ready resistance along the whole front. Offensive plans were postponed and defences strengthened and deepened.

In the midst of these measures the storm burst on the 21st March on the front of the Fifth Army astride the Somme and that part of the Third immediately on its left. Heralded by a terrific bombardment, wave after wave of selected storm troops and machine gunners advanced to the assault in such overwhelming numbers that the front was quickly penetrated to the alarming depth of several miles. The Fifth Army was driven from its ground south of the Somme and disappeared as a fighting command, while the Third, subjected to almost equal pressure, was obliged to conform to its retirement.

Gradually the initial ferocity of the onslaught spent its force, despite the fresh divisions that Germany poured in. We were able to bring up reserves, the French took over the front south of the Somme, and the battle came to a standstill in front of Amiens, an important strategic railway centre which the enemy was unable to reach.

Meanwhile a subsidiary attack had developed on the 28th March a bit further north, opposite Arras. This was much less successful and was repulsed with little loss of ground.

The first great blow had been struck, and though its intensity caused us to stagger, it had not proved fatal.

The scene next shifted to the front stretching from north of Arras nearly to the coast of Flanders where the line had been thinned by the despatch of troops to reinforce the region of the Somme. Here, on the 9th May, another attack was launched which in the course of the next few days made a deep indentation over a width of some sixty miles.

The situation now seemed critical, so near the coast were we being driven, and the Commander-in-Chief, abandoning his accustomed reserve, issued on the 12th

April a special order in which, after expressing his admiration for the splendid resistance offered, he intimated that there could be no further retirement and that we must fight it out with our backs to the wall.

But the climax of Germany's effort had been reached. Though the blows of the sledge-hammer continued to fall for some time longer, no further impression could be made on the stubborn defence. The line, if dangerously bent, remained unbroken. The flanks held, French troops arrived to assist, and Hazebrouck, another important centre, was saved.

It is no disparagement to the bravery of our men, who were outnumbered three and even four to one, to say that what caused each of these operations in turn to waver and peter out was not because the enemy faltered. Germany had ample reserves opposed to other parts of the front where our line was perilously attenuated by our pouring fresh divisions into the battle. It was rather, as was admitted by Germany, the difficulty of feeding her advancing troops, and in particular that ammunition could not be sent forward fast enough to enable the guns effectively to support their infantry. The area behind the battlefield became blocked. Even at ordinary times it was difficult to prevent traffic congestion, and in the salients created by these attacks, roads and railways had been destroyed by shell fire. Her means of communication were particularly bad during the first operation begun on the 21st March and conducted over ground desolated by previous fighting.

It is not difficult to picture the scene. Stream after stream of German lorries and wagons struggling forward with munitions and rations, guns moving to fresh positions, others being hurried up to replace casualties, among them columns of infantry reliefs wending their way. An equal stream flowing the other way of empty transport, ambulances, disabled guns for repair, infantry returning from the front, wounded and prisoners. All have to pick their way over a wilderness of shell craters; and one lorry disabled through a break in the road or a wagon stuck in the mud suffices to hold up a whole

column. The difficulties were too great even for Germany's organizing genius to overcome immediately.

We on the other hand were all the time falling back over an undevastated country on reserves of materiel; and so long as our main arteries and nerve ganglions were intact, our supply arrangements, though hampered, were not seriously thrown out of gear. While Germany was re-organizing her communications over new frontal areas, repairing roads and laying railways, creating new dumps of food and ammunition, we had breathing space in which to withdraw our artillery to new positions, replace our lost guns, re-form our shattered battalions, re-entrench, bring up fresh troops and face the foe with renewed confidence. The battle then had to start all over again without the one great advantage of the offence—the element of surprise.

Two factors of modern warfare which have been previously mentioned stand out in these encounters. The power of a determined defence to master an equally determined attack in far superior strength, and the extent to which success depends on good administrative staff work.

That Germany lacked neither men nor munitions to continue the struggle is shown by the next events. Having failed to obtain a decision she formed a new plan, a great thrust against the French front at Rheims and Compiègne with Paris as its objective, to be followed by a renewed attempt on the Channel ports.

Here, again, the first onslaughts were dangerously successful. The safety of Paris was imperilled. Very unwillingly a number of British divisions were lent to France, and with a line thus weakened we anxiously awaited further attack. But in reality the Allies were now in better fettle. American troops, fresh and eager for the fray, had been hurried across the Atlantic, all our casualties made good, our big loss of guns replaced, and a French Generalissimo was in supreme command of all the Allies. A brilliant counter-attack in July by massed French reserves threw the foe back over the Marne which he had crossed; and with this failure the

operations which were to follow against our front were abandoned.

This was Germany's final effort, the gambler's last throw which left him bankrupt of resources.

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A brief account of these operations, of a magnitude without parallel in the history of the war or indeed of the world, has been necessary to make clear their repercussion on those services with which we are concerned.

At the outbreak of war our army was perfectly mobile, it possessed not an ounce of materiel beyond what its transport could carry. Everything else was well back on the lines of communication and, except for food and ammunition, it was not expected that anything would be necessary whilst actually in contact with the enemy.

So great and incessant, however, did the call for materiel become, especially in warfare of the type that developed in France, that we perhaps went to the opposite extreme and sacrificed mobility overmuch so that the troops might get everything they wanted with a minimum of delay or difficulty. A great array of establishments grew up in frontal areas. Each Ordnance officer with a formation had a substantial dump. Gun parks held large stocks of artillery equipments. Gun workshops occupied ranges of buildings and portable shedding. Ammunition dumps were scattered up and down the country. There were armourers', bootmakers' and other shops, salvage dumps, a host of semi-civil establishments. A few only of these products of the war were supposed to be mobile, but road transport had been largely replaced by light railways. Lorries had been pooled and when wanted for their legitimate purpose were not always forthcoming.

