

1914, by **John French**, *Viscount of Ypres*

CHAPTER XVIII

AMMUNITION

From the beginning of the Battle of the Aisne up to the close of the Battle of Loos, at the end of 1915, the scanty supply of munitions of war paralysed all our power of initiative and, at critical times, menaced our defence with irretrievable disaster. Great anxiety on this subject overshadowed all my direction of military operations, and deep concern at the failure of the Government to appreciate and remedy our difficulties from this cause dominated all my work. In this chapter it is my object to make known some of the efforts I made to awaken both the Government and the public from that apathy which meant certain defeat. I exhausted every effort, by urgent official demands to the War Office, and personal appeals to Lord Kitchener and such Cabinet Ministers as I came in contact with. When these efforts got no response, I gave interviews to the press and authorised public men who visited me to urge this vital necessity in their addresses. Nothing less than my deliberate conclusion, after all these measures had failed and nine months of war had elapsed, that the Empire itself was in jeopardy, forced me to act in May 1915 as I did. I was conscious before taking this step, which meant the overthrow of the Government, that it also meant the end of my career in France, with all the

hopes and ambitions that only a soldier can understand. But the consciousness of the great results achieved in this upheaval has been my reward, and I trust that a recital of my difficulties may, if occasion arise in the future, protect the British Army in the field from the recurrence of any similar situation.

During my term of office as Chief of the Imperial General Staff, from March 1912 to April 1914, I had urged these vital necessities upon the Government, but my demands were steadily opposed by the Finance Department and the Treasury. All our experiences in the South African War, and the warnings which the Manchurian campaign plainly gave, passed altogether unheeded in the years preceding the present war. I was always a strong advocate for the supply of high-explosive shell to our horse and field artillery, but I got very little support, and even such as was given to me was lukewarm in the extreme. I believe the Ordnance Board was not in favour of it.

As early as the middle of September 1914 the British Army in France was subjected to heavy bombardment from German 8-in. howitzers, to which they were quite unable to reply. At the same time the daily expenditure of artillery ammunition became far in excess of the receipts from home, and we were unable to maintain the stocks on the lines of communication up to anything like the proper war establishment. For example, the 18-pdrs. fired an average of 14 rounds a day, whilst the receipts were barely seven. The 60-pdr. guns and the

4.5-in. howitzers fired over 40 rounds a day, against a supply of eight or nine rounds at most. In private letters and telegrams I had repeatedly brought this to the notice of the Secretary of State, and a strong official memorandum on the subject was sent to the War Office on September 28th. A further communication to the same effect was made on October 10th; and on the 29th of the same month the War Office were officially told that the state of the ammunition supply had necessitated the issue of an order restricting expenditure to 20 rounds per gun daily, and that a further restriction to 10 rounds would be necessary if the supply did not improve. This was during the most desperate period of the First Battle of Ypres, when the average daily expenditure of 18-pdr. ammunition had amounted to 81 rounds per gun.

In some cases the expenditure per gun had reached the enormous total of 300 rounds daily.

A proportion of at least 25 per cent. of high-explosive shells for 13 and 18 pdrs. was included in the demands to which I have referred above.

In a communication to the War Office on December 31st, the view was expressed that considerably more high explosive was necessary, and the following table was laid down as our minimum requirements to carry on the war with any prospect of success :

REQUIRED OUTPUT OF AMMUNITION.

- Rounds per gun a day.

- 13-pdr.50 (25 H.E.)
- 18-pdr.50 (25 H.E.)
- 4.5-in. howitzer40 (35 H.E.)
- 6-in. howitzer25 (all H.E.)
- 60-pdr.25 (15 H.E.)
- 4.7-in. gun25 (15 H.E.)
- 6-in. gun25 (all H.E.)
- 9.2-in. howitzer12 (all H.E.)

It was explained that this output was necessary for a period of active operations, and should be continued even during a lull, till a reserve of three or four times the amount laid down in war establishments had been accumulated. To this request there was no reply until January 19th. The War Office then declined to work up to more than 20 rounds a day, and refused a request for 50 per cent, of high explosives.

