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The German Army in 1886

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OCCASIONAL PAPER.

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THE GERMAN ARMY IN 1886.¹

By Major J. S. ROTHWELL, R.A., Professor of Military Administration, Staff College.

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I.—ORGANIZATION OF THE GERMAN ARMY.

BR most readers of the Journal of the Royal United Service Institution it will be admitted that the German Army of the present day, though not the largest of the Continental forces, is that which is most completely organized, and consequently most efficient. Before proceeding to an examination of the details of the German military organization, it will therefore be of interest to enquire as to the cause of this pre-eminence of the German Army, as a fighting machine, over the armies maintained by other Great Powers.

It is clear that the cause is not to be found in any special combativeness inherent in the German, whom we are accustomed to regard as stolid and peace-loving, and whose philosophical temperament is less suited, apparently,

¹ The following works have been consulted in the preparation of this paper:—
 "The Armed Strength of the German Empire," Official, London, 1876; Baron Kaulbars' "Report on the German Army," Paris, 1880; Baron Stoffel's "Military Reports," Translation, Official, London, 1872; "L'Armée Allemande sur le pied de Guerre," Chef de Bataillon Rivière, Paris, 1884; Deutschland's "Streitkräfte," Vienna, 1882; "La Revue Militaire de l'Étranger," and other periodicals.

for the desperate ventures of the battle-field, than the impetuous disposition of the Italian or the Frenchman. In modern war, however, the result is less often decided by some exceptional feat of arms than by the perfection of the arrangements which enable a leader to count upon his troops being in a thoroughly efficient state at a certain place by a certain time, and it is in the painstaking accuracy by which such results are ensured that the German peculiarly excels. But the German soldier is more than a part of a great machine which works with astonishing exactness. He is intelligent and highly educated,¹ and has moreover an imaginative side to his character, which enables him at the call of duty to perform deeds of heroism equal to any that are recorded in military annals, for the sake of that Fatherland which he regards with an almost romantic affection.

Such is the material of which the German Army is made, and on the utilization of this material it will be seen that a surprising amount of sagacity has been brought to bear. In their treatment of military problems the Germans have made but few mistakes, and this must doubtless be attributed to the fact that the Army commands the services of the best talent in the nation. While in most other States the political, diplomatic, or legal career attracts the young men of the highest ability, leaving those of inferior capacity to fill the posts in the Army, it is otherwise in Germany. There the Army, besides being held in higher esteem than any other profession, actually has in its ranks for a time a large number of those who contemplate following some other pursuit, and by the prizes which it holds out can retain the services of a great proportion of the ablest men that the nation can produce.

Development of the German Army.—The German Army of the present day may be considered as a comparatively modern institution; for though it inherits the glorious traditions of the Army of Frederick the Great, its constitution was so radically changed in the early part of this century that for our present purpose it is unnecessary to go back further than the reconstruction which followed the disastrous campaign of 1806-7. Prussia was at this time so completely at the mercy of her conqueror that she was forced to submit to any terms which he was pleased to impose; and by the Paris Convention of 1803 Napoleon decreed that for ten years the standing army to be kept up by Prussia should not exceed 42,000 men of all arms,² and that the militia should not be called out.

At the end of 1803, therefore, we find that Prussia, whose Army at the outbreak of war in 1806 had amounted to about 250,000, had no more than the stipulated number in her ranks, and was thus supposed to have been reduced to impotence. On the collapse of her military power before the armies of Napoleon, a Military Commission had however been at once appointed, and this Commission, which included the best men available, such as Scharnhorst, Gneisenau, and Clausewitz, recommended the adoption of a system by which Napoleon's restrictions were rendered nugatory. The plan decided on by the King, on the advice of these distinguished Officers, was to dismiss to their homes all soldiers who had completed their course of instruction in drill, and replace them at once by recruits, who in their turn were sent back to civil life directly they had become trained soldiers. In this way the Army was neither more nor less than a great military school, and though

¹ Of those who come before the recruiting authorities, only 1·5 per cent. are illiterate.

² Guard.....	6,000
Infantry (10 regiments)	22,000
Cavalry (8 regiments)	8,000
Artillery, Sappers, &c.....	6,000
	<hr/>
	42,000

no more than the authorized 42,000 men were ever at one time in its ranks, it was able to pass out every year some 20,000 well-drilled soldiers, who could be recalled to the colours when the occasion for their employment might arise.

At the beginning of 1813 the Prussian landwehr first received a definite organization, and the military forces of the country were thus increased, nominally, by 109,000 men. The training, or, as it was generally called, the "Kriimper" system, had by this time been more than four years at work, so that when hostilities were this year resumed, the regular troops of Prussia were over 130,000 strong, in addition to which there were the 109,000 of the landwehr. Prussia was thus in a very different position from that which Napoleon had intended her to occupy, and as his power was now on the wane, the further development of her military organization was taken in hand even while her armies were in the field.

At the end of the campaign of 1814 no time was lost in giving effect to the improvements which had been decided on, and this year saw the Prussian forces organized on a basis which, with some modifications, is that which exists at the present day. The principle of general obligatory service was accepted, and in order to avoid the expense of keeping a very large number of men under arms in peace-time, each unit was given a comparatively small establishment, to be raised on the outbreak of war to the full strength, by recalling to the ranks those who had been sent on furlough after completing their course of military training. The Army was to consist of three main portions; the standing army, the landwehr, and the landsturm. Of these the standing army was composed of men serving with the colours and those in the reserve; the landwehr of two sections, called the 1st and 2nd bans, all the members of which had already served in the standing army; while the landsturm embraced all men capable of bearing arms who were not actually enrolled in either the standing army or the landwehr. The obligation to military service extended from a man's 17th to his 49th year, so that every individual in the nation capable of bearing arms was during this portion of his life enrolled in one of the three portions of the Army.

Under ordinary circumstances a man served in the standing army from his 20th to his 25th year, the first 3 being with the colours and the 2 latter in the reserve. He then passed into the first ban of the landwehr for 7 years, and on leaving this at 32 years of age joined the second ban for another 7 years, after which, being now 39, he became a member of the landsturm for 10 years. Before joining the colours, however, he had become liable to service in the landsturm on attaining the age of 17 years, and if from any cause a man did not join the standing army and complete the regular course of service in it and the landwehr, he still remained a member of the landsturm until he reached the age of 49, when his military liability ceased.

By the Law of 1814, the number of young men who were to join the Army each year was fixed at 40,000, but as the population of Prussia increased, it became necessary to call up a larger number each year, in order to carry out the original idea that the bulk of the young men attaining the military age should pass through the ranks of the Army. This, change, however was not effected in proportion as the population increased, but the yearly contingent remained at the former figure till 1860, when a Bill was introduced by which the contingent was to be raised to 60,000 men, and important changes in the organization of the Army were proposed. By this measure, which became law some years later in spite of serious opposition, the time of service in the standing army and reserve was increased from five years to seven, and the fourteen years in the landwehr were reduced to twelve, five in the first ban, and seven in the second.

With certain modifications this is the system in force in Germany at the

present day, and it is instructive to note that only one important measure of army reform has been introduced in Prussia in seventy-two years. The stability thus given to the military institutions of the country has had an important effect, and has enabled the German soldier to feel assured that a change in his position will not be lightly made, and that his old traditions will not be subjected to rash interference.

During the fifty years which followed the peace of 1815, France still posed before the world as the great military nation of Europe, and while the somewhat slow and methodical manœuvres of the German were sneered at as being antiquated and out of keeping with modern military science, the numerical strength of the Prussian Army was not so great as to suggest the possibility of its being able to hold its own against the larger forces of the other great military Powers. The results of the war with Austria in 1866, however, convinced all who were capable of forming a just judgment that the Prussian Army was something very different from the stiff, barrack-yard, military machine which it had been the fashion to consider it, and that its success, instead of being explained away by the superiority of the needle-gun, was really attributable to the perfection of its organization, and the care taken in peace-time to fit all branches of the Service for the parts which they would have to play in war.

The most important change in organization which followed the war of 1866 was that relating to the *landwehr*, service in which was now made to terminate at the end of the five years formerly passed in the first *ban*, instead of extending over twelve years as had been the case under the system established in 1860. The conclusion of the war with France brought with it no alteration in the conditions of service, which have now remained unaltered for nearly twenty years, and are in all important particulars based on the report of the Military Commission which was assembled in 1868.

The conditions under which German subjects perform their military service to the State having been thus set forth, we may turn to the broader question of the organization of the Army as a whole. The principle which has been adopted is that which we know by the name of *localization*; that is, the maintenance of a definite connection between a certain province or district and a corresponding portion of the Army. In our Service this system of localization has only been applied to the comparatively small units of infantry regiments and Divisions of artillery, but in Germany every military unit, up to and including the Army Corps, has a corresponding locality with which it is indissolubly connected.

Army Corps Organization.—Each of the larger provinces or kingdoms of which the German Empire is now composed has thus its own Corps, but all are similarly armed, equipped, and organized, and are equally under the control of the Emperor. The Corps which formed the Prussian Army in the earlier part of the present century were as follows:—

Guard.—I Corps, Prussia; II Corps, Pomerania; III Corps, Brandenburg; IV Corps, Saxony; V Corps, Posen and Silesia; VI Corps, Silesia; VII Corps, Westphalia and Rhine Provinces; VIII, Rhine Provinces.

These military divisions have remained practically the same up to the present time, but after the war of 1866, when Prussia replaced Austria as the head of the German Confederation, three additional corps were enrolled in the Prussian Army, and numbered IX, X, and XI. These corps were furnished by the new provinces annexed by Prussia after that war, viz.:—Sleswig-Holstein, Hanover, Nassau, and Hesse-Cassel, and a Division, which has never been incorporated in any Army Corps, was also added to the Prussian Army, by absorbing the troops of the Grand Duchy of Hesse. The

¹ The Guard has never had a special district.

German Army then consisted of twelve complete Army Corps and an independent Division, but before the outbreak of the war with France in 1870 it was further increased by the Saxon Army, which became the XIIth Army Corps. The troops of Wurtemberg and Baden which took part in the war against France now form the XIIIth and XIVth Corps, and Alsace and Lorraine, which were annexed to the German Empire after that war, are garrisoned by the XVth Corps, which is formed of units of infantry and cavalry detached from all other Corps except the Guard. These sixteen corps, with the Hessian Division, are supplemented by the two corps maintained by the kingdom of Bavaria, which though organized on the same principles as the other corps, are not put on the same numerical list, but remain the 1st and 2nd Bavarian Corps. The following table gives the German Army Corps as they stand at the present time :—

Army Corps.	Province.	Head-quarters.	Commander.
Guard .....	..	Berlin	General von Pape.
I	Prussia	Königsberg	Lieut.-Gen. von Kleist.
II	Pomerania	Stettin	General von Dannenberg.
III	Brandenburg ...	Berlin	Lieut.-Gen. Count von Wartensleben.
IV	Saxony	Magdeburg	General Count von Blumenthal.
V	Posen	Posen	General von Stiehl.
VI	Silesia	Breslau ...	Lieut.-Gen. von Wichmann.
VII	Westphalia	Münster ...	General von Witzendorf. ¹
VIII	Rhenish	Coblenz ...	Lieut.-Gen. Baron von Loë.
IX	Sleswig-Holstein.	Altona	General von Treschow.
X	Hanover	Hanover ..	Gen. Prince Albert of Prussia. ¹
XI	Hesse-Cassel ...	Cassel	Gen. Baron von Schlotheim. ¹
XII	Saxony	Dresden ...	Gen. Prince George of Saxony.
XIII	Wurtemberg	Stuttgart ..	General von Schachtmeier.
XIV	Baden	Carlsruhe ..	General von Obernitz.
XV	{ Alsace and Lorraine ... }	Strasbourg ..	Lieut.-Gen. von Heudeck.
I Bar.	South Bavaria ...	Munich ...	General Baron von Horn.
II Bar.	North Bavaria ...	Würzburg ..	General von Orff.
Hessian Division	Hesse	Darmstadt ..	Lieut.-General Prince Henry of Hesse.

The composition of these various Army Corps is similar, though not absolutely identical. Each consists of two Infantry Divisions, and a Rifle Battalion, with force of Cavalry varying from twenty to forty squadrons, as a rule attached to the Infantry Divisions, nineteen batteries of Artillery, a force of Foot Artillery, a Pioneer Battalion, and a Train Battalion.

The following table shows the distribution of the troops in Army Corps in time of peace, but in some instances additional troops are attached, as in the case of the XVth Corps, which is strengthened by the addition of the Foot Artillery Regiment of the XIIth Corps, and a Battalion of the 2nd Bavarian Foot Artillery Regiment, as well as by a Brigade of Bavarian Infantry :—

¹ Cavalry Generals.

Corps.	Divisional troops.			Corps artillery.			Cavalry divisions.		Fortress artillery companies.	Pioneer battalions.	Train battalions.
	Battalions.	Squadrons.	Field batteries.	Horse artillery batteries.	Field batteries.	Rifle battalions.	Regiments.	Squadrons.			
Guard	27	..	8	3	8	12	8	40	8	1	1
I	30	..	8	3	8	1	5	25	8	1	1
II	27	30	8	3	8	1	..	..	16	1	1
III	24	30	8	3	8	1	..	..	8	1	1
IV	24	20	8	3	8	1	..	..	8	1	1
V	27	25	8	3	8	1	..	..	8	1	1
VI	27	25	8	3	8	1	..	..	8	1	1
VII	27	20	8	3	8	1	..	..	8	1	1
VIII	24	20	8	3	8	1	..	..	8	1	1
IX	24	20	8	3	8	1	..	..	4	1	1
X	24	25	8	3	8	1	..	..	..	1	1
XI	27	20	8	3	8	1	..	..	..	1	1
XII	30	..	8	2	10	2	6	30	8	1	1
XIII	21	20	8	..	8	..	..	..	4	1	1
XIV	24	20	8	1	8	..	..	..	4	1	1
XV	27	..	8	..	8	1	7	35	8	2	1
I Bav.	27	25	8	3	8	2	..	..	8	1	1
II Bav.	30	25	8	3	8	2	..	..	8	1	1
Hessian Div. .	12	10	4	1	..	..	..	..	..	..	0½
	453	335	148	46	146	20	26	130	124	19	18½

In the Army Corps, other than the Guard, the Infantry Divisions are numbered throughout consecutively. Thus the 1st Army Corps is composed of the 1st and 2nd Divisions, the IInd Corps of the 3rd and 4th, and so on to the XIIth, which is composed of the 23rd and 24th Divisions. The independent Hessian Division, which is attached to the XIth Corps, is counted as the 25th, so that the XIIIth Corps consists of the 26th and 27th Divisions, the XIVth of the 28th and 29th, and the XVth of the 30th and 31st. The Infantry Brigades, of which there are two to each Division, are similarly numbered, the 1st Division consisting of the 1st and 2nd Brigades, the 2nd of the 3rd and 4th, and so throughout to the 31st Division, which consists of the 61st and 62nd Brigades.