During these battles there was great difficulty in extricating such establishments. At ordinary times the D.D.O.S. of an Army with his expert ammunition and mechanical engineering officers, and the A.D.O.S. of a corps, were as a rule able to get through their office work in the early morning and evening; and spent a

great part of the daylight hours visiting headquarter staffs and departmental institutions to see that everything was up to the mark and working smoothly. But now, with everyone on the move, the temporary officer with a formation, in charge of a workshop, gun park or ammunition dump, was usually deprived of this light and leading, being often cut off from all outside communications. A heavy responsibility rested on his shoulders. He had to take quick decisions with nothing to rely on but his own grit and power of initiative during the most difficult of all military situations—an enforced retirement.

The incubus of an accumulation of materiel to troops in retreat can be judged from the experience of Lieutenant Chaplin, recently posted as D.A.D.O.S. to one of the divisions which suffered such heavy loss on the 27th May while holding what was believed to be a quiet position on the French front near Rheims. After applying in vain to his divisional headquarters, he managed to intercept one lorry. Then two more arrived of which one was ordered away again to carry the instruments of the divisional band. No less than ten lorries were needed to hold the contents of his dump. Four moves, each further to the rear, had to be made under fire in the course of the next 48 hours; it was impossible to make second journeys, and stores valued at £5000 had to be abandoned. In his diary this officer attributed this loss to his four lorries being used for other services. But though to some extent true this is an overstatement, the loss was caused mainly by the size of the dump.

Others were more fortunate. Lieutenant D. R. Smith, who was with a division in the first battle of March 21st, finding a Flying Corps headquarters next door on fire and guns coming into action alongside, thought it time to evacuate his dump and divisional shops. He managed to remove 16 lorry loads, after which he sent back to destroy the rest to avoid capture by the enemy, for the site was being shelled and swept by machine gun fire from aeroplanes.

The officers' shop made no pretence to mobility; it was in no sense a fighting organization. That of the

Fifth Army was a total loss; by the time it could be packed up and got to the railway station the last train had left—only half a lorry load was saved. A great part of the overgrown central workshop of this Army was also lost.[1] Elsewhere arrangements were attended with better success; one Army had time to send the heavy plant of its shop to Calais for instance.

In the aggregate these losses were substantial and would have been far more serious had we been driven back only a little further and a little faster.

Medium and light workshops fall into a different category, having important work to do during the progress of battle. But for them there would have been no alternative but to send back every equipment to the lines of communication when out of order; and at a time like this, with batteries on the move and all the ordinary channels of communication more or less disorganized, serious delay would have occurred in replacement. Moreover, the reserve of spare guns required husbanding and could only be used to replace those condemned for wear, entirely disabled or lost to the enemy.

The policy of doing repairs near the front was unquestionably sound, but during a prolonged period of stationary warfare it had perhaps been carried too far. Better work could be done in a semi-permanent workshop than in one on wheels; and, when lorries were pooled, no transport was left beyond what was wanted for daily errands.

The medium workshop in particular, which had the heavier artillery to deal with, had accumulated so much gear that it was apt to be too fully occupied over its own evacuation to attend to current work. Besides this, in the hurry of action, it was difficult to find a site suitable tactically and at the same time capable of accommodating such a large establishment, with solid foundations on which to bed down heavy machinery.

The doings of No. 7 Medium Workshop at Matigny, in charge of Captain Dowling, can be cited by way of

[1] When La Flaque, the site of this shop, was retaken in August, this plant and machinery were recovered intact.

example. Notice to quit was received on the evening of the 21st March, and by working throughout the night the shop was ready to move off at 9 a.m. the next day, with a generous train of eighteen lorries in place of five—the authorized number. Even then a gantry and an assortment of materials had to be left behind. One lorry was dropped at Corps artillery headquarters with a light equipment, a couple more were ditched in shell holes, and during the following days the rest of the column, gathering strength by picking up tractors with parts of heavy artillery and stragglers, wandered from place to place seeking a resting place and finding none. On the 26th Longeau was reached and for the first time some light roadside repairs were carried out; but Longeau was becoming untenable and the same evening the journey was continued to Poix. Here at last a halt could be called and unpacking started, but it was not till the 29th March, after eight valuable days had been lost, that the shop was oncemore in full swing and able to set to work on a large number of siege howitzers and a 6-inch gun that awaited overhaul.

In several cases valuable plant had to be abandoned, Captain Wilson's light shop at Estaires being the most unfortunate. From early dawn on the 9th April shell began to drop and by a series of mischances no transport was available. One lorry was being mended, another collecting stores and rations; even the workshop car was away on duty. A.D.O.S. XVth Corps was told of the situation and then all communication with the outside world ceased. There was nothing to be done but complete the work in hand, get everything ready to move, and stand by. In the afternoon some of our field artillery came into action behind Estaires, the enemy's fire became intense, and in the evening Wilson withdrew his men to greater safety at Vieux Berquin, expecting to return the next morning. Here a message was intercepted from Corps headquarters saying that four lorries would be sent after dark, if circumstances permitted, to evacuate the workshop. The lorries failed to arrive and the next day Estaires was in the hands of the Germans.

Wilson took the loss of his shop greatly to heart, but there was nothing more he could have done. To have stayed longer would only have led to loss of personnel besides materiel. As it was, he and his assistants were able to help another shop suffering from pressure of work.