This amazing attitude at a most critical time compelled me to consider means by which the several members of the Government, and the public also, might be advised of this deplorable apathy which, if long continued, meant the destruction of our Army.

In this letter from the War Office, of January 19th, which I have already mentioned, an estimate was attached of the receipts which we might rely upon up to and including the month of May. This estimate was far below our requirements, whilst the actual receipts fell

far short of it. The actual supply in May proved to be less than one half of the War Office estimate, which was the only one ever furnished for our guidance. Such failure made it quite impossible to make any reliable forecast of the condition of the ammunition supply at any particular date. This state of uncertainty rendered the formulation of plans for co-operating with the French most difficult, if not impossible.

During the winter of 1914-15 it was hoped to accumulate some small reserve of ammunition, but, during this period, all our efforts in this direction were of no avail, because the number of rounds per 18-pdr. gun throughout this period fell to less than five!

I had serious misgivings that the *morale* of the Army was becoming affected by this first long and weary winter of inactivity in the trenches, and to render the defence effective it was necessary to undertake an offensive operation.

Early in March a small reserve of ammunition had been accumulated, and the Battle of Neuve Chapelle was fought and won. Had proper steps been taken to increase the supply when my first strong appeals were sent in during September 1914, the offensive operation commenced so successfully at Neuve Chapelle might have been much further developed, and, indeed, possibly have led to great and important results. But the battle had to be broken off after three days' fighting because we were brought to a standstill through want of ammunition.

Immediately afterwards I again addressed the strongest representations I could frame to the War Office. I begged that His Majesty's Government might be informed that, if their object was to drive the enemy off French and Belgian territory during 1915, no progress towards this objective could be obtained unless and until the supply of artillery ammunition should enable the Army to engage in sustained operations. The only official reply which I received to this letter was an injunction to use the utmost economy, but a private letter, dated March 16th, was addressed by Sir James Wolfe Murray to Sir William Robertson, who was then my Chief of Staff. This letter was said to have been dictated by the Secretary of State, and its contents hinted very strongly that an impression prevailed at the War Office that we were wasting ammunition.

The operations at Neuve Chapelle used up all our available resources, and it became necessary to restore them by reverting for a time to a strictly defensive attitude.

It was, moreover, very clear that the Germans had early realised that the war was to be one calling for colossal supplies of munitions; supplies, indeed, upon such a stupendous scale as the world had never before dreamed of, and they also realised the vital necessity for heavy artillery. They began with an inferior field gun, and they never stopped to remedy this defect, but directed all their energies, from the first, to developing their heavy artillery. Whilst their total proportion of

guns to bayonets was fully maintained, the proportion of field guns to bayonets was reduced, and all heavy guns enormously increased. Each month the development of heavy artillery became more accentuated until, towards the late spring of 1915, the greater number of projectiles fired by the Germans, whenever operations of any importance were taking place, were of 5.9 and upwards. This was in defence as well as in attack, and by this means the enemy endeavoured to shatter the *morale* of the attackers, as well as to inflict very heavy casualties.

The necessity for a great preponderance of heavy artillery was also recognised by the French long before our War Office could be persuaded to move in that direction. From early in the war they aimed at obtaining one heavy gun of 6-in. calibre and upwards for every field gun they held, without reducing the proportion to bayonets of the latter which obtains in the French Army. To meet these requirements the French were taking guns from their old warships and coast defence ships, and straining every nerve to get guns of heavy calibre into the field.

In May, 1915, the proportion of field to heavy guns above 6-in. calibre in the French Army was 2.3 to one. At this time the British Army had but 71 guns altogether above 5-in. calibre against 1,416 below it, and no adequate steps whatever had yet been taken to bring the proportion more nearly to the requirements of modern warfare. The supply of trench guns and mortars, with their ammunition, hand-grenades, and other most

necessary munitions of war, was almost negligible, nor was there any active attempt to understand and grapple vitally with the new problems calling for the application of modern science to the character of warfare that had developed.