The Bavarian Corps also consist of two Divisions each, but these as well as the brigades of which they are composed, have a separate enumeration, distinct from that of the Prussian Corps.

It will be seen from the table given above that in peace-time, except in the Guard, Ist, XIIth, and XVth Corps, the German Cavalry is not formed into independent Divisions, but is attached to the Infantry Divisions. This would not be the case in time of war, as the bulk of the cavalry would then be formed into Cavalry Divisions, and only one regiment of cavalry assigned to each Infantry Division, but with this exception the German Army Corps carries with it into the field the same organization that it has in time of peace.

Under no circumstances is one Army Corps made dependent on another, or on a central establishment outside its own province, for the supply of any stores or supplies necessary for it. Each corps is practically as independent and self-contained as if it were the army of some minor sovereign State, so that the preparations for taking the field can be carried on simultaneously in all, without any clashing of interests. This principle of decentralization has been so thoroughly carried out that as soon as the orders are issued to the Army Corps Commanders, each of these Generals can at once proceed to give effect to them, without further reference to the Imperial Headquarters in Berlin.

The same principle is also apparent in smaller units, the commanders of which are made as far as possible independent, and able to complete all preparations directly the mobilization orders reach them.¹

Landwehr.—In the table on p. 307, only the troops of the standing army have been referred to, but in addition to these the Army Corps Commander has under his orders the various units of the landwehr which belong to his district. The landwehr, as mentioned already, is a sort of militia in which men who have served for seven years in the standing army and reserve are enrolled, and in which they continue to serve for a period of five years; this period extending under ordinary circumstances from a man's 27th to his 32nd year. In time of peace the units, on the rolls of which these men's names are inscribed, have no existence as military bodies; only the cadres, or as we call them the "Permanent Staff," being kept up, in the case of the landwehr infantry battalions.² The landwehr, however, is not exclusively an infantry force, as it has an establishment of cavalry and artillery, but for these no cadres are maintained in time of peace, and they only commence to have an existence on the outbreak of war.

As a rule two landwehr battalions correspond to each infantry regiment, so that the number of landwehr battalions for whom cadres are maintained in time of peace is 300. If the rule were strictly followed the number would be 322, but in the case of the more recent additions to the German Army, the organization adopted in the older corps has not been closely adhered to. In consequence, however, of certain changes which were made in 1881, the number of landwehr battalions will increase progressively after 1888, and in 1893 will reach a total of 328. Landwehr infantry are formed into reserve regiments, brigades, and divisions, when required for active service.

The cavalry of the landwehr would in time of war consist of 24 reserve regiments, and 50 dismounted squadrons, and the artillery would be organized in 55 batteries; these troops being as a rule attached to the reserve divisions just mentioned, but also employed otherwise as they might be required.

Landsturm.—The landsturm has no military organization laid down either for peace or war. It is merely a list of those male inhabitants of the country who are of military age and fit to serve, whose names are not entered on the rolls of the standing army, the reserve, or the landwehr. A struggle which would necessitate the calling up of this force would be one in which the very existence of Germany as a Power would be at stake; for even in the War of 1870-71 it was never found necessary to have recourse to the landsturm, but if such an emergency should arise, the men belonging to this force would be drafted into the landwehr to fill vacancies in its ranks, and formed into newly raised landsturm regiments, to take a part in the defence of the country.

¹ It may be observed that there is telegraphic communication to every barrack throughout the Empire.

² These battalions may be called out for training, every man while in the Landwehr being liable to attend two trainings, each of 14 days.

II.—INFANTRY.

The German infantry of the standing army consists of 161 regiments of Guards, and Line, and 20 battalions of rifles. Regiments of Guards and line are further distinguished as Grenadiers, Infantry, or Fusilier Regiments, but these distinctions, like the corresponding titles in our own Service, have now ceased to have any military significance, and all these regiments are expected to perform similar duties.

The Infantry of the Guard consists of 9 regiments; viz.: 4 regiments of Foot Guards, 4 regiments of Grenadiers of the Guard, and 1 regiment of Fusiliers of the Guard.

There are 19 regiments of Grenadiers, of whom 12 are Prussian, 1 Mecklenburg, 2 Saxon, 2 Baden, and 2 Wurtemberg.

Of the 13 Fusilier regiments, 11 are Prussian, 1 Mecklenburg, and 1 Saxon.

Each regiment consists of three battalions, of which one is always styled a "Fusilier" battalion, the other two battalions in Guard regiments being called Grenadiers, and in the line Musketeers. These Fusilier battalions, unlike the Fusilier regiments, are intended for employment somewhat different from that of the other battalions, being used as light infantry, while the Grenadier or Musketeer battalions are for general service. All battalions, however, have a similar establishment, each consisting of four companies, which are not numbered independently for each battalion, but consecutively from 1 to 12 throughout the regiment.

Company.—The establishment of a company in peace and war is as follows:—

	Peace.	War.
Captain (Hauptmann)	1	1
1st Lieutenant	1	1
2nd Lieutenants	2	3
Sergeant Major-(Feldwebel)	1	1
Vice-Sergeant-Major	1	1
Portepée Fähnrich.....	1	1
Sergeants	4	4
Non-commissioned officers	7	13
Lance-corporals	13	24
Privates	106	202
Drummers	2	2
Buglers	2	2
Hospital Assistants	1	1
Train soldier	—	1
Tradesmen	3	—
	145	257

The Captain of a German infantry company is a mounted Officer; being allowed forage for one horse in peace and two in war. The Portepée Fähnrich is a candidate for a commission, who takes rank after the sergeant-major and vice-sergeant-major, and is generally armed with a rifle.¹ Each of the four sergeants is in charge of a section of the company, and they, as well as the other non-commissioned officers, carry rifles, so that each com-

¹ The 69th Mecklenburg Grenadiers is an exception to this rule, as it consists of three grenadier battalions, and in Saxon and Bavarian regiments the rule is not observed.

² He carries a rifle until he has passed the examination for Officer's rank, when he is given a sword, and ranks above the sergeant-major.

pany on war strength has 243 or 244 rifles, according as the Führich is or is not armed in this way.

Of the 257 individuals forming a German company, all are combatants except the hospital assistant and the train soldier, but in the ranks there are four men trained as stretcher bearers, who though armed with rifles do not take their places in the ranks during an action, but are placed at the disposal of the medical Officer.

Battalion Staff.—An infantry battalion, which consists as already mentioned of four companies, has in addition the following staff :—

	Peace.	War.
Battalion Commander (Major)	1	1
Adjutant (Lieutenant)	1	1
Surgeons.....	2	2
Paymaster	1	1
Clerk	1	1
Drum-major	1	1
Armourer	1	1
Train soldiers.....	—	16
Sutlers and assistants	—	4
	8	28

The battalion commander is allowed forage for 2 horses in peace and 3 in war, the Adjutant for 1 in peace and 2 in war, and the Surgeons and the Paymaster 1 each in war, so that the riding horses of the battalion staff are 3 in number in peace and 8 in war.

There are no wagons or draught horses with a battalion in peace, but in time of war each infantry battalion has 9 vehicles¹ and 24 draught horses. The complete peace establishment of a battalion thus amounts to 688 of all ranks, with 7 riding horses, and the war establishment to 1,056 of all ranks, with 16 riding horses, 24 draught horses, and 9 vehicles. Colours are carried by each infantry battalion, except in the 103th Saxon Regiment.

Regimental Staff.—An infantry regiment consists of three battalions of similar strength, the regimental staff being as follows :—

	Peace.	War.
Regimental Commander.....	1	1
Field Officer for interior economy	1	1
Supernumerary Captain.....	1	—
Adjutant	1	1
Staff Surgeon-major	1	1
Clerk	1	1
Musicians	10	10
Train soldiers	—	7
	16	22

The regimental commander is allowed forage for 3 horses in peace and 5 in war; the Field Officer and Adjutant for 2 in peace and 3 in war; and the Staff Surgeon-major for 2 in war; the riding horses of the regimental staff thus numbering 8 in peace and 13 in war. There is only one vehicle belonging to the regimental staff, viz, a two-horse baggage wagon, so that the complete peace establishment of an infantry regiment amounts to 1,760

¹ 1 six-horse ammunition wagon, 1 four-horse battalion baggage wagon, 4 two-horse company baggage wagons, 1 two-horse pharmacy wagon, and 2 two-horse sutler's wagons. These are kept in peace-time at the headquarters of the regiment.

of all ranks, with 29 riding horses, and the war establishment to 3,190 of all ranks, with 61 riding horses, 74 draught horses, and 28 vehicles.

It will be noticed that on the staff of an infantry regiment there are only ten musicians, but the regimental bands are brought up to a strength of about forty-two performers by attaching two or three men from the ranks of each company. These men, however, being equipped and trained exactly like their fellows, have been included among the combatants.

The supply of ammunition and of food for a German soldier when on active service is provided for as follows:—As regards ammunition, each infantry man carries 80 rounds on his person, viz., 40 in two pouches on the waist-belt, and two packets of 20 each in a pocket at each side of the knapsack. Twelve rounds more per man are carried in the company wagon, and 20 in the battalion wagon, so that with the regiment there should be 112 rounds per man. The first reserve of ammunition is carried in the Army Corps ammunition columns, and provides for 60 rounds per man additional, so that 172 rounds per man are actually carried with a mobilized Army Corps.

On service, rations are issued in the usual way wherever this is possible, but to meet the case of an advancing force pushing far ahead of its trains, each infantry regiment has with it three days' provisions per man, which are called the "iron ration," and must not be touched except on the direct order of the General Commanding. These rations are partly carried by the men themselves and partly in the wagons, but they must always be with the troops, as well as three days' oats for each draught horse.

RIFLES.

Rifle battalions differ in no material respect from other infantry battalions, but being recruited exclusively from among the foresters they are specially valuable for service in a difficult country, on an advanced guard, or in any circumstances where a single battalion has to be employed. Of the 20 battalions of which the force consists, there is 1 of Rifles of the Guard and 1 of Sharpshooters of the Guard; 11 Prussian rifle battalions, 2 Saxon, 1 Mecklenburg, and 4 Bavarian.

There is no battalion ammunition wagon as in infantry regiments, but 40 rounds per rifle are carried in the company wagons, so that riflemen have close at hand a total of 140 rounds per rifle.

Training of Recruits.—We may now turn to the system which is adopted for the training of the infantry soldier. Each company receives in theory the same number of recruits annually,¹ but as the casualties in some companies are more than others, they are practically brought up each year to the regulated establishment. The number amounts to nearly one-third of the company establishment, or about forty-eight, and these men join generally at the beginning of November, about four weeks after the reservists whom they are to replace have proceeded to their homes.

During the interval which has elapsed since the departure of the reservists, everything necessary for the reception of the new comers has been prepared by the Captain of the company, and the recruits are at once told off to the rooms they are to occupy, each room having for its head a specially selected lance-corporal to maintain order and teach them their duties. These lance-corporals are 10 or 12 in number for each company, 3 or 4 being told off to each of the 3 squads into which the 48 recruits are usually divided. Each squad is under a non-commissioned officer, who with the aid of the lance-

¹ Consisting of biscuit, bacon, or preserved meat, rice, coffee, and salt.

² The number per battalion is fixed by Imperial Decree each year, and has stood at 190 for a considerable period.

corporals drills the recruits composing it, and lives as much as possible in their company. The supervision of the whole course of instruction of the recruits is entrusted to one of the Lieutenants of the company, who, like the non-commissioned officers, has been selected by the Captain on account of being specially suited for this work by reason of his attainments, good temper, and firmness. The course of instruction is accurately laid down by regulations which the instructors are obliged to follow, but beyond seeing that the rules are complied with, the Captain interferes little with the training of the recruits. Here, as in more important matters, the principle is that no duty is assigned to an Officer who is not considered to be capable of performing it satisfactorily, but that when the work has been begun, the responsible Officer is left to his own judgment as to the mode in which he will carry it out, knowing that he will be judged by the result.

On his first arrival the recruit is served out with his uniform, not by any means new, but still sufficiently clean and smart looking to induce him to take a pride in his cloth, and he is taught by the head of his room how to clean his accoutrements and how to put them on. Drill is at first made comparatively easy to the young recruit, who during his first week is only kept on parade for two hours in the morning and an hour and a half in the afternoon, but the next week half an hour is added to the length of both parades, and in the fourth week he is drilled for two hours and an half on each occasion. The arrangement of the recruits' course of instruction is left entirely to the discretion of the Captain of the company, who in his turn leaves great freedom of action as to details to the Lieutenant-Instructor. Thus the different companies of the same regiment may proceed in the training of their recruits on totally different lines, some Captains for instance commencing the manual exercise as early as the third day of a recruit's service, while others do not place arms in his hands till a considerably later date. With the different systems which may be adopted the Commanding Officer is careful not to interfere; all he concerns himself with is that when the inspection of the recruits takes place they shall come up to the prescribed standard.

The inspection is usually made about the 1st March, and the recruits have consequently had by this time some twelve or fourteen weeks' training, within which period it is expected that they will have thoroughly learnt all parade movements, and how to manœuvre in dispersed order. They must also be trained in gymnastics, in the use of their arms, aiming drill and bayonet exercise, as well as in the methods of keeping their arms, clothing, and accoutrements in serviceable condition. They must be familiar with all bugle calls, and have a general acquaintance with the articles of war and military regulations; information on the last-mentioned subjects being given in the winter evenings by the Lieutenant to whose care the recruits have been confided.