That frontal workshops helped substantially to save the situation, and that their staff did wonderfully good work, is beyond question[1]; but these instances go to show that their services would have been even more valuable had their original mobility been restored during the winter when we were preparing to be attacked. The workshop should have been able to function without having to entirely dismantle and re-erect its machinery. Whether in advance or retreat its mobility was assuredly no less important than that of the guns it served.

In the work of making good artillery casualties, gun

[1] The case is well put in the following kindly letter from G.O.C. R.A. to A.D.O.S. Vth Corps:

DEAR BLACKBURN,

I have been wanting for long to get an opportunity of going round your workshops and telling the officers and men how much I appreciate the untiring zeal with which they worked to refit our guns during the recent battle.

Without their work—which was as valuable as that of those who were using the guns—we could not have got on, and I often think that it is the unshowy work which carries no excitement and receives few rewards, which is the hardest to perform.

I still hope to come round at an early date, but I should be much obliged if you would convey my gratitude and appreciation to all concerned.

Yours sincerely,

R. P. BENSON.

29th April, 1918.

Several instances of gallantry were specially rewarded, among which the plucky conduct of Staff-Sergeant Gascoyne, serving as an armament artificer with an artillery brigade, who received an immediate award of the Distinguished Conduct Medal may be cited. The record reads:

" After the infantry had retired through a battery and the enemy were 600 yards away, he personally disabled one of the guns and then joined a party of infantry whose officer was soon after killed. Taking charge of the party and being forced to retire, he successfully withdrew to a line of defence where he remained in charge till sufficient reinforcements arrived to counter-attack. After the guns were retaken he remained with them till tractors arrived to salve them."

parks took an equal share. Our loss of guns to the enemy was very severe and there was never any difficulty in evacuating a gun park, so quickly did it empty itself. The difficulty was to keep it replenished.[1]

The doings of the Fifth Army park at La Flaque have been recorded by Captain Gay, the officer in charge. At the outset there was such a heavy demand for guns of all calibres and their fittings that it looked as if the stock would run dry. But a train of sixty trucks opportunely arrived, and though gunners came and gunners went, none departed empty handed. "A 2/Lieutenant of the R.F.A. went away the proud possessor of four packets of cigarettes and a gun, saying he would be the most popular man in the battery—because of the woodbines."

On the 26th March the stream of guns passing back along the road ceased and artillery was now in action to the rear. The remains of the park were therefore withdrawn to Longeau, only a few stores of little value being left behind. Shell were falling dangerously near as the last lorry moved off and our machine gunners were taking up positions covering the road.

Another section of the park had been opened at Longeau two days earlier, and on the 27th a further move had to be made to Poix. But work continued at one place or the other without intermission by day or night; one

[1] Gun casualties between the 20th March and the end of April 1918 are set forth in the following table:

Nature.	Shell fire.	Premature	Wear.	Lost.	Total.
13-pounder Q.F.	5	—	2	4	11
13-pounder A.A.	3	—	24	4	31
3-inch 20 cwt.	—	—	17	—	17
18-pounder	289	16	100	411	816
60-pounder	41	16	60	44	161
6-inch	1	2	12	9	24
12-inch .	—	—	1	—	1
4·5-inch howitzer	86	15	65	114	280
6-inch howitzer	56	7	16	118	197
8-inch howitzer	10	—	2	32	44
9·2-inch howitzer	2	—	3	29	34
12-inch howitzer	—	—	—	5	5

train after another arrived, and as fast as guns and carriages were off-loaded they were assembled, fitted with adjuncts and handed over to waiting gunners. The only misfortunes were that a direct hit from an aeroplane bomb put eleven field guns out of action, and that another killed six men and wounded twenty-five others, the park having become a nucleus for numerous stragglers whose wants it was able to relieve.

When finally it came to rest at Pont Remy on the 9th May (Poix being in the area taken over by the French), it had issued no less than 585 guns and 2941 machine guns.

In no case did a gun park sustain any loss worth mention. Their movements were excellently timed. In the Third Army an advanced section at Bapaume had been withdrawn shortly before the offensive; and in the First Army portions of the stock were even pushed forward during the attack to lie within easier reach of the gunners. During these critical days, and with communications so strained, these institutions proved invaluable.[1] It should be added that the elaborate arrangements by which casualties were only to be made good from a gun park after getting sanction from G.H.Q. went to the winds once the real pinch was felt.

The arrangements for supplying ammunition and the enormous stocks held in frontal areas after three years of stationary conflict have been described in the last chapter. The amount expended was so weighty and so fluctuating both as to time and place, that in no other way could the Gargantuan appetite of trench warfare be satisfied; and although the result was that no ammunition was mobile except what happened to be on the move from day to day, the risk of loss was slight so long as we could be tolerably sure of holding our positions.

[1] The following is an extract from the report of the Ist Corps in the First Army on the operations:

Replacements of guns and carriages—The arrangements made for immediate replacement were most satisfactory. Gun park stocks were always ready to meet demands, and did not fail on any occasion. The close liaison between Ordnance and Royal Artillery throughout the whole period was the secret of success in replacement.

During these battles, where we lost so many guns, the ammunition remaining in their dug-outs disappeared with them, the more forward dumps and re-filling points went next, supply through the accustomed echelons and channels broke down, and the railheads and dumps in charge of the A.O.C. became pivots on which the guns rallied and drew what they needed.

Officers in command of Ordnance ammunition units had orders to stay at their posts till the last possible moment and, before leaving, either themselves to destroy what had to be abandoned, or to arrange that this was done by the R.E. whose business it was to demolish bridges, etc., in a retreat. The responsibility resting on these junior officers was particularly heavy. Their highly dangerous freightage was a special target for enemy planes and guns, and as a rule they had only their own judgment to rely on. Two illustrations will show the nature of the work and how they acquitted themselves.