I have referred before to the disinclination of the War Office, prior to the war, to take up seriously the question of high explosives; the natural consequence was that the true nature of high-explosive shells, and the correct particulars which govern their construction, were not properly understood, as they had too little experience of them.

The deadly nature of modern rifle and machine-gun fire had brought about trench warfare, which enabled the troops opposite to one another to approach to ranges which were customary in the days of the Peninsula and Waterloo. The time-honoured grenades, which were so marked a feature in those days, were thus resuscitated.

Although the War Office received detailed reports from the Front as to the employment by the enemy of these new and unfamiliar weapons, no proper attention was ever paid to these reports. It was their duty to bring these old-time weapons up to date, and to compete with the new mechanical inventions constantly being devised by the great organisation of a thoroughly prepared enemy. But reports from the Front as to these new and unfamiliar weapons were received with a carelessness which bordered on incredulity. The critical days in the early part of November, and during the First Battle of

Ypres, compelled me to devise a plan to meet the exigencies of this grave emergency. As the fighting settled into trench warfare, the inadequacy of our weapons to enable us to reply to an enemy thoroughly equipped with every contrivance for this sort of warfare became painfully apparent; while even our hand-grenades, by reason of their faulty construction, frequently did not explode. I was therefore compelled to conduct experiments in the field, and improvise new weapons as well as possible. For such work the Army had no organisation. In this I received invaluable assistance from my friend, George Moore. Mr. Moore is an American who has had wide experience of large construction developments in the United States. Although a young man, he was deeply versed in the method of scientific research as applied to mechanical invention. Add to this that he was a great personal friend of my own and passionately interested in the success of the Allies, and it will be seen how naturally I turned to him for help and advice in this terrible crisis. Under Mr. Moore's advice and direction, experiments were carried out with the maximum of speed, energy and resource, covering the field of the proper construction and use of high explosives, hand-grenades, trench mortars and bombs; and a number of factories and small plants were set up for the production, for use in the field, of properly constructed hand-grenades, bombs and trench mortars.

As a result of this work in the daily trench struggle that had then developed, we were rapidly enabled to acquire the accurate knowledge of the proper use of high explosives, and the appliances necessary to meet the enemy on his own ground under these novel conditions of warfare. Mr. Moore from time to time brought men in whom he had trust and confidence to help in the work. Among them I will only specifically refer to Colonel Lewis, an American, whose machine gun, bearing his name, proved of such enormous help in this war, and to Lieutenant Lawrence Breese. This gallant young officer of the Blues, to which magnificent regiment he belonged, did wonderful work, and conducted experiments the result of which was of the highest value; and, after several months of tireless energy, gave his life in carrying out one of these experiments. This hastily improvised organisation worked night and day in these trying times, with the results which enabled us, with success, to meet the enemy in trench warfare.

During this time I received visits at my Headquarters from prominent members of both Houses of Parliament, to whom I told, in course of conversation, the great anxiety I felt on the subject of the shortage of heavy guns and ammunition.

On March 22nd I gave an interview to the Press, which appeared generally in the English papers, from which I quote: "It is a rough war, but the problem it sets is a comparatively simple one—munitions, more

munitions, always more munitions; this is the essential question, the governing condition of all progress, of every leap forward." On March 27th I gave an interview to *The Times*, in which I said as follows: "The protraction of the war depends entirely upon the supply of men and munitions. Should these be unsatisfactory, the war will be accordingly prolonged. I dwell emphatically on the need for munitions."

To the public men who visited me, I appealed that they should make known this grave necessity to the public in their speeches. I quote a line from a speech of the Earl of Durham, who, at my request, said: "What we want and must have is more and more munitions."

At a conference at Chantilly with Lord Kitchener, I reminded him of my constant representations on the subject of munitions, both officially and privately, and warned him that the danger would be fatal if instant action were not taken to supply our needs.

