tier they are still more useful, particularly if fortified upon both banks, as Prague on the Mulda, or Maestricht on the Meuse. In the former case an offensive army must cross the river only once, but in the latter it must cross as often as the adversary thinks proper ; for, placing his camp under protection of one of these fortresses, the enemy cannot pass him without being taken in flank or rear, nor besiege the place without dislodging the enemy. Hence intrenched camps, covering and covered by a fortress, add considerably to the defence of a state. The Austrians felt severely the want of these precautions on the Danube in the late wars. Thus the operation of Mack upon Ulm would have been good had he moved in time to attack from thence either on the right or left of the river ; but to have rendered it secure, there should have been fortified positions on the Schellen­berg at Donauwerth, Ingolstadt, and Ratisbon : for then he could always place the river between him and the enemy ; and if the latter operated on both banks, he could attack with his whole mass that part which was most convenient, before the other could cross to assist it. Fortifications are also eminently useful in the defence of passes in chains of mountains. The insignificant fort of Bard, with 600 men, arrested the progress of the principal column of Napoleon, when descending the Great St Bernard into the valley of Aoste in 1800 ; and if the fort had been better secured, the whole plan of campaign would have failed, for Melas would have had time to arrive and defeat the enemy in detail. Again, the French emperor having constructed the fine roads into Italy, neglected to secure them by any fortifica­tions, and the first military use that was made of them was by the Austrians in the two successful invasions of France, where the old fort of L’Ecluse, near Geneva, was the only point that could, and actually did, retard them some days.

Fortresses likewise secure the magazines, stores, and hos­pitals of an army, and save the *matériel* and broken troops after a defeat. Pampeluna saved what did escape of the French after the battle of Vittoria, as Prague did the Aus­trians in 1757. But in order to make them capable of pro­ducing the share of security to a state which reason can ex­pect from them, fortresses should not be too numerous, be­cause they absorb too great a proportion of troops for gar­risons, and cost immense sums; nor small, for then they are easily embraced and overpowered by artillery ; nor all on the frontiers, for if the enemy penetrate beyond them, the great arsenals, depots, founderies, &c. of the nation are no longer within reach of the defensive army, which is also deprived of the *appui* for a position to cover the capital, and turn the flank of the invader. In the last campaigns, France felt the want of intermediate fortresses. If such had existed about Soissons, on the Marne, and about the junction of the Seine and Aube, the avenues to Paris would have been more easily defended. Intrenched positions are often eminently useful, provided they intersect or flank the most direct lines of operations ; but as they do not contain arsenals, &c. they are less so than fortresses, and the selec­tion of their site is extremely difficult. Those of the Rus­sians at Drissa, upon the line of Moscow, were abandoned. The intrenchments of the French on the frontiers of Spain and at Toulouse were forced; but those on the Isla near Cadiz, and at Torres Vedras, both saved kingdoms. A position ably chosen has sometimes the same effect. That of Dumouriez, near the wood of Argonne, arrested the ad­vance of the duke of Brunswick in 1792; and that of Ku- tusoff at Malojaroslaf, near Tula, forced the French to re­tire by the road they came. Both were on the flank, and menaced thc rear of the enemy. Dumouriez, in the north-east corner of the French frontier, presented a salient angle upon a simple line of operations towards the German and the Netherland fronts of defence, and was near the fortresses of Lorraine. Napoleon, in 1814, endeavoured to recover a similar line after the battle of Brienne ; but it was then be­

yond the sphere of operations, and his march occasioned him the loss of his empire. To conclude, defensive war does not consist in covering every part of a state, but in preventing an enemy from obtaining any advantage which may enable him to accomplish his main object.

III—BATTLES.

Between a battle won and a battle lost there is an im­mense distance, said Napoleon, the day before the conflict at Leipzig—empires lie between them ; and indeed the plan of campaign, and the strategical movements, are only so many preparatory dispositions to arrive at the great crisis of a battle. The rules applicable to battles, therefore, form the most important branch of the science of war; because, unless they are well understood, all other knowledge will be comparatively useless. In many respects this branch is less capable of being reduced to fixed principles than the others. There are however certain general rules which should govern the dispositions, and the chance of success will be increased or diminished in the ratio of their due ap­plication. Among these, the first is that of operating with a superior mass upon the decisive point, because the phy­sical force of organized numbers in arms furnishes the un­erring means of victory, when the moral qualities in both armies are equal. The means of bringing this force to bear in the most advantageous manner is the art of fighting ; consequently, courage and fortune being nearly balanced, that general who can operate with the largest mass upon the most decisive point must be successful. But to effect this purpose, the combinations must be such as to produce a unity of movements, conducing simultaneously to the same object.

The following maxims are of general application: 1. No opportunity should be left till the morrow. 2. No battle should be given, but for an important object, unless the po­sition should render it unavoidable. 3. After a victory, the enemy should not be allowed to recover—the pursuit should be incessant.

As in lines of operations, so on fields of battle, it is ne­cessary to avoid dispositions which have generally proved fatal ; such as, 1st, forming isolated divisions; 2d, ordering extended movements, which deprive the army of a part of its strength, and enable the enemy to ruin either the main body or the detachment ; 3d, positions with too great an extent of front ; 4th, allowing obstacles to separate the wings, or obstacles which prevent the connection of co­lumns, and expose them to separate defeats.

The finest combinations are those which produce an ob­lique order of battle, those with a wing reinforced, those which out-flank the enemy, and those which form a per­pendicular upon a hostile extremity, or upon a scattered centre. These are almost always successful, because they present a whole line to an extremity, and therefore a greater mass than the enemy. Thus the fundamental prin­ciple of all military combinations, namely, to effect with the greatest mass of forces a combined attack upon the de­cisive point, is applied ; and it is easy to understand how a general of ability, with 60,000 men, may be able to defeat 100,000, if he can bring 50,000 into action upon a single part of his enemy’s line ; for battles are decided, not by troops upon the muster-rolls, nor even by those present, but by those alone who are simultaneously engaged. Nu­merical superiority of troops not engaged, so far from being useful, only increases the disorder, as was fully exemplified at Leuthen.

There is not a great variety of measures applicable to this maxim.

I. The first is evidently that of taking the lead in the movements. The general who is enabled to have this ad­vantage, can employ his forces wherever he thinks them