Captain Banfield, with two units, was at X.U. railhead[1] in the Fifth Army when the first bombardment started, and almost at once the railway approach was cut by shell fire concentrated on the post. Two trains which had arrived the day before were on the sidings and later on some 13-pdr. ammunition was received by road. The time was spent in unloading, unboxing and issuing field gun ammunition, and so heavy were the demands that, when the bombardment was resumed the next morning and a direct hit made on a shed, the 6000 rounds it had contained a few hours previously had all gone. "The hangar was now empty and Fritz drew a blank."

The Labour Company had been withdrawn owing to casualties, and at 11 a.m. on the 22nd March, as there was little doing and the fire was intense, Banfield sent back his men, remaining in a dug-out and meeting a few more demands from passing horse artillery and infantry entrenched behind the station, who were short of ammunition for their rifles and machine guns.

At 4 p.m., as demands had ceased and the place was

[1] These sidings, built during the war, had no names on the map of France.

by then under rifle fire, he decided it was time to quit and rejoined his party at 'Misery,' the next railhead in rear where the line was still open, and where a train, unable to get further forward, was found waiting. Misery was on the point of being evacuated, but there was just time to remove some of the field gun ammunition before the train was withdrawn by the R.T.O., which enabled more guns passing by to be replenished, the detachment taking cover from shrapnel in a ditch during slack intervals.

The same night, there being no more guns in the vicinity, the march was continued to Chaulnes, where it was hoped to find the train from Misery. Chaulnes, however, was deserted, no news could be got of the whereabouts of this or any other consignment of ammunition, and after a rest the journey was resumed to La Flaque which was reached on the 24th, and where it was possible to get into touch with headquarters.

So far the small Ordnance detachment had been lucky, but here it sustained a heavy loss, its strength being reduced by half by a single bomb. Among the wounded was Captain Banfield[1] who, however, was able to remain on duty and, acting under instructions, took the rest of the detachment on to continue work first at 'X.T.' and next at Petit Blangy. On the 28th they proceeded to Montières which continued in use as an ammunition railhead for some time. The enemy was using long range gun fire on this spot, and during the night of the 14th April obtained five direct hits, but fortunately all ammunition received during the day had been cleared a few hours earlier, "so Fritz again drew a blank." Two days later another move was made to Bois du Gard.

This account is typical of a number of others. Ordnance ammunition units had to stay at their railheads long after they were abandoned as such. They stayed till all calls for ammunition had ceased, till not only the guns but often the infantry had passed back; only then could they retire to the next railhead. All the time trains

[1] This officer was one of those who received an award in the Field of the M.C. for his services.

were being sent forward as far as it was safe for them to go. Sometimes these only arrived to be promptly withdrawn, but even so there was time during shunting operations to throw overboard some part of the contents.

Rarely was there any superfluity of field gun ammunition at a railhead, every round was badly wanted—one detachment alone exhausted the whole of what it possessed at the moment in two days, 87,000 rounds of 18-pdr. and 22,500 of 4·5-inch howitzer; but there was often more of the heavier natures than was called for. Then, before finally quitting the post, if there seemed no prospect of its re-occupation, cartridges, tubes and fuzes would be fired, and only the bare shell, useless to an enemy by themselves, abandoned.

The next case illustrates the work of an ammunition dump. At 'Trent,' a large reserve, several stacks of ammunition were exploded by shell fire on the afternoon of the 9th April. For five hours the fires had to be battled with to prevent the whole place from going up in flames, Captain Gee who arrived from Army headquarters taking a prominent part in this dangerous work.[1]

"During the afternoon of the next day," writes Captain Alaway, who was in charge, "it became apparent from the heavy traffic retiring towards Bailleul that something untowards was happening, and this was confirmed by explosions at O.X.D. three kilometres away towards Armentières. I therefore detailed my party who were to destroy the dumps to be in readiness. At about 2.30 p.m. the Commander of B/121 Brigade, R.F.A. galloped in and enquired if any 18-pounder or 4·5-inch ammunition was available and the quantity. I informed him that far more was available than would meet his immediate requirements. Shortly after this a number of limbers pulled into the depot and refilled. At 3 p.m. some field batteries took up positions at the far end of the depot and immediately went into action. At 5 p.m.

[1] Captain Gee, an ex-Master Gunner, was given a commission in the Ordnance early in the war as an ammunition officer. He was one of the few who gained the rare distinction of having an M.C. with two bars, each awarded for some act of gallantry.

the R.E. destroyed the railway opposite. At about 7.30 p.m. the crisis passed and my party, who had remained in readiness the whole time to fire the depot, was dismissed.

"During all this time, heavy issues of ammunition proceeded which continued at frequent intervals throughout the night; and several gunner officers expressed the opinion that Trent saved the situation as far as they were concerned.

"Meanwhile steps were being taken to evacuate as much as possible until finally, at 3 p.m. on the 11th, an officer of the railway operating staff arrived with an engine and announced that it was imperative that he should at once pull out all rolling stock as it was doubtful if he could get past Merris, towards which the enemy had been attacking heavily all day. As he did not return, I presume he got through.