The inspecting Officer whose duty it is to see that the recruits have been properly trained is the Colonel of the regiment, and the very close examination which he makes of every individual recruit, obliges him to spend about two hours over the inspection of each company. So much importance is attached to this inspection that it is by no means unusual for the General Commanding the Army Corps to be present at it, and the keenest interest is taken by Officers of all ranks in the success or failure of the different systems adopted in the various companies.

On the day following the recruits' inspection they are passed into the ranks of the company, and thenceforward do duty in all respects as the old soldiers.

It is to be remarked that in thus transforming raw recruits into soldiers fit to take their place in the ranks in such a short space of time as three months, the process is materially assisted by the military training which all young

Germans receive while at school, as well as by the high standard of education diffused throughout the nation. The Lieutenant-Instructor of the company has not to waste his time on hopelessly ignorant dullards, but can count on every recruit with whom he has to deal having a good elementary education, and being thus able to benefit by the teaching which is to fit him for his duties as a soldier.

When the recruit drills are terminated and the company is brought up to its full peace establishment, the spring drills commence, and it may be remarked that in the prosecution of the extended series of exercises which are included under this head, the young soldier's instruction is comparatively little interrupted by guards and fatigues. On the average the German infantry soldier has about ten or eleven nights in bed, and every effort is made to reduce the number of men employed both on guard and on fatigue duties. Thus on any post where a sentry in the day time can be dispensed with, only a night sentry is employed, and the number of purely honorary sentries, at the gates of palaces, &c., is reduced to a minimum.

In the earlier part of the spring drills the men are exercised in route-marching by companies, and practised in constructing bivouacks and placing outposts. These marches are succeeded by company drill, in which the movements are simple, but where the men are taught to act with the utmost promptitude on their Captain's orders, whether those orders are in accordance with what is laid down in the regulations, or something totally different. By this system of making irregular and unexpected movements, the company becomes extraordinarily handy, and the men learn to obey a word or a sign from their Captain with mechanical accuracy.

The company drills last for about six weeks, and at their conclusion each company is inspected by the Colonel of the regiment, who, on finding the condition of all satisfactory, orders the commencement of battalion drill. This is now practised three days a week for about four weeks, the remaining days being devoted to company drill and rifle shooting. The battalion exercises are at first merely drill, carried out simply with the object of making the battalion easily handled and flexible, but afterwards every sort of field manœuvre which can occur in actual war is practised under the best conditions which can be obtained.

At the close of these drills each battalion is inspected by either the Brigade or Divisional Commander, these inspections usually taking place about the beginning of June.

In the course of the summer, whenever it is practicable, the three battalions of the regiment are manœuvred together, and at some stations brigade drill is practised, but very often when the battalion drills are completed, the troops are at once exercised in minor tactics. This work is done at first by companies, each Captain marching his men out into the country and teaching them in a practical way how to make themselves secure by outposts and patrols, while on the march out and homewards one half of the company is sometimes sent on, representing the rear guard of a retreating force, the other half representing the advanced guard of the pursuers, and endeavouring to keep the first in sight. The formation of bivouacks and the best ways of crossing hedges, ditches, and other obstacles are also practised, as well as the attack and defence of posts, and the construction of shelter trenches and simple field works. Swimming is taught universally, and concurrently with the above-mentioned exercises the troops of all ranks are constantly engaged in rifle practice.

Musketry.—The German military authorities act on the principle that the better the rifle with which the men are armed, the more important it is to teach them to use it properly; and hence the attention which is paid to musketry instruction is large and increasing in amount. Ball practice com-

mences in many instances before the recruit has finished his drill, the number of rounds fired on each occasion being as a rule limited to five, so that the men may not be tired or disgusted. For every infantry soldier, including Officers, an annual allowance of 130 rounds of ball cartridge is given, and some extra rounds beyond this number are assigned to those men who prove themselves to be bad shots. Practice in barracks with the miniature ammunition and the aiming tube is also encouraged, the only restriction on this being that a lance-corporal must always be present while it is being carried on.

The whole of the musketry instruction is carried out by the Officers and non-commissioned officers of the company, the men being united for instructional purposes in small squads of ten or twelve, so that every individual is brought directly under the eye of the Officer or non-commissioned officer who is responsible for his training.

The only time of the year when rifle practice is not going on is during the grand manœuvres, which take place every autumn. With these the military year may be said to terminate; for at their conclusion the reservists proceed to their homes, and preparations are made for the new batch of recruits who, as mentioned already, join each company in the month of November.

III.—CAVALRY.

There are 93 regiments of German cavalry, of which 10 are cuirassiers, 2 Saxon heavy cavalry, 2 Bavarian heavy cavalry, 28 dragoons, 20 hussars, 6 Bavarian light cavalry, and 25 uhlans or lancers.

The regiments are classed as guards and line, the guard cavalry being composed of 2 regiments of cuirassiers, 2 of dragoons, 1 of hussars, and 3 of uhlans. These are all Prussian regiments, but the cavalry of the line is made up of contingents from the various States. Thus Saxony furnishes 2 regiments of heavy cavalry, 2 of hussars, and 2 of uhlans. Bavaria has 2 heavy cavalry regiments, 6 regiments of light cavalry, and 2 of uhlans. Mecklenburg has 2 regiments of dragoons, Oldenburg 1, and Baden 3. Brunswick has 1 regiment of hussars, Hesse 2 of dragoons, Wurtemberg 2 of dragoons and 2 of uhlans. The remainder, viz., 8 regiments of cuirassiers, 16 regiments of dragoons, 16 of hussars, and 16 of uhlans, are Prussian.

All these regiments are identical in their organization and establishment, each consisting of five squadrons, the squadron being again divided into four sections.

When ordered on active service, however, a regiment only takes the field four squadrons strong, the remaining squadron being left behind as a *dépôt* squadron, and giving up to the service squadrons its trained men and horses in place of the recruits and inferior horses that may happen to be in the ranks when the orders arrive. The regiment can thus at the shortest notice take the field with four thoroughly efficient squadrons, while its requirements during the campaign are supplied by a system which requires the introduction of no fresh machinery. The squadron which thus acts as the regimental *dépôt* differs in no respect from the other squadrons, as the liability to be thus left behind, in case war should break out, is undertaken by a different squadron each year, according to a regular roster.

The peace and war strength of a squadron are as follows :—

	Peace.	War.
Captain (Rittmeister)	1	1
1st Lieutenant	1	1
2nd Lieutenants.....	2-3	3
Sergeant-major (Wachtmeister)	1	1
Vice-Sergeant-major	1	1
Portepée Fähnrich	1	1
Sergeants	4	4
Non-commissioned officers	8	8
Lance-corporals	20	20
Trumpeters	3	3
Troopers	96-97	112
Farrier.....	—	1
Hospital assistant	1	1
Train soldiers.....	—	6
Tradesmen	4	—
	143-145	163

The number of horses in peace is 140, and in war 174, including 2 draught horses for the squadron wagon. A squadron on war strength has 155 mounted combatants. A cavalry regiment, with 5 squadrons in time of peace and 4 in war, has the following staff:—

	Peace.	War.
Regimental Commander.....	1	1
Major for interior economy	1	1
Adjutant	1	1
Staff Surgeon-major	1	1
Assistant Surgeons	2	2
Staff Veterinary Surgeon	1	1
Veterinary Surgeons	4	2
Paymaster.....	1	1
Assistant Paymaster	1	—
Clerk	1	1
Trumpet-major	1	1
Armourer	1	1
Regimental saddler.....	1	1
Hospital assistants	5	—
Train soldiers	—	14
Sutlers and assistants	—	4
	22	32

The Officer commanding a cavalry regiment is allowed forage for 3 horses in peace time and for 5 in war, the Major for 2 in peace and 4 in war, the Captains for 3 in peace or war, and the Lieutenants for 2 in peace and 3 in war.

Regimental Transport.—Each cavalry regiment has in time of war its own transport, consisting of 8 vehicles,¹ drawn by 18 horses, and attended to by 7 of the train soldiers, the remainder of these men being told off as Officers' grooms.

The total strength of a cavalry regiment on peace strength amounts to 737 of all ranks, and in time of war to 684, of whom 667 are mounted, the number of mounted combatants being 624.

¹ 1 four-horse headquarters' wagon; 4 two-horse squadron wagons, with portable forge; 1 two-horse pharmacy wagon, and 2 two-horse sutler's wagons.

Ammunition.—Each cavalry soldier who is armed with a carbine carries 50 rounds of ammunition, 20 being in his pouch and 30 in the wallets. Non-commissioned officers and others who have revolvers instead of carbines, carry 18 rounds each, or three complete charges for the six-chambered weapon with which they are armed. No ammunition is carried in the wagons of a German cavalry regiment, so that if a further supply is required, it must be obtained from the Army Corps ammunition columns, unless the regiment forms part of an independent Cavalry Division, in which case recourse might be had to the attached ammunition wagons, in which about 12 rounds per carbine are conveyed.

Iron Rations.—Iron rations for cavalry men are exactly the same as for infantry, and one day's iron ration of oats is carried for every troop horse.

Tradesmen Division.—Among the non-combatants attached to each cavalry regiment, and left behind when the regiment goes on active service, are 20 tradesmen, 4 for each squadron. These are attached to the dépôt squadron, and their numbers are increased to 60 of all ranks, thus forming a tradesmen division, whose duty it is to keep the regiment supplied with equipment of all sorts while in the field. They are under the superintendence of the Assistant Paymaster, who is detached from the regiment for this purpose.

The German cavalry are classed as heavy and light; cuirassiers and lancers being counted as the former, and dragoons and hussars the latter. Two to four regiments constitute a brigade, these brigades bearing the same numbers as the infantry Divisions to which they are attached. Where a cavalry brigade consists of an even number of regiments, they are usually half heavy and half light; but in the brigades which have three regiments, no fixed relation seems to be observed.

Horses.—Horses for the German cavalry are as a rule provided from the twenty remount depôts, where they have been kept for a year or two, after having been purchased as three-year-olds, at an average price of about 34*l*. They are expected to last for eleven years, but a certain number of those which, at the end of this period are still fit for work, are only provisionally cast, and are retained for the instruction of one-year volunteers. Forage for these horses is supplied as well as for some supernumerary horses, which to the number of three or four may be kept by each squadron. In peace-time these supernumerary horses are used for drawing forage, and for the regimental transport during manoeuvres, when, the regiment being still on the peace footing, no draught horses are provided, but on mobilization they are at once taken on the strength as effectives.

Subalterns' horses are supplied by the State, a few superior animals being sent from the remount depôts for this purpose. Such horses, after having been five years in the Officer's possession, become absolutely his property; but an Officer who exchanges or leaves his regiment cannot take with him a horse which he has had for less than the full period. In such a case he would receive a sum of money representing his interest in the animal, proportionate to the length of time during which it has been in his care. If a charger is not supplied, a payment in money is issued, the amount allowed being about 25*l*. The number of remounts annually required in peace-time in the German Army for cavalry, artillery, and train amounts to about 6,000, and these are told off at the depôts to the branch of the service for which they are best suited. Each cavalry regiment, battery, &c., sends a detachment to the dépôt from which it procures its remounts, and the men of this detachment take the horses back with them by railway, all the remounts thus reaching the corps at or about the same time, viz., in the month of July.

Each cavalry regiment receives sixty-three horses annually, giving twelve or thirteen to each squadron, exclusive of Officers' chargers, and this number

is never exceeded. If the squadron commander feels constrained to cast more than thirteen horses, or if in the course of the year some of the horses die, his squadron must remain below its establishment till the following year, when by casting less than thirteen, he can again bring his troop horses up to their proper number.

The number of rations of forage issued to each squadron is always for the full number of horses on the establishment, whatever the actual number of horses may be. It consequently happens, where from any cause this number is below the establishment, that a certain amount of surplus forage will be drawn, and this forage the commander of the squadron has the right to sell, and with the money thus obtained, purchase another horse or horses to remove the deficiency. By this arrangement squadrons are seldom left much below their proper establishment, and all intricacies of correspondence about forage returns are avoided.

Training of Recruits.—The instruction of cavalry recruits is carried on in a manner similar to that adopted in the infantry. The recruits join at about the same season, viz, in October; but as in the cavalry a very large proportion of the recruits are four-years volunteers, who join on the 1st October, while the ordinary recruits do not join till a fortnight later, it follows that the annual quota for a squadron forms two parties which cannot conveniently be instructed together.

Each squadron receives annually thirty-five to forty-five recruits, and these are usually formed into three or four squads to be trained, as in the infantry, by selected non-commissioned officers, acting under the superintendence of the Lieutenant-Instructor. Recruits must attend the riding school for six months, no matter how well they may be able to ride before joining, and as there is no riding-master, this course is entirely in the hands of the squadron instructors.

Before a recruit can be dismissed he must be able to manage his horse perfectly under all circumstances and at all paces, to cross all fences or other obstacles which he is likely to meet, and to understand thoroughly the use of his arms. As recruits if left to themselves might charge too wildly for their own safety or of that of their horses, this part of the training is always practised in company with an equal number of old soldiers, one of whom is told off to each recruit, who must regulate his pace by that of his more experienced comrade.

On the 1st May the recruits' course of drill is ended, and they take their places in the squadron, as do also the last batch but one of remounts, which in the twenty-one months that they have been with the regiment have been thoroughly broken in. The newest remounts are also used, but as they are not considered to be efficient troop horses, they are left in the hands of the men who act as rough riders.

Squadron drill lasts for about six weeks, during which time the squadron commander is constantly exercising his men in the field, his main object being to impress them with the idea that there is no formation from which the squadron cannot instantly charge the enemy, no matter on what side he may make his appearance.