It must be remembered that all this time, when the British Forces in France were in absolute jeopardy owing to these deficiencies, trainloads of all kinds of ammunition were passing along our rear *en route* to Marseilles and the Dardanelles.

This was the situation when on April 22nd the Germans made their first attack with poisoned gas in the Second Battle of Ypres and, in a gigantic effort, again attempted to break through; and the defence called for the most desperate kind of fighting, only surpassed in

intensity by the struggle in the First Battle of Ypres. Just about this time, the then Prime Minister, Mr. Asquith, made his famous Newcastle speech, in which he stated that the Army had all the ammunition it required. When I read this speech, after all my public and private appeals, I lost any hope that I had entertained of receiving help from the Government as then constituted. So that, on May 9th, 1915, when we commenced the Battle of Festubert, an operation undertaken to relieve the intense pressure on the troops at Ypres, my mind was filled with keen anxiety. After all our demands, less than 8 per cent. of our shells were high explosive, and we had only sufficient supply for about 40 minutes of artillery preparation for this attack. On the tower of a ruined church I spent several hours in close observation of the operations. Nothing since the Battle of the Aisne had ever impressed me so deeply with the terrible shortage of artillery and ammunition as did the events of that day. As I watched the Aubers ridge, I clearly saw the great inequality of the artillery duels, and, as attack after attack failed, I could see that the absence of sufficient artillery support was doubling and trebling our losses in men. I therefore determined on taking the most drastic measures to destroy the apathy of a Government which had brought the Empire to the brink of disaster. A friend was standing by my side on the tower, and to him I poured out my doubts and fears and announced my determination. He warned me that the politicians would never forgive the action I proposed, and that it meant my certain recall from the

command in France. But my decision was made, and I immediately started for my Headquarters, fully determined on my future course of action.

If any additional proof were required of the hopelessness of any relief coming from the War Office, I found it waiting for me when I reached Headquarters that afternoon, in the shape of a telegram from the Secretary of State for War, directing that 20 per cent. of our scanty reserve supply of ammunition was to be shipped to the Dardanelles. I immediately gave instructions that evidence should be furnished to Colonel Repington, military correspondent of *The Times*, who happened to be then at Headquarters, that the vital need of high-explosive shells had been a fatal bar to our Army success on that day. I directed that copies of all the correspondence which had taken place between myself and the Government on the question of the supply of ammunition be made at once, and I sent my Secretary, Brinsley FitzGerald, with Captain Frederick Guest, one of my A.D.C.s, to England with instructions that these proofs should be laid before Mr. Lloyd George, who had already shown me, by his special interest in this subject, that he grasped the deadly nature of our necessities. I instructed also that they should be laid before Mr. Arthur J. Balfour and Mr. Bonar Law, whose sympathetic understanding of my difficulties, when they visited me in France, had led me to expect that they would take the action that this grave

exigency demanded. Together with the correspondence, I sent the following memorandum :

(Secret.)

INFORMATION REGARDING AMMUNITION.

1. Large quantities of high-explosive shells for field guns have become essential owing to the form of warfare in which the Army is engaged. The enemy is entrenched from the sea to the Swiss frontier. There is no flank in his position that can be turned. It is necessary, therefore, for all offensive operations to start by breaking the enemy's line, which presupposes the attack of formidable field entrenchments. Shrapnel, being the man-killing projectile which is used against troops in the open, is primarily used in defence. In offensive operations it is used for searching communication trenches, preventing the enemy's reinforcements intervening in the fight, repelling counter-attacks, and, as an alternative for high-explosive shell, for cutting wire entanglements. It is, however, ineffective against the occupants of the trenches, breastworks, or buildings. It is, therefore, necessary to have high-explosive shell to destroy parapets, obstacles, buildings, and many forms of fortified localities that the enemy constructs, more particularly his machine-gun emplacements. Without an adequate supply the attack is impotent against the defenders of field fortifications, as the first step cannot be taken. Guns require 50 per cent. of high-explosive shell. Howitzers use high-explosive shell almost exclusively.