"At 3.30 p.m. the field batteries pulled out and retired to positions some distance to the rear, where they at once resumed action. Heavy demands continued for 18-pounder, 4·5-inch, 60-pounder and 6-inch howitzer ammunition without break until 6 a.m. on the 12th April, when the last demand for 60-pounder was satisfied. Between sun-set and sun-rise the work was carried out under great difficulties, owing to the darkness, the distance the ammunition had to be carried (in some cases a quarter of a mile) as lorries could not get nearer to the depot than the main road, and the heavy hostile shelling which continued the whole time.[1]

"At 8.15 a.m. on the 12th April, our infantry established a line of out-posts through the depot and dug in, and at about 11 a.m. the hostile shelling increased.

"I now considered it advisable to evacuate the camp and at 11.35 a.m., with the exception of a picked party retained for firing the dump, I paraded all ranks and marched them off to a pre-arranged rendezvous. At 11.55 a.m. a heavy barrage was directed on the infantry dug in across the depot, and almost immediately the shed containing trench munitions blew up. Following this

[1] It had never been anticipated that these reserves would be called on to make direct issue. They were planned to work by rail—broad or narrow gauge.

a cartridge shed caught fire and rapidly became one huge sheet of flame. Between 12 noon and 12.30 p.m. the position taken up by the infantry became untenable owing to the barrage and firing of dumps and they gradually retired.

"At 12.35 p.m., with the infantry well to our rear and the depot one mass of flame, I decided to fire the camp (that being practically all that now remained), and this was effectually done with No. 27 grenades. The office was burnt to the ground and all papers destroyed.

"At 12.45 p.m., those remaining—Lieut. Woodhead, A.O.C., Sub-Condr. H. J. Beckett, Pte. F. J. Cross, A.O.C. and myself—moved off and joined the main party at the rendezvous.

"It is of interest to note that the last issues of ammunition, consisting of 360 rounds of 18-pdr. H.E., and 152 rounds of 18-pdr. shrapnel to B/121 Brigade, and 213 rounds of 18-pdr. H.E., and 91 rounds 18-pdr. shrapnel to C/121 Brigade were made after 11 a.m.; thus issues went on to almost within an hour of the final evacuation to batteries in action at our rear.

"I desire to put on record the excellent work done during the last 72 hours at Trent by all ranks. Every man in the camp, without exception, the labour party, cooks, batmen and sanitary men, worked with a goodwill, loading ammunition under practically continuous fire; otherwise the demands could never have been satisfied.[1]"

Bearing in mind the supreme need that there should be no shortage of ammunition at such a crisis and the way in which these dumps were able to provide what was wanted when every other source of supply failed, criticism may seem invidious.

It is however possible to argue that for a defensive action, where it was important that a retirement should

[1] The safe arrival of the main party sent off in the morning was reported by an officer of the Hampshire Regiment who added, "I must congratulate you on the very excellent work you have done—your masterly retreat and the safety of all concerned which I have heard all about."

Captain Alaway received the M.C., Conductor Beckett the Distinguished Conduct Medal and Private Cross the Military Medal.

not be hampered, our reserves near the front were too lavish. They were imperilled immediately, and it was only by strenuous exertions that some part of their contents was evacuated. The trains engaged in the removal of surplus stocks might have been more profitably employed in bringing forward ammunition to some other point where it was wanted.

In support of this view one more example will be cited, that of a dump at Vieux Berquin in the First Army, intended to hold 5000 tons, which was actually in process of formation when the battle started. Not being complete, it only held 2850 tons, of which 1000 were issued to artillery and 1220 evacuated by rail. Most of the balance had to be abandoned intact, as to blow it up would have endangered our own troops. Had this dump been fully stocked the loss would have amounted to 3780 tons. Even as it was it held nearly three times as much as was needed.

In all, the stocks in army areas, of which substantial quantities were lost, were in the neighbourhood of 100,000 tons of a value of some two million sterling, and ships, steel, coal, a host of other ingredients and machinery, besides man power—all very precious at the time—were required to remake every round wasted.

Further, the danger that the enemy might turn against ourselves the guns he captured could not be ignored, although this never happened. Much time and labour would have been needed before strange guns temporarily disabled and munitions in shreds and patches could be brought into service by a foe.

There are however cogent arguments on the other side. It was impossible to estimate with anything approaching precision the amount and nature of ammunition likely to be wanted in any locality, and far better to have too much than too little. Had the retreat been less hasty the dumps might have had much heavier calls to meet. One reason why so much was held in army areas was the difficulty of finding room for the vast amount stored overseas. The quantities held in these dumps were small compared with the stocks in the big depots in rear, which were liable to destruction by air-raid. The permanent way might be

damaged. In short it was better to scatter some of the eggs in place of holding them all in a few large baskets.

The most that can be said is that the margin of safety provided by these dumps was probably over-great for a defensive action which was much more likely to result in retreat than advance.

Reviewing all these matters one cannot help feeling that it would have been well had more active steps been taken to reduce or render more mobile all non-combatant organizations in frontal areas during the preceding winter, when it was fully anticipated that an attack in strength was to be expected. While we could be so confident of holding our ground that risk of loss was slight, it was right and proper to instal near the front any institution that added to efficiency or economy. But our High Command knew what a vast array Germany was gathering together and that the spring and summer of 1918 would be a most anxious and critical period.

There would have been ample time during the winter to reduce the Ordnance officer's dump to more manageable proportions capable of being carried on his lorries. With such a stormy forecast, officers' shops in Army areas might have been dispensed with—we had managed without them for the first two years of the war. Gun workshops might have evacuated their heavier gear to the base until the weather cleared ; and ammunition dumps have been reduced in size, especially as regards the heavier natures of artillery of which much less use could be made as soon as movement developed.