When regimental drill begins in June, these squadron drills are not discontinued, but each Captain takes out his squadron on the days when there is no regimental drill, every horse being expected to do at least five days' hard work in each week. Any spare time which the men may have is employed in foot parades and rifle shooting, 40 rounds being allowed annually for each carbine and 15 for each revolver. The regulated allowance of ammunition is however supplemented by 15 additional rounds of carbine ammunition issued annually for each of the 120 best shots in the regiment, and besides this some extra rounds are obtained in lieu of lead recovered from the

butts, so that a German cavalry soldier has frequent opportunities of practising shooting.

Among other exercises which form part of the course of instruction the swimming of rivers by cavalry is important. This is practised once a week in summer at all stations where there is a river of sufficient size within reach, and with regiments which have had some experience the horses plunge in without hesitation, and carry their riders with their arms and accoutrements in safety to the opposite bank. Every sort of duty which can fall to the lot of the cavalry soldier is practised, but the art of making a rapid reconnaissance, and of briefly reporting the most important points, is cultivated with peculiar care. A non-commissioned officer, for instance, detached for such a purpose would have the exact circumstances under which he is acting carefully explained to him, and it is needless to say that the preparation of such problems entails a considerable amount of work on the regimental Officers by whom they are drawn up, and that before being capable of setting such tasks to their men, they must be possessed of an ample store of military knowledge.

Such a course of training renders the German cavalry soldier extremely self-reliant, and qualifies him for the duty which is peculiarly his own, that of being the eyes of the army.

IV.—ARTILLERY.

The German artillery is composed of two branches, viz., the field artillery and the foot or garrison artillery. The Officers and men of each of these branches belong to them permanently, and cannot be transferred from one to the other, this complete separation of the Officers having been carried out in 1872.

The field artillery is organized in regiments, two of which, with the ammunition columns, form a brigade, and one such brigade, with a regiment of foot artillery, is allotted to each Army Corps. One of the two regiments in a field artillery brigade is composed of two divisions, each of four field batteries, and this regiment furnishes the Divisional artillery, viz., four field batteries to each infantry Division. The other regiment of the field artillery brigade consists of three divisions, two of which are similar in composition to the divisions of the first regiment, while the third division is made up of three batteries of horse artillery; this regiment forms the corps artillery.

The field artillery with a German Army Corps amounts therefore to 19 batteries or 114 guns; of which 8 batteries or 48 guns are with the infantry Divisions, and 11 batteries or 66 guns are under the direct control of the corps commander, but of course when some of the horse artillery batteries are detached for duty with a cavalry Division, the corps artillery will be proportionally decreased.

As a rule, in time of peace only four guns of a German battery are horsed, the other two guns and the twelve carriages which are mentioned below being kept in store at the headquarters of the regiment.¹

The peace and war establishments of a German field battery are as follows :--

¹ Four field batteries of the Ist Corps, four of the IIInd, and eight of the XVth Corps have 6 guns each in peace. These batteries have 9 men and 16 horses extra. Of the horse artillery batteries, three of the VIIIth, one of the XIth, one of the XIIth, and one of the XIVth Corps have 6 guns each. These batteries have 1 trumpeter and 10 gunners extra, with 30 additional horses.

	Peace.	War.
Captain (Hauptmann).....	1	1
1st Lieutenant.....	1	1
2nd Lieutenants	2	3
Sergeant-major (Feldwebel)	1	1
Vice-sergeant-major	1	1
Portep \acute{e} e F \ddot{u} hrer.....	1	1
Sergeants	4	4
Non-commissioned officers.....	10	8
Corporals (Ober-gefreite)	4	6
Lance-corporals	6 or 7	9
Trumpeters	2	3
Gunners and drivers ¹	67 or 68	129
Train soldiers	—	5
Farrier	—	1
Saddler	—	1
Hospital assistant	1	1
	<hr/> 102	<hr/> 175

The establishment of a horse artillery battery is very similar as regards the men, the only difference being that both in peace and war there are 8 less non-commissioned officers and men, with 1 saddler extra in war.

The number of horses in a battery is as follows :—

	Peace.	War.
Field battery.... { Riding.....	16	32
{ Draught	28	118
	<hr/> 44	<hr/> 150
Horse artillery { Riding.....	48	116
battery, { Draught	28	114
	<hr/> 76	<hr/> 230

The twelve carriages which belong to a battery consist of eight ammunition wagons, three store wagons, and a forge wagon, all six-horsed.

Ammunition.—The number of rounds carried in time of war is as follows :—

	Gun limbers.	Ammunition wagons.	Total.
Field battery.... { Common shell	120	440	560
{ Shrapnel	60	160	220
{ Case	18	16	34
			<hr/> 814
Horse artillery { Common shell (light)	144	460	624
battery, { Shrapnel (light)	72	192	264
{ Case (light)	18	16	34
			<hr/> 922

Particulars as to the two natures of guns with which the German artillery

¹ Of the 144 corporals, lance-corporals, and privates in a field battery on war strength, 45 are gun numbers, 68 are drivers, and 28 are in reserve.

is armed will be given later (page 358), and it is only necessary here to observe that the field artillery gun is known as the 9-cm. gun, and the horse artillery gun as the 8-cm. gun. The axletree boxes of the field battery gun are fitted with seats, so that with three gunners carried on the limber, a field battery can bring up on the guns themselves a sufficient number of men to work them.

Ammunition Columns.—The two ammunition columns which have been mentioned as being part of a brigade of field artillery are only formed on mobilization. Each of them consists of two infantry and three artillery sections, which carry respectively small-arm and gun ammunition.¹ These columns, though part of the Army Corps organization, are thus readily attached to the two infantry Divisions, if this should be desirable, and are capable of still further subdivision, by assigning one section to each infantry brigade, supposing a case to arise where a brigade has to be employed independently.

In the 10 sections of the Army Corps ammunition column 60 rounds are carried for each infantry rifle and cavalry carbine, 121 rounds for each field battery gun, and 135 for each horse artillery gun, so that with a German Army Corps there are in all 172 rounds for each infantry rifle, 110 rounds for each cavalry carbine, 256 rounds for each field battery gun, and 288 rounds for each horse artillery gun.²

Foot Artillery.—The foot artillery regiment belonging to each Army Corps consists of two battalions, each of four companies. The establishment of a company of foot artillery is as follows:—

	Peace.	War.
Captain (Hauptmann)	1	1
1st Lieutenant	1	1
2nd Lieutenants	2	2
Laboratory sergeant (Feuerwerker)....	1	1
Non-commissioned officers.....	19	19
Corporals	10	10
Lance-corporals	13	13
Gunners	74	160
Hospital assistant	1	1
Trumpeters	2	2
	<hr/> 124	<hr/> 210

The Captain of a company of foot artillery, like a Captain of infantry, is mounted, drawing forage for one horse in time of peace, and two in war.

The staff of a battalion of foot artillery is somewhat similar to the staff of an infantry battalion, but if employed independently it has an increased establishment, twenty-five laboratory sergeants-major and sergeants being then attached to it from the staff of the regiment.

The total number of battalions of foot artillery in the German Army is 31, of which 28 are formed into 14 regiments, and 3 are independent. Each Army Corps has one regiment, with the exception of the IXth, XIIth, and XIVth

¹ An infantry section has 177 of all ranks, with 175 horses and 24 vehicles. An artillery section has 160 of all ranks, with 181 horses and 26 vehicles. Vehicles with small-arm ammunition are painted grey to distinguish them from those with artillery ammunition, which are blue.

² In a British Army Corps 162 rounds per infantry rifle would be carried, with 280 rounds for each 16-pr. gun, 298 rounds for each 13-pr. gun, and 300 for each 9-pr.

to which only a battalion is allotted, and the Xth and XIth, which are without this unit.¹

In time of peace the German foot artillery regiments do garrison duty in the various fortresses; and in time of war are employed either in carrying out siege operations with the Army in the field, or are used to reinforce the garrisons of those fortresses at home which may be regarded as liable to attack.

In an Army Corps when mobilized the units under the command of the artillery commander would thus be 3 batteries of horse artillery, 16 batteries field artillery (114 field guns), 2 columns Divisions (i.e., 10 ammunition columns), with 8 companies of foot artillery if required.

Training of Recruits.—The system of instruction for artillery recruits is similar to that adopted in the cavalry. Each battery of field artillery receives some thirty recruits in the month of November, the complement for a horse artillery battery being somewhat less; and on the 1st April following these men take their places as gunners, and the battery is thoroughly drilled as a unit during the months of April, May, and June. July and the first half of August are devoted to shell practice, after which the battery takes part in the autumn manœuvres, with which the military year terminates.

Although the young men who join each year are classed as recruits until the 1st April, they are drilled along with the old soldiers of the battery for about three months before this date. It is only during the earliest portion of their military career that squads formed exclusively of recruits are to be seen, as it is considered that in order to learn the somewhat complicated duties of a gunner, association with those who have already been trained is of great value.

Recruits intended to act as drivers, though taught to ride, are not allowed to do duty with the battery during their first year's service, the drivers being in all cases furnished by men who are at least in their second year of service.

In order that no delay shall take place when a mobilization is ordered, it is the practice in the German artillery to carry out in every battery a complete mobilization of some indicated portion every year. All the batteries in the regiment then combine the portions they have mobilized, one furnishing a gun complete, one a wagon, one men, another horses, and so on, so that a fully mobilized battery is put together, which is thus annually available for all ranks to study. This battery, as it would stand on war strength, is then sent a short distance by railway for entraining and detraining practice, the whole of the operations being carried out in presence of the Officers, non-commissioned officers, and volunteers belonging to the regiment.

Gun Practice.—Practice with field guns is carried out, as has been mentioned already, in the months of July and August, the number of rounds allotted annually per battery being 244 common shell, 100 shrapnel, and 12 case, or 356 in all. As only 4 guns are available, it follows that each gun which is used fires 89 rounds annually.

The targets are of three sorts, representing skirmishers, formed infantry, and artillery respectively, and fire is opened at various ranges from 1,000 metres to 2,000 metres, or more if the ground allows; but in every case the distance of the target must be estimated, being never known beforehand.

¹ The 2nd Foot Artillery Regiment and the 9th Foot Artillery Battalion as belonging to the Pomeranian and Sleswig-Holstein Corps respectively, are specially trained in coast defence. The 10th Foot Artillery Regiment belongs to the XVth Army Corps. It is formed of a battalion recruited from the territory of the XIth, and another from that of the XIIth Army Corps. The 11th Foot Artillery Regiment, which belongs to the IIInd Army Corps, is employed in the fortress of Thora.

V.—ENGINEERS AND RAILWAY TROOPS.¹

The German engineers are organized in peace time by battalions, styled "pioneer battalions," one of which is, as a rule, attached to each Army Corps. These pioneer battalions are similar in their composition to the battalions of foot artillery, each consisting of four companies,² which have the establishment given below:—

	Peacc.	War.
Captain (Hauptmann).....	1	1
1st Lieutenant	1	1
2nd Lieutenants	2	3
Sergeant-major (Feldwebel)	1	1
Vice-sergeant-major	1	1
Portepée Fähnrich	1	1
Sergeants	4	4
Non-commissioned officers.....	10	13
Lance-corporals	9	22
Privates.....	90	155
Buglers	3	3
Train soldiers	—	11
Assistant Surgeon	—	1
Hospital assistant	1	1
Scuttler and assistant.....	—	2
	<hr/> 124	<hr/> 220

The three first companies of a pioneer battalion are styled field companies, and are trained in pontooning and field work, while the fourth company, being a fortress company and not intended to accompany the field troops, is specially instructed in mining.

On mobilization, the battalion organization disappears, the battalion staff passing at once to the Army Corps staff, and the three field companies being allotted, one to each Division, and the third to the Army Corps.

Bridge Trains.—Three bridge trains are formed from the field companies who have charge of the *matériel* in peace-time, one of these trains being attached to the Army Corps and the others to each of the Divisions. A corps bridge train has the following establishment:—

Captain	1
Lieutenants.....	2
Assistant Surgeon	1
Paymaster	1
Sergeants-major.....	2
Sergeants	4
Non-commissioned officers	8
Lance-corporals	7
Musicians	3
Train soldiers.....	103
Veterinary Surgeon	1
Shoeing smith.....	1
	<hr/>
Total	134

¹ Additional particulars will be found in a paper by Capt. W. H. Hare, R.E., on "The Engineer Arm in Continental Armies," vol. xxix, p. 1159.

² The Bavarian companies have five companies each.

An Army Corps bridge train has, moreover, attached permanently from the corps pioneer company a force of 2 Officers and 62 non-commissioned officers and men, with 2 horses, so that the total strength of the bridge train amounts to 193 of all ranks.

Each Divisional bridge train has the following establishment:—

1st Lieutenant	1
2nd Lieutenant	1
Sergeant-major.....	1
Sergeant	1
Non-commissioned officers.....	5
Lance-corporals	3
Musicians	2
Train soldiers	40
Total	54

The bridging material, &c., accompanying each of these trains is conveyed as shown below:—

Divisional.	Corps.
1	1 2-horse baggage wagon.
1	2 4-horse wagons with rack-sides.
3	— 4-horse tool wagons.
2	2 6-horse wagons with trestles.
6	26 6-horse wagons with pontoons and baulks.
1	2 6-horse wagons with tackle and pontoon appliances.
Total 14	33 vehicles.

The number of horses for a Divisional bridge train is 88, and for a corps train 223, and the lengths of bridge which can be formed by these trains are 36·5 metres and 122 metres respectively. The total length of bridging material which accompanies a German Army Corps amounts, therefore, to 195 metres, or 215 yards.

The fourth or Miner Company in most Army Corps is expanded on mobilization into three fortress companies, i.e., a second miner company and a reserve company, which remain in the Army Corps district unless required to take part in a siege, but in the Guard and in the IVth and VIIIth Corps it is the duty of this company to furnish the Field Telegraph Divisions, particulars as to which are given below.

The field pioneer companies, whose war strength has been already mentioned, are accompanied by four wagons, viz., two four-horse wagons (one for tools and one for powder and guncotton), and two two-horse wagons (one baggage wagon and one sutler's wagon).

Field Telegraph Detachments.—Each field telegraph detachment which is formed consists of 4 Officers, 1 Surgeon, 11 employes, and 137¹ men, with 76 horses and 14² vehicles. The length of line which can be constructed by a telegraph detachment is 36 kilometres (22 miles), and the appliances for ten stations are also conveyed.

