general features which concern the whole series of operations carried out under my command. I am urged thereto by the conviction that neither the course of the war itself nor the military lessons to be drawn therefrom can properly be comprehended, unless the long succession of battles commenced on the Somme in 1916 and ended in November of last year on the Sambre are viewed as forming part of one great and continuous engagement.

To direct attention to any single phase of that stupendous and incessant struggle and seek in it the explanation of our success, to the exclusion or neglect of other phases possibly less striking in their immediate or obvious consequences is, in my opinion, to risk the formation of unsound doctrines regarding the character and requirements of modern war.

If the operations of the past  $4\frac{1}{2}$  years are regarded as a single continuous campaign, there can be recognised in them the same general features and the same necessary stages which between forces of approximately equal strength have marked all the conclusive battles of history. There is in the first instance the preliminary stage of the campaign in which the opposing forces seek to deploy and manœuvre for position, endeavouring while doing so to gain some early advantage which might be pushed home to quick decision. This phase came to an end in the present war with the creation of continuous trench lines from the Swiss frontier to the sea.

Battle having been joined, there follows the period of real struggle in which the main forces of the two belligerent Armies are pitted against each other in close and costly combat. Each commander seeks to wear down the power of resistance of his opponent and to pin him to his position, while preserving or accumulating in his own hands a powerful reserve force with which he can manœuvre, and, when signs of the enemy becoming morally and physically weakened are observed, deliver the decisive attack. The greatest possible pressure against the enemy's whole front must be maintained, especially when the crisis of the battle approaches. Then every man, horse and gun is required to co-operate, so as to complete the enemy's overthrow and exploit success.

In the stage of the wearing out struggle losses will necessarily be heavy on both sides, for in it the price of victory is paid. If the opposing forces are approximately equal in numbers, in courage, in moral and in equipment, there is no way of avoiding payment of the price or of eliminating this phase of the struggle.

In former battles this stage of the conflict has rarely lasted more than a few days, and has often been completed in a few hours. When Armies of millions are engaged, with the resources of great Empires behind them, it will inevitably be long. It will include violent crises of fighting which, when viewed separately and apart from the general perspective, will appear individually as great indecisive battles. To this stage belong the great engagements of 1916 and 1917 which wore down the strength of the German Armies.

Finally, whether from the superior fighting ability and leadership of one of the belligerents, as the result of greater resources or tenacity, or by reason of higher moral, or from a combination of all these causes, the time will come when the other side will begin to weaken and the climax of the battle is reached. Then the commander of the weaker side must choose whether he will break off the engagement, if he can, while there is yet time, or stake on a supreme effort what reserves remain to him. The launching and destruction of Napoleon's last reserves at Waterloo was a matter of minutes. In this World War the great sortie of the beleaguered German Armies, commenced on the 21st March, 1918, lasted for four months, yet it represents a corresponding stage in a single colossal battle.

The breaking down of such a supreme effort will be the signal for the commander of the successful side to develop his greatest strength and seek to turn to immediate account the loss in material and moral which their failure must inevitably produce among his opponent's troops. In a battle joined and decided in the course of a few days or hours, there is no risk that the lay observer will seek to distinguish the culminating operations by which victory is seized and exploited from the preceding stages by which it has been made possible and deter-If the whole operations of the present mined. war are regarded in correct perspective the victories of the summer and autumn of 1918 will be seen to be as directly dependent upon the two years of stubborn fighting that preceded them.

## The Length of the War.

(11) If the causes which determined the length of the recent contest are examined in the light of the accepted principles of war, it will be seen that the duration of the struggle was governed by and bore a direct relation to certain definite factors which are enumerated below.

In the first place, we were unprepared for war, or at any rate for a war of such magnitude. We were deficient in both trained men and military material, and, what was more important, had no machinery ready by which either men or material could be produced in anything approaching the requisite quantities. The consequences were two-fold. Firstly, the necessary machinery had to be improvised hurriedly, and improvisation is never economical and seldom satisfactory. In this case the highwater mark of our fighting strength in infantry was only reached after  $2\frac{1}{2}$  years of conflict, by which time heavy casualties had already been incurred. In consequence, the full man power of the Empire was never developed in the field at any period of the war.

As regards material, it was not until midsummer, 1916, that the artillery situation became even approximately adequate to the conduct of major operations. Throughout the Somme battle the expenditure of artillery ammunition had to be watched with the greatest care. During the battles of 1917, ammunition was plentiful, but the gun situation was a source of constant anxiety. Only in 1918 was it possible to conduct artillery operations independently of any limiting consideration other than that of transport.

The second consequence of our unpreparedness was that our Armies were unable to intervene, either at the outset of the war or until nearly two years had elapsed, in sufficient strength adequately to assist our Allies. The enemy was able to gain a notable initial advantage by establishing himself in Belgium and northern France, and throughout the early stages of the war was free to concentrate an undue proportion of his effectives against