These remarks apply in particular to those organizations built up to buttress economy rather than efficiency and which it was a penny wise and pound foolish policy to expose to undue risk. There was a great accumulation of salvage and perhaps too much was attempted in the way of overhaul and repair. At such a time it would have been preferable to bundle everything back to the base that was not obviously worthless.

This criticism however does not imply that we should have reverted to the state of affairs prevailing at the

outbreak of war when no cut and dried plan existed for maintaining the troops with equipment while in contact with the enemy. The point is that we had gone from one extreme to the other. The fact is, I think, that everyone had become so inured to a stationary state of warfare that it was difficult to conceive of other conditions. Commanders, far from trying to reduce, were usually eager to expand any organization helpful in supply or salvage ; and the Ordnance officer, with his more limited outlook, was naturally keen to assist. That Germany might succeed where we had failed during the past two years was difficult to realize.

Germany's attempt did fail and our loss of materiel, though immense, was quickly made good. But this should not blind our eyes to the fact that Germany very nearly did succeed, when our losses would have been infinitely more severe. We might even have been reduced to holding the Channel ports with grim death staring us in the face or, abandoning them, retreat to the south to keep in touch with the French and prevent each ally from being dealt with piecemeal. These alternatives had to be seriously faced when matters were at their worst.

Turning next to the zone in rear. The first fear was that Amiens might be lost, our southern line of communications cut and our establishments south of the Somme isolated. Shipments of stores and clothing to Havre and Rouen were at once reduced by 60 per cent and those to Calais increased in proportion. The evacuation to Etaples of the depot at Abbeville was started and work suspended at the new gun and ammunition repair factories set up at Criel and Fressenville.

Schemes were secretly prepared for the demolition, if need be within twenty-four hours, of the three main ammunition depots in this area. To render shell and bombs useless by firing their components was comparatively easy ; the great danger was that our field gun ammunition—where shell, fuze, charge and igniter were combined in one unit—would fall into the enemy's hands. To blow up enormous solid stacks of fixed ammunition

would endanger life and property in the neighbourhood. At Saigneville and Rouxmesnil there were waterways nearby in which ammunition could be drowned or by which some portion might possibly be taken by barge, for rail transport was not to be relied on in such an emergency; but this was not the case at Blargies, the most exposed of the three. The enemy penetrated to within twenty-eight miles of this depot, and some of our batteries actually arrived there to draw ammunition direct. The French had a big ammunition depot not far off and there were other large British establishments in the vicinity. The most that could be done was to scatter portions of the fixed ammunition among the most isolated areas to reduce the extent of individual explosions.

Should the zone south of the Somme be isolated the intention was to entrust its defence to G.O.C. lines of communication area; to leave at Havre and Rouen a modicum of stores and clothing for current use, and ship the balance to Calais which would be called on to supply all the troops in forward areas.

While these plans were being elaborated and perfected, our front was breached further to the north. It was now the Channel ports that were jeopardised; the original programme of shipments, half to Havre and half to Calais was resumed, and an old scheme for the evacuation of Calais, framed in 1915 before it had been deemed amply secure, unearthed and brought up-to-date. To avoid the possibility of such a disaster as the loss of all our artillery reserves, the whole of which it will be remembered were at Calais, half the stock was sent by rail to Havre. At the same time arrangements were made to cut down the ammunition at Zeneghem and Audruicq, the most exposed depots in this region, by issuing from them in preference to other depots.

Retreat in the northern zone was a more serious matter than in the south, as our line of communications was there so short. With but little more loss of territory Calais and Boulogne, though still tenable, would have come under long range gun fire, in which case their activities would have to be curtailed. Probably all the

civilians would have quit, as did those at Etaples when raided by aeroplanes. Le Treport was suggested as a site for a main store depot and work was begun on a new ammunition depot at Conteville, to be fed from Dieppe.

These measures, however, were only palliatives. It was decided at all costs not to sever contact with the French, and this might involve the abandonment of the Channel ports. We might even have to give up those on the Seine and fall back on the Loire once more.

It was now realized that the policy of concentrating so many services overseas held a great danger. The process had been a natural one. If guns and wagons could be rebuilt in the country why send them to England? If clothing could be renovated by cheap female labour in France why ship it home, where labour was so scarce, to be cleaned and mended? Then followed the havoc wrought on our mercantile marine by German submarines and the policy was extended to its utmost limits. With each succeeding year more and more services were carried out on French soil where, moreover, the network of operations continually extended towards the front as rail transport was also scarce.

Besides what was wanted from day to day, there were by this time gigantic accumulations of dead stock at Havre, Calais, Paris and elsewhere—millions of articles of winter clothing, thousands of repairable wagons, masses of salvaged goods of every sort, gun cartridge cases and munition packages by the ten thousand ton waiting to be fetched at a convenient opportunity. The War Office at this juncture was repeatedly pressed to relieve the army in France of this immense liability, but every depot at home was replete, every ship occupied, and nothing could be done.

Providentially we were never reduced to the extremity of having to give up Calais, compared with which the hurried evacuation of Havre in September 1914 would have been child's play. Had we been forced to retreat to the south, nothing beyond a very small fraction of the most valuable military stores and small emergency reserves of ammunition could possibly have been saved.

Only at Paris were any steps actually taken. In July, half a million blankets were ordered home and it was proposed that the washing and storing of winter clothing be done in England. Paris was saved and this is as far as matters went.