¹ 47 of these men, with 1 Officer, belong to the train.

² 6 six-horse telegraph equipment wagons; 2 two-horse office wagons; 3 two-horse officials' wagons; 2 four-horse wagons with rack-sides; 1 two-horse baggage wagon.

RAILWAY TROOPS.

Railway troops are not a branch of the pioneers in Germany, being under the railway section of the Great General Staff, but from the nature of their duties they are more closely allied to the pioneers than to any other branch of the Service, and it is from this source that most of the railway Officers are obtained.

The railway regiment which exists in time of peace¹ consists of two battalions, each of four companies, but on the outbreak of war this organization disappears, the largest unit then employed being the company. Companies of railway troops in peace-time are employed in various works of construction, and the repair of lines which have been destroyed, as well as in ordinary railway work, but the companies which are formed on mobilization have distinct functions to perform, being classed as construction companies, management companies, and works companies.

It is the duty of a construction company to repair as rapidly as possible the injuries which a retreating enemy may have caused to the railway lines, to lay fresh lines where required, and to render unserviceable any lines which it may be necessary to abandon to the enemy. Companies of this class therefore take the field with troops of the first line, and march among the leading troops. They are formed from the peace establishment of the regiment, and from the reservists and landwehr men who have been trained in its ranks.

Railway management companies are employed to take the place of the civilian officials on a captured line, and are also utilized for working the railway traffic immediately in rear of the field army. A company is considered to be sufficient for the management of a line of railway from 45 to 60 kilometres in length (28 to 37 miles), two or more companies being united under the same inspection. The *personnel* of the railway management companies is mainly obtained from the reserve men of the regiment, with the addition of some Officers, non-commissioned officers, and men from the peace establishment, but all railway employes in Germany who belong to the reserve or landwehr can also be ordered to serve in these companies, irrespective of the arm of the Service in which their colour service was passed, so that it has been calculated that the total number of men available is not less than 20,000.

Railway works companies furnish the *personnel* necessary for the loading and unloading of trains and the storing of goods in the railway depôts.

The establishments of these different companies are as follows:—

	Construc- tion.	Manage- ment.	Works.
Captain	1	1	—
1st Lieutenants	2	1	1
2nd Lieutenants	6	4	1
Assistant-Surgeon	1	—	—
Paymaster	1	—	—
Sergeants-major	2	2	3
Sergeants	6	12	3
Non-commissioned officers	17	27	9
Lance-corporals and privates	175	159	186
Train soldiers (Officers' grooms)	11	6	2
Hospital assistants	1	—	—
	223	212	205

¹ It is stated that it is the intention of the German Government to double the strength of the railway troops and form a brigade of 2 regiments.

A construction company has also, when advancing with the Army, a train column attached, consisting of 1 non-commissioned officer and 9 men, with 16 horses and 5 vehicles.¹ When the advance is on a line of railway, a special train for bringing up railway plant is attached to each company.

The four 2nd Lieutenants of a management company would be employed as station masters, while the sergeants and non-commissioned officers would supply the engine-drivers, guards, signalmen, &c., required for the working of the line, the privates acting as porters or cleaners of locomotives and carriages.

VI.—TRAIN AND DEPARTMENTS.

Each Army Corps in the German Service includes a train battalion which in time of peace consists of two companies, a depôt and a section of workmen. A bakery section is also attached, and when mobilization is ordered these units are largely increased by the addition of reservists, and are given a very much wider development than might be expected from the peace establishment maintained. The train battalion in peace has only a strength of 12 Officers, 46 non-commissioned officers, 30 lance-corporals, 138 privates, 126 horses, and 24 vehicles, but in time of war it is expanded into the following units, viz., 5 commissariat columns, 5 wagon-park columns, 3 bearer companies, a field bakery train, and in some cases a reserve bakery train, with a depôt of horses.

The establishments of the more important of these units are as follows:—

Commissariat Column.—Establishment of a commissariat column (Proviant-Colonne):—

Captain	1
Second Lieutenant.....	1
Paymaster	1
Veterinary Surgeon	1
Farrier	1
Sergeants-major.....	2
Sergeants	2
Non-commissioned officers	7
Lance-corporals	16
Musicians	2
Privates (tradesmen).....	8
Train soldiers.....	76

118

The vehicles in which the commissariat stores are transported are 30 four-horse provision wagons, with 1 four-horse reserve wagon and a six-horse field forge, the total number of horses allotted to a column being 167.

The whole of the wagons for the commissariat columns of the Army Corps, as well as for most of the other formations into which the train battalion is expanded on mobilization, are kept at the train depôt;² and in order that these vehicles may be in thoroughly serviceable condition at any given moment, it is the practice to "mobilize" certain of the wagons every year, in the same

¹ 2 four-horse tool wagons; 1 four-horse wagon with rack-sides; 1 two-horse baggage wagon; 1 two-horse cabriolet.

² These depôts are established at the following places: Guard Corps, 1st depôt, Berlin, 2nd, Liebenwalde; I Corps, Königsberg; II, Alt Damm, near Stettin; III, Berlin; IV, Neustadt, a suburb of Magdeburg; V, Posen; VI, Breslau; VII, Münster; VIII, Coblenz; IX, Rendsburg; X, Hanover; XI, Cassel; XII, Dresden; XIII, Ludwigsburg; XIV, Carlsruhe; XV, Strasburg; ditto, supplementary, Metz; I Bav., Munich, ditto, supplementary, Ingolstadt; II Bav., Wurzburg; 25th Division, Bessungen.

way as portions of each battery of artillery are annually mobilized. These wagons are fully loaded with the stores which they would have to carry on service, and in order that no time may be lost in this work, not only is there on every package which is to be conveyed¹ a label showing the wagon and the part of the wagon where it is to be placed, but in every wagon the list of contents shows also in what storehouse and press the articles are to be found.

Two commissariat columns are attached in time of war to each infantry Division, the fifth column being for the corps artillery and other corps troops, and it is calculated that four days' supplies for the Army Corps can be thus conveyed. During an advance these columns follow the troops to which they are attached, and furnish them with supplies when closely concentrated for action, being also employed for the removal of the sick and wounded. When the Army is stationary the transport of these columns is utilized for bringing up supplies from the nearest railway station or advanced dépôt, but it cannot be taken for any other purpose except on the order of the General Commanding the Army Corps.

Wagon-Park Columns.—Besides the commissariat columns there are for each Army Corps the same number of wagon-park columns (*Fuhr-Park-Colonnen*) and also a sixth column which is for service on the line of communications. The establishment of one of these columns is similar to that of a commissariat column, but there are 105 train soldiers, and the total of all ranks is 142. Each of these columns has 82¹ vehicles and 205 horses, and is intended to convey a six days' supply of forage and flour for the Army Corps, so that counting the 3 days' iron ration which each soldier carries and one day's ration carried in the company wagons, provision is thus made for the conveyance of 8 days' supply for each man, besides flour for 6 days more, and forage for each horse for either 7 or 9 days, according as supplies for 1 or 3 days are carried with the troops. If the wagon-park columns were loaded exclusively with provisions, supplies for 9 days might be sent forward by this means, and if these columns were employed only in conveying forage, the number of days' supply thus carried for the horses of the Army Corps would be 7.

It is to be observed that the wagons required for these columns are not kept in store, but large contractors bind themselves annually to place at the disposal of the Government the required number of covered wagons the instant hostilities may break out. No such arrangements are necessary for the supply of horses, as these are obtained by requisition.

Bearer Companies.—The establishment of a bearer company (*Sanitäts Detachment*) is as follows:—

Captain	1
First Lieutenant	1
Second Lieutenant	1
Staff Surgeons	2
Assistant Surgeons	5
Field apothecary	1
Paymaster	1
Hospital assistants	8
Sergeants-major.....	2
Sergeants	5
Non-commissioned officers	12
Lance-corporals	19
Musicians	2
Privates (stretcher bearers).....	165
Train soldiers	25

250

¹ 80 two-horse wagons, and 2 two-horse squadron baggage wagons.

There are in all 45 horses with a bearer company, and 12 wagons,¹ exclusive of a two-horse sutler's wagon which accompanies each of these units.

One of these bearer companies is attached to each infantry Division, the third being at the disposal of the Army Corps Commander, but under ordinary circumstances attached to the corps artillery.

The men who are employed in the bearer companies are specially selected for this duty, a certain number of privates in their second year of service being permitted each year to pass from the line into this branch of the service. The men so selected must be of superior attainments in order that they may profit by the special instruction which is given to them, and none but men of the best character are taken for this employment. Their training includes instruction in finding wounded men, with which object they are practised in discovering some of their comrades who are sent out previously to hide themselves in holes and bushes such as wounded men might crawl into, and they are moreover taught how they can recognize whether an apparently dead man is or is not actually a corpse. The modes of resuscitating those who are thus to all appearance dead are explained, as well as the proper ways to stop bleeding, while carrying the wounded so as to cause them the least amount of pain is practised by making the stretcher bearers march out of step.

Ambulances.—There are several patterns of ambulances used in the German service, the older description carrying 2 men badly wounded, lying down, or 3 men sitting up, with 7 stretchers, and the new pattern, 4 men lying down, 2 men sitting up, and 8 stretchers. With each bearer company there are, therefore, either 56 or 64 stretchers according as the equipment is of the old or new pattern.

Field Bakery Train.—The field bakery train, formed on mobilization in each Army Corps, has a strength of 115 of all ranks, with 15 horses and 2 vehicles.² This train is composed of two sections, the men in one section being exclusively bakers, while those in the other are butchers, cattle-drivers, masons for the construction of ovens, &c. Travelling ovens are not supplied to Army Corps bakery trains, but two such vehicles form part of the equipment of a reserve bakery train, of which units there is one for each separate Army. The Army Corps bakery trains do not follow the corps closely; being generally left at some convenient spot, and moved as seldom as possible.

Horse Depôts.—Horse depôts are maintained to make good casualties without delay, and consist of 115 of all ranks, with 201 horses and 2 baggage wagons.

ARMY DEPARTMENTS.

In the German Army the branches of the Service which we know by the name of the Departments of the Army are the Commissariat, the Medical Department, the Veterinary Department, the Legal Department, the Postal Department, and the Chaplain's Department.

Commissariat.—The commissariat (Intendantur) consists of two classes of Officers, viz., the administrative Officers who are attached to the Staff of Divisions or Army Corps, and the executive Officers who belong to the commissariat and wagon-park columns.

The duties of this Department are divided into four branches, viz., accounts; subsistence; clothing; garrison and hospital administration. Under the first of these branches are included the paymasters who are doing duty with the various corps, and who relieve the company commanders and others in analogous positions of all trouble with regard to the men's accounts.

¹ 8 two-horse ambulances, 2 two-horse pharmacy wagons, and 2 two-horse baggage wagons.

² A four-horse bakery equipment wagon and a four-horse reserve wagon.

The subsistence branch attends to the contracts for provisions and forage, and the proper maintenance of the stock of rations required for the Army on mobilization, while the clothing branch controls the action of the regimental clothing committees,¹ and the remaining branch concerns itself with hospitals and barracks.

The Corps Intendant is in some respects directly responsible to the War Minister, and is thus partially independent of the General Commanding the Army Corps; but this independence has much less practical effect under the purely military administration of the German War Office than in countries where the War Minister and his subordinates are civil functionaries.

Medical Department.—The Medical Department has also a certain number of administrative Officers who serve on the Staff of Army Corps and Divisions, while the great bulk of the *personnel* of this branch of the service is employed directly with the troops. The numbers of those thus employed have been given with the staffs of the various regiments, &c., but in addition to these a very large proportion of the medical profession in Germany is in time of war required for service in the field hospitals.

Field Hospitals.—These hospitals are each calculated for the reception of 200 patients, and have the following establishment:—

Surgeons	5 ²
Field apothecary	1
Hospital inspector	1
Accountant	1
Hospital assistants	9
Non-commissioned officers	5 ³
Hospital orderlies	12
Cook	1
Trumpeter	1
Train soldiers	19
	<hr/>
	55

With a field hospital there are 32 horses and 6 vehicles,⁴ the Surgeons being all mounted.

For each Army Corps there are 12 such field hospitals, and these draw their equipment on mobilization from the train battalion of the corps. In addition to these, however, there is established in time of war a hospital reserve depôt for each army in the field, and from this depôt the field hospitals draw supplies of hospital stores as may be required, and replace casualties which may occur in the *personnel*.

The line of communications (Etappen) hospitals have an establishment of about three times the strength of a field hospital,⁵ but have no horses or vehicles. The Surgeons, however, are allowed train soldiers to act as grooms for their private horses.

The German Medical Department is supplied with Officers partly from those who have been trained at the military medical institutions with the object of joining the Department, and partly from those young men who intend to practise afterwards as civil physicians or surgeons, and who fulfil their military obligations in this capacity.

Veterinary Department.—The Veterinary Department is represented by the

¹ See page 352.

² 1 Surgeon-major, 1 Surgeon, and 3 Assistant Surgeons.

³ 2 of these belong to the train.

⁴ 3 four-horse utensil wagons; 2 two-horse ambulances, and 1 two-horse baggage wagon.

⁵ Each of these hospitals has 19 Surgeons.

Veterinary Surgeons who are attached either to the Staff of the Army Corps, or to the various regimental units. Candidates for this branch of the Service have usually been educated at the Army Veterinary School in Berlin.

Legal Department.—The Legal Department consists entirely of the auditors attached to the Staff, two of these officials being allotted to each infantry Division, and one of superior grade to each Army Corps. They have duties to perform which are somewhat analogous to those of a Judge Advocate in our Service, but these duties include taking part in the preliminary investigation, by which a decision is arrived at, whether the case should or should not be sent for trial.