2. We have found by experience that the field guns actually engaged in offensive operations, such as Neuve Chapelle, fire about 120 rounds per gun per day.

Heavy guns and howitzers, according to their calibre, fire less in proportion. The guns of the whole Army are of course never equally heavily engaged at the same time, but the number of guns available and the amount of ammunition are the limiting factors when a plan of attack is being considered. There is, therefore, scarcely any limit to the supply of ammunition that could be usefully employed. The more ammunition, the bigger the scale on which the attack can be delivered, and the more persistently it can be pressed.

Demands must, however, be reasonable, and our position would be very greatly improved if our supply reached the figures in the attached Table "A" within three months. Up to the present it has been below these figures.

WANTED THREE MONTHS HENCE, SAY, AUGUST 1ST.

Table "A."

| Nature. | Guns now in Country. | Rounds per Gun per Day. | | Total Rounds required Daily. ^[8] | |
|------------------|----------------------|-------------------------|------|---|--------|
| | | Shrapnel. | H.E. | Shrapnel. | H.E. |
| 18-pdr. | 700 | 12 | 12 | 8,500 | 8,500 |
| 13-pdr. | 125 | 12 | 12 | 1,500 | 1,500 |
| 15-pdr. BLC. | 200 | 12 | 12 | 2,500 | 2,500 |
| 4.7-in. gun | 80 | 8 | 8 | 650 | 650 |
| 60-pdr. | 28 | 8 | 8 | 250 | 250 |
| 5-in. howitzer | 50 | — | 15 | — | 750 |
| 4.5-in. howitzer | 130 | 4 | 16 | 500 | 2,000 |
| 6-in. howitzer | 40 | — | 12 | — | 500 |
| 9.2-in. howitzer | 12 | — | 12 | — | 150 |
| | | | | 13,900 | 16,800 |
| | | Grand Total | | 30,700 daily. | |
| | | Grand Total | | 921,000 monthly. | |

3. Table "B" shows the percentage of high explosive of certain natures received since application for

increased quantities was made between September and December last.

PERCENTAGE OF HIGH EXPLOSIVE RECEIVED SINCE FIRST APPLICATION FOR IT IN INCREASED QUANTITIES.

Table "B."

| Nature of Gun. | Dec. Per Cent. | Jan. Per Cent. | Feb. Per Cent. | March. Per Cent. | April. Per Cent. | May. Per Cent. |
|------------------|----------------|----------------|----------------|------------------|------------------|----------------|
| 13-pdr. | Nil | Nil | Nil | Nil | Nil | Nil |
| 18-pdr. | 3.8 | 6.8 | 8.3 | 8.2 | 6.1 | 8 |
| 4.5-in. howitzer | 44.4 | 68.5 | 88 | 75 | 59 | 65 |
| 60-pdr. | — | 66 | 60 | 56 | 53 | 50 |
| 7-in. howitzer | 55 | 59 | 51 | 77 | 69 | 50 |

Colonel FitzGerald and Captain Guest reported that on May 12th and 14th they had carried out my instructions and laid the facts before Mr. Lloyd George, Mr. Balfour and Mr. Bonar Law. On May 15th, Colonel Repington's article appeared in *The Times*. The world knows what then happened. The Coalition Government was formed, with Mr. Lloyd George as Minister of Munitions; and, though delays afterwards occurred, the problem was at last faced with the intelligence and energy that its gravity demanded, and I feel that for his work on munitions we owe unmeasured gratitude to Mr. Lloyd George. The successful solution of the problem came when he applied to it that matchless energy which has enabled him to come through the great ordeal as England's most valued leader in her direst hour.

For my unprecedented action I claim that no other course lay open to me. To organise the nation's industrial resources upon a stupendous scale was the only way if we were to continue with success the great struggle which lay before us, and I feel that the result achieved fully warranted the steps I took.

Footnote 8 : Round numbers are given. Expansion must be provided for at a similar rate. We need more guns and a correspondingly larger amount of ammunition.