Actually our communications, although strained, were never interrupted. The way in which our huge loss of guns was made good from England was a marvel. Munition workers, recently restrained from striking only by the threat of being conscripted, even volunteered to forego their Easter holiday. The only limit to the rate at which materiel was sent to France was the rate at which it could be absorbed. Refitment of the troops that bore the brunt of the first attack was far the biggest operation of its sort in the war. Divisions as they were withdrawn were concentrated round Abbeville to be re-equipped, while with Poix as a centre 20,000 gunners were furnished with all they needed. Elsewhere the ordinary arrangements sufficed.[1]

[1] The following is an extract from the Ist Corps report on the operations:

Ordnance Supply generally—In spite of constant movements of divisions in and out of the Corps, and constant need of refitting those coming in and out of the line, there was no hitch in supply, and no arrangements had to be made out of routine, which speaks well for the system.

A few statistics will show how immense were our losses and how speedily they were made good :—

Item.	Number issued.		Increase. over normal.
	1/2 to 25/2/18.	25/3 to 18/4/18.	
Rifles	17,776	63,935	46,159
Packs	21,516	147,903	126,387
Tents	3,985	36,546	32,561
Blankets	145,980	631,557	485,577
Stretchers	1,259	29,523	28,264
Binoculars	1,656	10,129	8,473
Dial Sights	2,939	8,639	5,700
Limbered Wagons	110	537	427
Bicycles	1,571	4,804	3,233
Telephones	912	3,338	2,426
Telephone Cable (Miles)	6,708	23,027	16,319
Boots	279,735	442,386	162,651
Box Respirators	135,497	362,402	226,905

The hurried arrival of troops from the United States in single battalions, to be incorporated in and trained with our divisions, added to all this work. They had to be furnished with our rifles and ammunition, machine guns, trench mortars, respirators, steel helmets, etc., which had later to be withdrawn when they joined their own Army. When their artillery arrived large numbers of complete siege equipments had to be assembled for their use. These transactions were complicated not only by financial adjustments and difficulties of nomenclature, but because their organization differed from ours—the duties covered by our Ordnance being spread over several branches; their Ordnance taking part of the work, their Quartermaster's Department another part, and their Signal, Engineering and Medical services yet others[1].

During all this time enemy aeroplanes made determined efforts to interfere with the work of supply. Calais was several times raided though only slightly damaged, and Havre alone escaped scot free. The chief targets were naturally the ammunition depots. These were full to overflowing, and safety spaces had been encroached on; but so well dispersed and protected were the stocks that only twice was any material damage done.

On the night of 19/20th May an organized attack by German aeroplanes under the command of the celebrated 'Ace' Richthoven, was made on Blargies. About 120 bombs were dropped on the depot itself but little damage was done, as on this night the planes were well

[1] To help in keeping matters straight, for we continued to assist in equipping the American army, an Ordnance officer was attached to the headquarters of the American Expeditionary Force, who had occasion several times to comment on the unfortunate results of this division of labour. "Consolidation of demands of the various branches," he reports, "is badly needed. I understand that the question is being considered of making each branch responsible for the total provision of one class of store. At present each provides for its own requirements without reference to stocks which may be available with other branches. As a case in point, the Signal service were urgently in need of hand axes and asked if we could help. I went to the Ordnance branch and found that they had sufficient stock to tide over the immediate urgency." This, of course, is just what happened with us at the Crimea under a similar organization.

up. The same squadron returned the night following and was more successful, this being the only raid, except that at Audriucq in 1916, which put a depot temporarily out of action.

In his report, Major Hopkins says that a shed full of 8-inch and 9·2-inch cartridges was immediately struck and its contents destroyed. Other bombs quickly took effect and soon the depot was blazing in five different directions. Low flying planes used their machine guns to make it more difficult to cope with the incendiary fires. " Work is proceeding to-day, the 22nd, on clearing the railway lines, so that the remaining stocks may be available for issue as soon as possible. It is hoped that this work will be completed in two or three days' time. The railway lines are destroyed in numerous places, but traffic in the main depot was down as low as possible and no great amount of rolling stock was destroyed—at most fifty trucks and perhaps two locomotives. All loading orders had been completed and despatched except one train, half of which was saved by being run into an extension. All incoming traffic was also saved by removal to this area." 5000 tons of ammunition and a number of lives were lost; the casualties being mainly among those of the A.O.C. whose duty it was to fight the fires.[1]

Marshal Foch, the new Allied Generalissimo, had his headquarters at Molières village about four miles from Blargies. He sent to ask that the depot be moved the following day or as soon as possible. It had to be pointed out that it would take some little time to move the many thousands of tons of ammunition, besides the 16,000 tons of their own ammunition which the French had asked us to hold. The matter was left at that and the depot was not moved.

[1] The following awards were made to the Ordnance staff:

Capt. Bailey—M.C.
Lt. Corbett Sullivan—M.C.
Lt. Johnson—Bar to M.C.
Sub-Conductor Harris—D.C.M.
Sub-Conductor Bancroft—M.M.
Staff Sergeant Jasper—M.M.

On the night of May 21/22 Saigneville was attacked by the same squadron, but, in spite of an all-night bombing, six sheds only were struck out of a total of fifty-two. This was due to the fact that Saigneville was laid out as a modern ammunition depot, and in consequence was able to report 'business as usual' next day.

Altogether these few months were crammed with instructive incidents for the Ordnance officer. Previous chapters have shown how means of replenishing equipment on active service had been neglected in peace, how this neglect was remedied, and what a specially predominant rôle was taken by materiel in trench warfare. Here, by way of contrast, we see how an army can become so encumbered that its free movement may be hampered. Non-combatant organizations near the front became a drag in retreat. Germany's advance, on the other hand, was delayed by the difficulty in bringing forward supplies. But for this our further movements might have been far more gravely hindered by the presence of immensely greater institutions more to the rear, many of which might have been located in England but for shortage of sea transport. It is also worth noting that it was Germany's unwillingness to sacrifice the huge depots and other institutions she had created on French soil which caused her to give ground with such leaden feet in the months to come. But for these, a far sounder military policy would have been to retire in good order, as she could have done, to a much shorter front where the Allies might again have been held at bay.