Postal Department.—The Postal Department is a small one, but it has been organized with quite as much care as those branches which are of more direct importance to the well-being of the troops. To each Division and to the corps artillery is attached in time of war a section consisting of 5 postal officials, 13 men, 12 horses, and 2 two-horse wagons, and to each Army Corps a somewhat larger section, viz., 4 officials, 17 men, 19 horses, and 4 two-horse wagons. These postal sections do not exist in peace-time as part of the normal organization of the German Army, but in each large garrison there is a military post office for the transmission of official correspondence which would otherwise be sent by orderlies. To this little post office, which is established in a central position, each corps sends an orderly once a day with the outgoing letters, and the same orderly brings back any letters which are addressed to his corps, this military post office thus resembling a bank clearing house. The business of the office is managed by two lance-corporals who are relieved every three months, so that without drawing on the resources of the Imperial Post Office, the Army has always available a number of soldiers who are trained in the work of sorting and dispatching correspondence. When on service the field post office forwards both official and private correspondence as well as post-cards, newspapers, and money orders.

Chaplain's Department.—Chaplains are attached to infantry Divisions in the proportion of two to each, and one of the corps artillery, making a total of five for each Army Corps. They belong to the Lutheran Church, but in the case of twelve Divisions which are territorially associated with districts where the prevailing religion is the Roman Catholic, an additional chaplain of this denomination is appointed.

VII.—RECRUITING.

In Germany every man is liable to military or naval service, and cannot free himself from this liability either by purchasing exemption or by providing a substitute. To this rule exceptions are made only in the case of members of reigning houses, and in time of peace in favour of the sole supporters of families, or of parents who are incapable of work. As has been mentioned in an earlier part of this paper, the liability to military service commences at 17 years of age, but as a rule men are not required to join the Army till they are in their 21st year. As the number of young men in the German Empire who annually attain the age of 20 years is calculated to be over 400,000, while the contingent fixed for the Army is only 151,000 exclusive of volunteers, it is plain that this rule of furnishing personal military service to the State affects considerably less than half of the community in time of peace. Those, however, who are thus exempted are not the most desirable recruits, as the men who are to serve in the ranks are not selected till all those who are physically unfit, or undersized, have been eliminated. The number of men who are absolutely unfit to be made use of in any military capacity is comparatively small, and of those who appear unfit or undersized in their 20th year, many are found suitable a year or two later.

One per cent. of the population is taken as the basis of calculation for the strength of the Army in peace-time, and this is maintained very accurately, as the population of the German Empire in 1884 was ascertained to be 43,234,000, while the establishment of the Army for 1885-86 amounts to 457,705 of all ranks.

The number of recruits who are to join each unit is annually fixed by an Imperial Decree, the numbers at present standing as follows :—

For the Guards and 7 specified infantry regiments of the line	225 per battalion.
For all other infantry and rifles	190 "
For each cavalry regiment at least	150 per regiment.
For each horse artillery battery at least	25 per battery.
For each field battery at least	30 "
For the foot artillery regiments Nos. 8 and 10....	200 per battalion.
For all other foot artillery regiments	160 "
For the railway troops at least	135 "
For each train company { for three years' active service.....	15 per company.
{ for half year's service	44 "

The following table, the figures of which relate to the year 1883, will explain the manner in which the recruiting operations are carried on :—

Age.	Morally unfit.	Physically unfit.	Passed to Ersatz Reserve.	Taken for service in the ranks.	Total.	Volunteers.]
20 years	307	35,066	14,036	66,102	116,111	13,955
21 "	298	11,772	9,503	37,114	58,687	2,336
22 "	289	17,613	121,402	36,883	179,192	1,535
Above 22 years.	458	3,424	4,118	1,713	9,713	2,470
Total	1,352	68,475	152,059	141,817	363,703	20,305
Percentage	0.4	18.8	41.8	39.0	90.9	5.1

In addition to those who are included in this table, there were in the year 1883, 15,877 young men who had emigrated without permission and thus escaped being drawn for military service.

Those who are held to be morally unfit to serve their country are men who have been sentenced to confinement in a house of correction, and whose offences are of such a nature that it is hopeless to expect that they will turn out reformed characters. Those, however, who at the time when they should be brought forward to take part in the drawing, are undergoing imprisonment of more than forty-two days, or who have been deprived of their civil rights, are not thereby exempted, but are classed among those who are temporarily unfit, and are brought up again a year later with those whose defect was physical rather than moral.

A man is not considered to be physically unfit unless he is maimed or so deformed as to be evidently incapable of employment in any military capacity as long as he lives. The subsidiary services of the Army are so varied that the number of men who are thus judged incapable of serving is not very large, as in such capacities men may be usefully employed who could not be allowed to take their places in the ranks.

In deciding on the fitness of a man to serve in the ranks the conditions first

looked to are chest measurement and height. No one is accepted whose chest measurement is below 80 cm. (32 in.) while the minimum heights of recruits for the different branches of the service are as follows :—

Guards : 170 cm. (5 ft. 7 in.) one half to be 175 cm. (5 ft. 9 in.) and in exceptional cases men of 167 cm. (5 ft. 6½ in.) are taken.

Infantry, rifles, and train 157 cm. (5 ft. 2 in.).

Cuirassiers, lancers, and foot artillery, 167 cm. (5 ft. 6½ in.).

Dragoons, hussars, field artillery, pioneers, and railway troops, 162 cm. (5 ft. 4 in.). In exceptional cases men of 157 cm. (5 ft. 2 in.) may be taken for dragoons and hussars.

In certain branches of the Service there is also a maximum standard of height. Thus recruits for the rifles, cuirassiers, lancers, train, and horse artillery must not exceed 175 cm. (5 ft. 9 in.) while the limit for dragoons and hussars is 172 cm. (5 ft. 7½ in.).

The minimum limit of 157 cm. (5 ft. 2 in.) for infantry may appear low to us, considering that the minimum limit for our infantry is 5 ft. 4 in., and we are disposed to regard one of our line regiments as decidedly undersized if it has in its ranks many men under 5 ft. 6 in., but it is to be noted that the minimum height for recruits is higher in Germany than in any other Continental army.¹

Men in Germany who are below the prescribed standard of height, but who do not appear to have yet reached their full stature, are put back as being temporarily unfit, and have to present themselves again when they are a year older. If by that time they have grown sufficiently, they are admitted to the lot drawing, but if still undersized they are put back for another year, when if suitable they are accepted, but if unsuitable they are passed into the Ersatz Reserve, and are not called on to join the standing army.

Men may be passed into the Ersatz Reserve the first, second, or third time that they present themselves, but as may be seen by the table on page 305, the great majority are retained as temporarily unfit until they are 22 years of age, not being sent to the Ersatz Reserve till it is absolutely certain that they cannot be made available for the active army.

In the same way men who at 20 years of age claim exemption by reason of being the sole supporters of their family, &c., are not permanently excused on proving this to be the case, but must present themselves each year till they are 22 and show to the satisfaction of the Recruiting Commission that their circumstances have not altered in the meanwhile.

The Ersatz Reserve, which receives all the young men who from any of these causes are not taken into the active army, keeps their names on its lists till they have completed their 31st year, and during this time they are liable in case of war to be called on to fill vacancies in the ranks of the active army, thus taking the places of men of their own age. This Ersatz Reserve is, however, divided into two classes, into either of which a man may be passed according to his physical fitness for military service. Those who are best suited for taking their place in the ranks, but who have not been drawn for the active army, either by reason of being below the minimum height, or because they obtained a high number in the lot drawing, are placed in the first class, while those who are less eligible form the second class. Neither of these classes received any military training whatever in former years, but in 1880 authority was obtained from Parliament for the calling out of a portion of the first class, so that in the event of war, when these men would be required for service, they might not be absolutely ignorant of military duties. The number of the first class to be thus trained was calculated on

¹ Austria, 5 ft. 1½ in.; France, 5 ft. 0½ in.; Italy, 5 ft. 1½ in.; Russia, 5 ft. 0½ in.

the basis of the requirements of the army on mobilization being supplied by five annual contingents, and as this is taken at about 100,000 the number annually called up for training since 1881, when this system was commenced, has been about 20,000.¹ The total number of men who join the first class annually is, however, about 60,000, so that two-thirds of this class remain without any military instruction. Those who are called up have to attend for a period not exceeding ten weeks for their first training, four weeks in their second year, and a fortnight in each of the two succeeding years.

Under ordinary circumstances a man who has been passed into the first class of the Ersatz Reserve remains in it for five years and then joins the second class till he completes his 31st year, but in the case of those who have been trained as mentioned above, there is no transfer to the second class, these men remaining in the first class, and consequently liable to immediate military service, up to the date when they cease to belong to the Ersatz Reserve. The number of partially trained men therefore which may eventually be obtained from this reserve will amount to considerably over 150,000. Men of the first class of the Ersatz Reserve are called up for training in the following order: those are first taken who have drawn high numbers, and then the remainder in proportion to their fitness for military service. On completing his 31st year a man passes into the *landsturm* till he is 42 years of age, when his military liability finally ceases.

Ersatz Commissions.—In Germany the recruiting business is managed by what are called Ersatz Commissions. For each regiment of infantry (other than the Guards, who are recruited throughout the Empire) there is a recruiting district, and this district is divided into two *landwehr* battalion districts, which are in their turn divided into four company districts.² An Ersatz Commission to deal with the recruiting business is assembled every year in each of the 275 *landwehr* battalion districts, and is composed of the commander of the *landwehr* battalion, an administrative official, some civilian members, and an infantry Officer.

This Commission meets in the early part of each year, and all the young men in the district who become liable to military service during the current year have to appear before it. They are examined medically, and any men who claim exemption, or who are desirous of postponing their service, lay before the Commission the grounds on which their application is based. All simple cases are there and then decided, but any points which the Commission considers to be beyond its powers are referred to the Ober-Ersatz Commission, of which there is one for each infantry brigade district.

The Ersatz Commission having heard the various petitions, and having decided what men shall be put back for a year on account of want of height, &c., and what men shall be drafted at once into the Ersatz Reserve, proceeds to assign to each of the remaining young men his place on the district recruiting list. This is done by lot drawing, the requisite number of recruits being eventually taken from those who draw the lowest numbers.

In order that no young man shall escape coming before the Ersatz Commission, this body is supplied each year with an extract from the register of births, showing the names of those within the district who have become liable to military service since the last return; and all who have become domiciled within the district, or who may be living in it without being domiciled, are bound to report themselves to the Commission on attaining the military age. Any young man who neglects to report himself, or who fails to present himself before the Commission when required, forfeits his right to draw lots,

¹ In 1881 nearly 40,000 were called up, but in 1882 and 1883 the number was 21,000, and in 1884, 18,000.

² Particulars as to the *landwehr* battalion districts will be found in No. 457, "Revue Militaire de l'Étranger," May 1879.

and is in the end, unless he quits the country, drawn for service before all other conscripts.

Ober-Ersatz Commission.—The Ober-Ersatz Commission, which, as has been stated, decides matters which are beyond the competence of the ordinary Ersatz Commissions, has for its president the infantry brigade commander, the members of this Commission being an administrative official and a civilian, with a Field Officer of the Guard who is attached with the special object of looking after the recruiting for the Guard Corps.

The number of these Ober-Ersatz Commissions corresponds to the number of infantry brigades, exclusive of the Guard, and is consequently seventy-one, while the number of ordinary Ersatz Commissions is about four times as many.¹

The Ober-Ersatz Commissions assemble every year in the summer, and visit each of the districts in which the ordinary Ersatz Commissions have held their sittings in the earlier part of the year. All young men who have not been put back by the ordinary Commission must then appear again, and after a further medical examination, and a consideration of the cases left to their decision, the Ober-Ersatz Commission proceeds to levy recruits according to the requirements of the service, taking care to select a certain number of supernumeraries in order to be prepared for casualties.

In levying recruits for the Army the young men are selected in the following order:—Those who have neglected to enrol their names, or failed to appear on a former occasion, are first taken; then those who in the previous year drew low numbers but from any cause were not taken; then those who draw lots in the current year, in the order of their drawing. If the numbers thus available are insufficient, the Ersatz authorities can draw on some young men whom they have retained at disposal from previous years, and if these should still leave the number below the contingent required from the district, recourse is had to the supplementary district, of which there is one for each Army Corps, to make up the deficiency.

Any appeal from the ruling of the Ober-Ersatz Commission is decided by the Army Corps Court, which is composed of the General Commanding the Army Corps, and a civil functionary, and the final appeal rests with the Minister of War of the State in which the recruiting district is situated.

The men who are thus selected for service by the Ober-Ersatz Commissions are sent to their homes, on furlough, and handed over to the landwehr authorities until they are required to join in the autumn. Before they are sent to join their corps the commander of the landwehr battalion district satisfies himself that each recruit is supplied with a good and sufficient stock of wearing apparel; and where the man is not so supplied, and is too poor to obtain the necessary clothing for himself, it is furnished by the civil authorities, and the cost paid by the parish or district to which the man belongs, if his relations are unable to meet the expense.

VOLUNTEERS.

In the German Army there are two classes of volunteers, viz., three-years and one-year, and any young man who has reached the age of 17 years may, with the consent of his parents or guardians, apply to enter the Army as a volunteer of one or other of these classes.

Three-Years Volunteers.—Those who volunteer for three years apply to the civil president of the Ersatz Commission of their district, and on proving that they are of blameless character and free from all civil ties they may be accepted as candidates. The advantages which a young man gains by

¹ As special arrangements are adopted for recruiting in Alsace and Lorraine, the numbers do not correspond exactly.

volunteering for three years are that he can begin his service if it suits him two or three years before the normal age, and that he can select the particular arm and regiment in which he wishes to serve. For the cavalry the period of service for volunteers is four years instead of three, but in consideration of the extra year so passed in the ranks, their time of service in the *landwehr* is reduced by two years.

In the infantry of the line the number of three-years volunteers annually received must not exceed ten per company or forty per battalion, and if there is no vacancy in the corps for which a young man volunteers, his name is put down for it, and he is sent on furlough until a vacancy occurs. In the cavalry and rifles, however, there is no restriction to the number of this class of volunteers, and the Commanding Officer may take as many volunteers as he chooses, provided he does not go beyond the peace establishment laid down. As the three-years volunteer while in the ranks differs in no respect from any other soldier who is fulfilling his obligation to serve the State for a like period, this class of volunteers is really only a class of soldiers who have entered the service by voluntary enlistment instead of by conscription.