In future wars between great industrial nations, should such unhappily occur, it seems evident that mechanical appliances will play an even greater part, and the clash between the rival claims of *Mobility* and *Materiel* will be even more pronounced.

The instinct of every Ordnance officer worth his salt will be to expand whatever organization may be in his care, to make everything as easy as possible for the troops he serves and transfer no work to those behind him that he can himself carry out. To curb this inclination and

see that it is not carried to excess will be very difficult, for it is on his shoulders that the blame will fall if anything be found wanting. Nevertheless it will be just as much his duty to tender advice when he considers some service should be relegated to a point further in rear in the interests of mobility, as when he believes some other should be shifted further forward in the interests of efficiency. As an administrative officer it will be his business to cultivate a wide view; for how to preserve a happy mean during the ebb and flow of warfare will need judgment of a high order.

The remaining months of the war can be dismissed much more briefly. The events described above were loudly proclaimed by Germany as great victories and accepted by the Allies as defeats. Viewed in a more sober light it can be seen that Germany had defeated herself.

In the attack more lives may be expected to be lost than in the defence, what is hoped is that this loss will be far more than recouped later. Germany's casualties had been heavy, and by selecting specially trusted troops for storming parties she must have immolated her finest and most patriotic manhood. The populace had been fed on exaggerated and lying propaganda and when it found these 'victories' were barren of result it at last revolted. In the Navy, which had no great tradition to sustain it and which had been shut up all through the war in its harbours, there were mutinies. Even the high tradition of the Army was not proof against insidious attack from the homeland; men refused to obey their officers or to return from leave. The crumbling of the military edifice that was the mainstay of German monarchical government was hastened from outside. Turkey was routed in Palestine and Syria; Bulgaria, realizing too late that it had backed the wrong horse, sued for peace; Austria, driven from Italian soil, was tottering. The German Emperor abdicated and fled. A provisional government was formed which sued for peace, and on the 11th November, 1918, an Armistice was signed under

the terms of which Germany was compelled by dire necessity to submit to every condition imposed by the Allies.

But though deliverance came so quickly in the end there was still very severe fighting ahead. The tide finally turned on the 8th August when we bit back deeply into the German salient created in front of Amiens in the spring. In this battle there was no prolonged artillery bombardment such as usually heralded the infantry assault, but which enabled the foe to prepare for attack and gave him time to hurry reserves to the point threatened. Large numbers of Tanks were used instead to lead the advance and cover the infantry. The method proved a complete success. The enemy was taken by surprise and lost heavily. Fighting then spread from one extremity of the line to the other, but every inch of ground was stubbornly contested and only gradually did the warfare become one of movement. When this happened Ordnance services at the front were forced to adopt a strict regimen of mobility All the more immobile institutions such as dumps and heavy workshops were left behind, and as the resistance became less determined it was increasingly difficult for supply to keep pace with advance.

Though new railheads were opened as quickly as the permanent way could be rebuilt, troops were at one time 70 miles in advance of the railway. Relays of motor convoys were employed, there was delay in bringing forward equipment and clothing to which we had grown unaccustomed and many petty losses occurred *en route*. There was no option but to put up with this inconvenience; but for the actual fighting, gun parks and mobile workshops were still indispensable. The former were divided into two or even more echelons which moved forward in turn; while the latter, stripped of their heavier impedimenta, usually worked in pairs—each in rotation taking up a position in front of the other. In this way movements were reduced by half and transport was used to double advantage. Once again ammunition supply was liquefied, the stock in rear of the road echelons

being kept in railway trains which moved forward as the railhead advanced.

The clearance of the vast battle-field area really belongs to the post-Armistice period, though the work was started during the advance, dumps of abandoned ammunition, British and German, being formed, and parks of captured enemy guns. One of these parks, which held 600 pieces of every known calibre, was a celebrity visited both by our own and the French Commander-in-Chief.

At the end of May 1918 Sir Harold Parsons, who had been ordered home to take up the post of Director at the War Office[1], was relieved by Major-General Sir Charles Mathew, an extract from whose diary may fittingly bring this chapter to a close. "28th November, 1918. Dined with the Commander-in-Chief to meet His Majesty the King, who informed me of the honour He was doing the Corps by conferring on it the title of Royal, in recognition of its excellent work."

[1] General Parsons' farewell order of the 31st May reads as follows:

After holding the position of Director of Ordnance Services of the British Armies in France since October 1914, I am leaving to take up an appointment at the War Office.

Before doing so, I wish to express my grateful thanks to officers and all other ranks of the Ordnance in France for the unfailing support they have at all times given me, and for their loyalty and devotion to duty.

The work of the Department in supplying the wants of our Armies has been strenuous to a degree, and it has only been carried out with such signal success by the entire absence of friction and through the willing and cordial cooperation of all ranks.

Our duties do not normally take us into the danger zone of the front line, but whenever opportunities have offered of showing courage and devotion to duty under fire, they have been readily taken, as the following figures will show: 22 Officers and 60 other ranks have, in the Western Theatre of War, received "Immediate Awards" of Honours for gallantry in the field.

In again expressing my thanks, I specially wish to include all ranks of the Ordnance Corps of our Overseas Forces and also the Q.M.A.A.C. who are now employed with the Department in large numbers and doing such valuable work.