One-Year Volunteers.—The one-year volunteer on the other hand stands in a totally different position. He is essentially a supernumerary, and in consideration of having only one year's service in the ranks, he has to pay the whole of his own expenses, and costs nothing to the State. For a young man to enter the Army as a one-year volunteer he must apply when he is between the ages of 17 and 20, and in addition to the consent of his parents or guardians, and a certificate of irreproachable conduct, he must produce a certificate of intellectual attainments from certain specified schools or colleges, or failing this must pass an examination which will prove him to be possessed of a corresponding amount of knowledge.

The number of one-year volunteers who can be received is limited to four per company of infantry, and three per battery of artillery, but the number admissible into a squadron of cavalry is not fixed. Commanders of squadrons, however, are not as a rule desirous of having many one-year volunteers under their orders, as they have already a large proportion of the four-years volunteers, and it is not always certain that a young man can be turned into a creditable trooper in a year.

While a three-years volunteer can enter on his service before the normal age of 20 years, if it suits his convenience, the one-year volunteer has the additional privilege of postponing the date of his entry into the Service till his 23rd year, if he wishes from any reason to delay the commencement of his military service. Of course a young man cannot thus postpone his entry unless when he is 20 years of age he has satisfied the Ersatz Commission as to his fitness to be received as a one-year volunteer, and he must at the same time have selected the capacity in which he proposes to serve. It is by no means obligatory on a one-year volunteer to serve exclusively as a combatant, as in the event of his being a medical or veterinary student he may be employed while in the Army as a Surgeon or Veterinary Surgeon, but it is in all cases required of him that he should pass six months of his time in the ranks as a soldier.

The one-year volunteer in time of peace costs the State nothing. He has to supply himself with clothing from the regimental stores on payment of its value, and for the use of the necessary articles of equipment he is charged at a fixed rate. If mounted, the horse he rides is his own property and must be kept at his own expense, while everything spent on his own maintenance must come out of his own pocket. The sum ordinarily required amounts to about 103*l.* a year, but if from any cause a one-year volunteer, in the course of his year's service, finds himself unable any longer to pay his expenses, he may cease to be a volunteer and can become an ordinary soldier. Each month

which he has passed as a volunteer is then credited to him as three months ordinary service, and the time which he has to serve in the ranks to complete his time with the colours is calculated on this basis.

A one-year volunteer, after his twelve months are ended, passes into the reserve, having been given a certificate of qualification for the rank of Officer or non-commissioned officer, if while serving he has shown himself fitted to be something better than a private. When he obtains the certificate of Officer, he does not at once become a reserve Officer, but ranks only as a non-commissioned officer, and during the year following that in which he served with the colours, he must do duty as such, usually in his old corps. If after four weeks' duty as a non-commissioned officer he is considered by the commander fit to be an Officer, he is employed in this capacity for four weeks more, and if he passes this test satisfactorily he returns home and is eventually gazetted as a reserve Officer. When a one-year volunteer is desirous of being not merely classed a reserve Officer, but enrolled as a reserve Officer of the particular regiment in which he served, the examination as to his fitness is very stringent; as the Officers of the regiment take good care that a man who may thus join them for service in the field shall be thoroughly competent to take his place as their comrade. It should be observed that the fitness of any man to be a reserve Officer is determined not merely by his military attainments but also by his social qualifications, and that no one is accepted who is not considered satisfactory by the Officers of the landwehr battalion of his district.

The period of service in the reserve is the same for a one-year volunteer as for anyone else, viz., four years, after which he passes in the usual course into the landwehr and landsturm.

VIII.—MOBILIZATION.

Before explaining the steps by which the German Army is mobilized, it will be as well to set down clearly what is meant by this term. No army can be maintained at all times in a state of complete readiness for war, as the expense of permanently keeping up such quantities of draught animals, &c., as are necessary to make a modern army "mobile," would be beyond the resources of any nation. Moreover, as for garrison duty in time of peace a comparatively small force is required, while for modern warfare, at all events in countries where railways exist, armies cannot be too large, it follows that on passing from a peace to a war footing there must be a very great and very rapid expansion of the military force, which must necessarily involve such considerations as the clothing, arming, equipment, and general organization of the men thus added to the existing army, before the whole can be regarded as an efficient fighting machine. In this country, we have had no experience of mobilization. We have on various occasions called out our Reserves, but the wars in which they have been employed have been of a very different character from the life and death struggle to which the mobilization of a Continental Army is usually the prelude. How we should fare if required to carry out a real mobilization in the face of an imminent invasion is a question which it is not easy to answer satisfactorily, and therefore in speaking of mobilization as an abstract operation, we must simply regard the steps which must be taken by any Continental Power to prepare itself for a great war. These steps may be conveniently considered under two heads, viz.: those necessary for rendering the army of the first line ready for immediate service, and those necessary for creating troops of the second and third lines, and for defending the mother country.

To render the army of the first line fit to take the field, the cadres which exist in time of peace must be brought up to the war establishment, and certain new units must be formed. This involves the assembly of the reserve

men, who are living at home engaged in civil pursuits, arranging for sending them to join their corps, as well as clothing, equipping, and arming them on arrival.

Secondly, there is the formation of the staffs necessary for the army which is to take the field, as well as the large administrative staff required; and

Thirdly, the army has to be supplied with horses.

In considering how far Germany is prepared to carry out these operations, the most important point to be observed is that each of the Army Corps of which her army consists is an absolutely independent unit, whose commander, on receipt of the orders to mobilize, can act without further reference to Berlin. By this system of decentralization whatever operations are required can go on simultaneously in each of the Army Corps districts, and the Army Headquarters in Berlin are left free for the transaction of more important business, confident that by a certain date the mobilization of every corps will be complete.

Completion of Cadres.—Turning now to the completion of the cadres from the reserves, which has been mentioned as the first step taken on the receipt of the mobilization orders, it is to be observed that in this respect Germany is advantageously situated. Her population is homogeneous, and tolerably evenly distributed, so that in each Army Corps district, the reserve men are at no very great distance from the centre at which they must report themselves. These centres are usually the headquarters of the landwehr district, but if it is considered that these places would become unduly crowded, the Army Corps Commander appoints additional rendezvous, which are notified to the Officers concerned. In all cases, however, the necessary arrangements are completed in time of peace, and as little as possible is left to be done under the strain and hurry of the mobilization. Thus, the landwehr battalion commander has ready in case of need the *calling out* orders addressed to each individual reservist and landwehr man within the district, so that, on inserting the date, these orders specifying where the man is to report himself can at once be dispatched. Within twenty-four hours from the time when this order is received the man must be at the appointed rendezvous.

Before the men arrive at the rendezvous, however, each regiment sends a detachment¹ to this centre to receive the reservists, and pass them on by batches to the regimental headquarters. Here arms are kept in store for the regiment on a war footing, and from these stores the reservists are supplied, being afterwards furnished with clothing from the regimental clothing stores, in which perfectly new uniforms for the unit on war strength are always kept up.

The reservists who join each regiment or other unit are furnished from those who formerly served in its ranks, connection in peace-time being maintained by the rule, that all men while in the reserve are liable to be called out for two trainings of eight weeks each, these periods of training being passed with their old regiments at the time of the autumn manœuvres.

Comparing the peace and war strengths of the different units, it will be seen that the numbers which they have to receive on mobilization are as follows:—

Company of infantry.....	1 Officer	114 men.
Squadron of cavalry	— "	21 "
Battery of field artillery	1 "	72 "
Company of foot artillery	1 "	86 "
" pioneers.....	2 "	94 "
" railway troops	6 "	104 "

It will be noticed that the cavalry in Germany are much more rapidly

¹ Usually 1 Officer, 1 Surgeon, and 6 non-commissioned officers.

prepared for war than any other branch of the Service. By forming the fifth squadron into a *dépôt*, they can take the field four squadrons strong at very short notice; as the 96 men and 122 horses necessary to bring the four squadrons up to war strength might be supplied from the fifth squadron without waiting for the arrival of any reserve men. This, however, is not done under ordinary circumstances, it being considered sufficient that the cavalry should be ready to march on the third day of the mobilization.

Appointment of Staffs.—The second point which has been mentioned as a step in the mobilization of an army is the appointment of the staff. In Germany this is not left till war is imminent, but for every post which would have to be filled up on mobilization there is at all times an Officer nominated, so that when the occasion arises he at once steps into the place for which he has been selected, the duties of which have been perhaps for years the subject of his careful study.

It is needless to say that this does not apply to the staff of an Army Corps, Division, or brigade which is mobilized, as it is part of the system of the German Army that the staff of such units shall be composed in time of peace exclusively of those men who are best fitted to serve in the same capacities in time of war. Army Corps and Divisions, therefore, on mobilization take the field with exactly the same staff, with certain additions, which they have in peace, and at such a critical time as the outbreak of war there is no sudden or violent change in the system on which business is conducted.

Representative Administrations.—The departure, however, of the Army Corps with its entire staff would give rise to inconvenience in the transaction of business connected with the *dépôt* and other troops remaining in the Army Corps district, and it is therefore provided that on mobilization the ordinary staff shall be at once replaced by what are called representative administrations. In each corps these are as follows:—

- The Corps Commander with Staff,
- 4 Infantry Brigade Commanders,
- The Inspector of *Dépôt* Squadrons,
- The Commander of the Artillery,
- The Provincial Intendence with its branches.

The Officers who are to fill these various posts are all selected beforehand, and they commence work during the period of mobilization in order to become acquainted with their duties, but they do not exercise their functions actively till the Army Corps has moved off to the seat of war.

The staffs of such large units as Armies or cavalry Divisions which have no existence in time of peace must of course be assembled at the outbreak of war, but as the number and composition of the Armies which would be formed is dependent on the character of the enemy against whom hostilities are to be undertaken, and as the possible enemies of Germany are very few in number, the appointment of the staffs for the various cases is not a very complicated matter, and under any circumstances which may arise a complete staff is at all times ready for immediate service.

If the Officers selected for such duties are already holding commands or staff appointments, others hold dormant commissions to fill the posts which may thus be vacated, the Officers so chosen being generally taken from the half-pay or retired lists.

Supply of Horses.—The third point noted above is the supply of horses to the Army, and the steps necessary for carrying this out proceed simultaneously with the assembly of the men and the formation of the staffs. In order to form an idea of the magnitude of the operations involved in supplying the Army with horses to the extent required for service in the field, it may be mentioned that while in time of peace the number of horses maintained in

the Army is 96,000, the number required for war, supposing the whole of the military forces of the Empire to be mobilized, would amount to over 350,000, so that some 260,000 animals would have to be obtained. Of these, however, all would not be required at once on the outbreak of war, but even when those which can thus be dispensed with temporarily have been deducted, at least 150,000 must be found to meet the immediate necessities of the field troops. These horses are obtained by requisition, every animal in each district being enrolled and classed according as it is fit for riding or draught, and from these lists, which are revised every sixth year, the owners are summoned to send their animals to certain appointed centres for purchase by the military authorities. At each of these centres there is a Receiving Commission composed of one or two Officers, a veterinary surgeon, and some clerks,¹ and the horses presented are examined, and if considered suitable are purchased at a price determined by a Valuing Commission. As soon as the purchase is completed, the horses become the property of the State, and are handed over to the regimental escort parties who are waiting to receive them, as each regiment has assigned to it a definite centre where it is to obtain its horses in case of mobilization.

The numbers which the different units require to raise them from the peace to the war establishment are as follows :—

Infantry battalion	33
Cavalry regiment.....	122
Battery of horse artillery	154
Field battery	106
Company of foot artillery	6
Company of pioneers	18
Company of railway troops	28

The horse artillery is the arm which it is considered most important to supply with horses at the earliest date, so that it may accompany the cavalry Divisions to the front, and in case of necessity it is provided that these batteries should be supplied with horses from the field batteries of the same regiment, which have their deficiencies made good when the requisitioned horses begin to arrive. For the troops of the first line, it is considered that the necessary horses will arrive on the fifth day, and that within two days of their arrival they will be ready for any duty.

As improvements in the system are eagerly sought for, it is highly probable that on the next occasion on which the German Army is mobilized a considerable gain in rapidity will be noticeable; but as a proof of the excellence which was attained sixteen years ago, the following results of the mobilization of 1870 are interesting :—

Infantry of the line were ready on the 8th day.	
Guard	10th
Cavalry	3rd
Horse artillery	3rd
Field artillery	8th
Pioneers	8th
Train (1st Section) ²	10th
„ (2nd Section) ³	18th

The staff and military police, &c., were ready on the 8th day.

¹ These Receiving Commissions are detailed annually by the Corps Commander.

² Viz., 2 commissariat columns, 2 bearer companies, 4 field hospitals, and 1 bakery train for each Army Corps.

³ Viz., wagon-park columns and etappen columns.

In most cases the mobilization was very much facilitated by the circumstance that regiments drew both their reserve men and their horses from the district in which they were quartered, but in certain instances both had to join from a distance, and this must happen again to some extent unless, before the next German mobilization, Alsace and Lorraine have become thoroughly assimilated to the rest of the Empire. The great pressure on the railways, however, does not begin till after the corps are fully mobilized, when the strategic movement of the army to the theatre of war is commenced, and during the early days of the mobilization it would be quite possible for reserve men to move from one end of Germany to the other in nearly the same time that would be required for the journey under ordinary circumstances.

Strategic Concentration.—As soon as each Army Corps is fully prepared, it is sent forward to the theatre of war; by route march if the distance is short, and by train if it is more remote. Germany being well supplied with railways and rolling stock, there is at least one line of railway available for the conveyance of each corps in any given direction, and the strategic concentration of her armies can thus be carried out with the utmost regularity. The lines of railway which are used for the conveyance of the fighting units in the first instance serve afterwards for the supply of the corps, and the removal of its sick and wounded, a convenient station within the Army Corps district being established as a military traffic centre, to and from which all military trains proceed.

Having considered the steps necessary for placing the first line army in the field, we may turn to the other steps necessary for a general mobilization, viz., the formation of reserve and depot troops, and the armament of the fortresses.

Reserve Troops.—The term reserve troops includes the landwehr, the reserve rifle companies, reserve cavalry regiments, the reserve batteries, and, where they are not required with the Army Corps, the foot artillery regiments and pioneer companies. These troops, as a rule, are employed to garrison fortresses, to defend the line of communications, and to keep order within the Empire, but if necessary they can be pushed forward to reinforce the field army.

Landwehr.—The landwehr, as has been mentioned already, is a territorial force, in some respects resembling our militia, but composed exclusively of men who have already served in the ranks of the Army, and who are on the average about thirty years old. In time of peace only small cadres are kept up, and these are exclusively for the infantry,¹ but in time of war, units of cavalry, artillery, pioneers, and train are formed as well as infantry.

There are generally seventeen landwehr battalion districts for each German Army Corps, two such districts corresponding to each infantry regiment in the corps, and one district being in reserve. In the case of the large towns of Berlin, Breslau, and Cologne, these form reserve landwehr regiment districts, Berlin furnishing 4 battalions, and the others 2 each. The total number of landwehr battalions which could be thus raised would amount to 280, to which, however, must be added 18 battalions for the 9 regiments of Guard infantry, which have no recruiting districts, and two more for the 109th Baden Grenadiers, which is likewise without a district, so that the total number of landwehr battalions available would amount to 300.

There are two establishments for a landwehr battalion on war strength,

¹ At landwehr battalion headquarters, 1 Field Officer in command, 1 Lieutenant attached from the corresponding infantry regiment, 1 clerk, and 2 orderlies. In each company district there is also a district sergeant-major, a non-commissioned officer, and a private: total, 2 Officers and 15 men.

viz., 22 Officers and 802 men, and 22 Officers and 1,002 men; the latter being adopted when the magnitude of the struggle in which the country is engaged renders it necessary.

Fourth Battalions.—There is a further reserve of infantry for which no cadres are maintained, and of which no mention is made by the Germans, but which is recognized by French critics as likely to have a very real existence in the next war in which Germany is engaged. This force consists of the fourth battalions, which it is assumed would be raised in some or all regiments as soon a mobilization is ordered, and the grounds on which this assumption is based are as follows:—As the number of recruits which each infantry battalion receives annually is 190, the number received by the regiment is 570, and at any time there are 12 contingents available, viz., 3 in the ranks, 4 in reserve, and 5 in the landwehr. The total number would thus be 570×12 or 6,840, or, allowing for the normal decrease, 6,143. If from these only 3 battalions of the first line (at 1,026 each) and 2 battalions of landwehr (at 824 each) were formed, there would remain 1,417 thoroughly trained soldiers still available. It is known that it is the intention to fill up the depôt battalions, which will presently be mentioned, to a considerable extent with men of the Ersatz Reserve, and it is not likely that such a large body of trained soldiers would be left unemployed, it is considered that they would be formed into fourth battalions. If each regiment, however, were to raise a fourth battalion of the usual strength, the surplus remaining out of the twelve contingents would only be 391, and this would leave such a very small margin that it is considered probable that each regiment will only raise a half battalion. This view is supported by the fact that each regiment has in reserve clothing and equipment for two companies (see page 327), and there would therefore be no difficulty in the formation of these half battalions, whose number is calculated at 140,¹ thus furnishing, if necessary, 23 additional regiments of three battalions each.

Reserve Rifle Companies.—In addition to the landwehr infantry of the line there are reserve rifle companies to the number of one for each rifle battalion. These reserve rifle companies have no existence in time of peace, but the clothing and equipment necessary for them are kept at the headquarters of the battalion. When required for service the men are obtained from the reservists or landwehr men who formerly served in the rifle battalion, and should it be considered desirable to form them into reserve rifle battalions, four of the companies are combined for this purpose.

Reserve Cavalry Regiments.—It has been already mentioned that the fifth squadron of a German cavalry regiment becomes the depôt on mobilization, and in connection with every such depôt squadron one or two reserve squadrons are formed from the reservists and landwehr men who are available after the service squadrons have been brought up to war strength. Clothing, equipment, and saddlery for these squadrons are kept with the regiment in time of peace, and are issued by the depôt squadron on mobilization. The reserve squadrons, when organized, are formed into reserve cavalry regiments, each of four squadrons, and as the normal number of line cavalry regiments in an Army Corps district is five, it may be assumed that the number of reserve squadrons will be from eight to ten, and that on the average two reserve regiments will be formed in each Army Corps district.

Reserve Batteries.—The corps artillery regiment in each Army Corps forms on mobilization three or four reserve batteries, which constitute the Divisional artillery of the reserve Divisions. The *matériel* necessary for these batteries

¹ As the Guards mobilize a double force of landwehr, it would not be possible for them to form fourth battalions.

is kept in time of peace at the headquarters of the artillery regiment, and is identical with that of ordinary field batteries. The men are obtained from the reserve and landwehr, Officers and non-commissioned officers being to some extent supplied from the *dépôt* batteries or detachments.

Reserve Pioneers.—Reserve pioneers are formed in a similar manner on mobilization in the proportion of a reserve company to each pioneer battalion, the miner company having the duty of forming this unit.

Reserve Train.—A train, in its general organization resembling that of the regular troops, is also attached to each reserve infantry Division (see page 350).

Dépôt and Garrison Troops.—The whole of the units of the landwehr may be employed in guarding the lines of communication of the field army, in holding entrenched camps within the frontiers of the home country, or in occupying captured fortresses in the enemy's territory, so that to provide for the filling up of the vacancies which occur in ranks of the field troops, recourse must be had to the special formations known as *dépôt* and garrison troops. The rule adopted is that when any unit of the field army is more than 5 per cent. below its establishment, a requisition is sent to the *dépôt*, and as an instance of the extent to which the *dépôts* were drawn on during the war with France, it may be mentioned that up to the beginning of March, 1871, 2,172 Officers, 222,590 men, and 22,012 horses were supplied to the field army from these sources.

Infantry Dépôts.—*Dépôts* are formed on mobilization in every branch of the service, that for a regiment of infantry consisting of a battalion with a normal strength of four companies. The *dépôt* battalion of each regiment of the Guards has, however, five companies, and in the line whenever a *dépôt* battalion has a strength of more than 300 men above the four company establishment, these supernumeraries are formed into a fifth company.

The Officers required for these *dépôt* battalions are furnished partly from the corresponding regiment of the active army, and partly from reserve and landwehr Officers. In 1870-71 on the average there were 7·7 Officers from the active army in each *dépôt* battalion, and 6·5 Officers of reserve and landwehr, the remainder of the Officers' posts in the battalion being filled by non-commissioned officers.

A *dépôt* battalion of the line with four companies would have the following establishment:—

Officers	{ Battalion staff	2
	{ Company	16
	{ In charge of tradesmen	1
Non-commissioned officers and men.....	{ Non-commissioned officers and recruits	1,004 ¹
	{ Tradesmen's section	211 ²
Medical Officers		2
Paymasters		2
Armourers		1
		<hr/> 1,239

The recruits are obtained by calling up men on furlough, Ersatz Reserve men, and men of the landwehr, as the needs of the Service may require, and any annual contingents which may become available during the continuance of the war would of course join the *dépôts* for instruction before being sent on to the units in the field. At the commencement of the war with France, the first casualties in the German Army, occurring during August and Sep-

¹ 400 of these are drawn from the 1st class of the Ersatz Reserve.

² 11 non-commissioned officers, 100 tailors, and 100 shoemakers.

tember, 1870, were replaced by thoroughly trained soldiers, of whom there were about 500 in each battalion, and the men next sent forward consisted of volunteers and Ersatz Reserve men, incorporated at the time when the mobilization of the Army was ordered. These sufficed to meet the requirements of the field troops up to the beginning of 1871, when the young men forming the contingent of 1871 who had joined during the previous autumn began to be available.

Garrison Battalions.—In every brigade district a special battalion is formed on mobilization, which is called a garrison battalion, and consists of four companies. The function of this battalion is to act as a *depôt* for the corresponding landwehr regiment, in the same way as the *depôt* battalion serves for its regiment in the first line. These garrison battalions have an effective of 22 Officers, 2 Surgeons, 1 Paymaster, 1 armourer, and 1,006 non-commissioned officers and men, the Officers being mainly drawn from the landwehr, and the men being furnished almost exclusively from the Ersatz Reserve. The Guard landwehr regiments, for which no garrison battalions are raised, draw their recruits from the 5th companies of their *depôt* battalions, which are maintained for this special purpose.

Depôt Squadrons.—The squadron of a cavalry regiment left behind as a *depôt*, on mobilization has the following establishment:—

Officers	5.
Non-commissioned officers and men	201 ..
Medical Officers.....	1 .
Paymasters.....	2 .
Veterinary surgeons	1
	210.

with 212 horses. In any Army Corps district where the number of cavalry reserve men is more than sufficient to meet the requirements of the cavalry and of the train, one or more dismounted or garrison squadrons are formed, but these would probably in the course of the war either be supplied with horses and used as cavalry, or employed at the *depôts* of horses which would be formed within the district.

Artillery Depôts.—Each regiment of field artillery forms on mobilization a *depôt* detachment, consisting of a staff, two batteries of six guns each, and a tradesmen's section. The detachment formed by the Divisional regiment of each corps has two *depôt* field batteries, but the detachment formed by the corps artillery regiment has one *depôt* field battery and one *depôt* horse artillery battery.

The establishments of these are as follow:—

	Field battery (divisional regiment.)	Field battery (corps art. regiment.)	H. A. battery.
Officers	4	4	4
Non-commissioned officers and men ...	165	215	139
Horses.....	68	68	118

The foot artillery regiments form on mobilization thirty-one landwehr battalions, corresponding to the thirty-one Guard and line battalions constituting

this force, and for each mobilized foot artillery battalion a park company is organized. The landwehr battalions serve as depôts to their corresponding battalions of the first line, and have approximately the same establishment.

Pioneer Depôts.—Each battalion of pioneers forms a depôt company on mobilization, with a tradesmen's section attached. The company has a strength of 4 Officers and 262 non-commissioned officers and men, with a Surgeon, an hospital assistant, and 2 Paymasters, while the tradesmen's section is composed of 5 non-commissioned officers and 70 men.

Railway Troops Depôt.—The railway regiment forms on mobilization a depôt detachment of two companies, with an artizans' section, the depôt detachment having a strength of 16 Officers and 410 non-commissioned officers and men, with a surgeon, 2 hospital assistants, and 3 Paymasters, and the artizans' section, 1 Officer and 106 non-commissioned officers and men.

Train Depôts.—Each of the eighteen train battalions forms on mobilization a depôt detachment, consisting of a staff, two companies, and a train depôt, with a tradesmen's section. The detachment has a strength of 12 Officers, 502 non-commissioned officers and men, with 9 non-combatants, 211 horses, and 40 vehicles, and the tradesmen's section, 1 Officer and 127 non-commissioned officers and men.

Horse Depôts.—In each Army Corps district a stationary depôt of horses, to the number of 300, is formed to receive the animals obtained by purchase or requisition, to forward them to the movable horse depôts which follow the field army, and to provide for unforeseen casualties. Two central horse depôts are also provided, each for 500 horses, so that if these depôts are maintained at their full establishment a reserve of over 6,000 horses would always be available in Germany, exclusive of the animals which might be obtained in the immediate neighbourhood of the operations.

Arming of the Fortresses.—With regard to the remaining step in the mobilization of the German Army, viz., the arming of the fortresses, it is only necessary to observe that the points of attack having all been very carefully considered in peace-time, the proper measures of defence are promptly adopted, and in those fortresses which are on the frontier or otherwise liable to early investment, special precautions are taken that the troops forming their garrisons shall receive their reserve men at the earliest moment, so that there shall be no risk of their being shut out by the advance of the enemy. In all fortresses there is an extensive network of subterranean telegraphic communication, both with the rest of the Empire and between the various portions of the defensive system. For each detached work a Commander is nominated in time of peace, and all details of the garrison required, the supply of provisions, ammunition, and stores, have been most carefully worked out, the principle in this, as in all else connected with the German mobilization, being, that so far as is possible, everything which can occur is foreseen, and that nothing which can be settled beforehand is left to be decided in the hurry of imminent war.

The following are the most important of the German fortresses:—

On the side of the Netherlands, Belgium, and France:

Wesel, Cologne,¹ Coblenz, Mayence, Metz,¹ Germersheim, Rastatt, and Strasburg.¹

On the side of Switzerland and Austria:

Ulm, Ingolstadt,¹ Neisse, and Glogau.

On the side of Russia:

Posen,¹ Thorn,¹ Königsberg,¹ and Danzig.

In the interior of the Empire are Magdeburg, Custrin, and Spandau, and on the Baltic and North Sea there are numerous fortified harbours, of which the most important are Kiel, Friederichsfort, and Wilhelmshaven.

¹ Surrounded by a girdle of detached forts.

IX.—THE ARMY ON A WAR FOOTING.

In the previous section the steps have been mentioned by which the units of the German Army are raised from peace to war strength, and it now remains to consider the Army as it might stand when completely ready for action. It has been seen that the principles which are observed in fitting the Army for active service are, that as little as possible is left to be done when war is imminent, and that, as far as can be, that organization is preserved under which the troops have been serving in time of peace.

The Brigade.—The increase which takes place in the establishment of regiments involves no alteration in their organization, and in the next larger unit, the brigade, the changes only affect the cavalry. Troops as a rule take the field as part of the same brigade to which they belong in time of peace, and continue to serve under the same Brigade Commander, who is assisted by the same Staff Officer.

Infantry Brigade.—An infantry brigade consists ordinarily of two infantry regiments, and though in time of peace some brigades have three regiments, it may be considered that two is the normal establishment which would be maintained in time of war. An infantry brigade on war strength would therefore stand as follows :—

	Generals.	Officers.	Men.	Horses.	Wagons.
Staff.....	1	1	10	14	1
2 Regiments .....	..	158	6,224	270	56
Total.....	1	159	6,234	284	57
6,394 of all ranks.					

The six battalions of which the brigade consists would furnish 6,144 combatants, of whom 5,856 would be armed with rifles, for each of which 112 rounds are carried.

Cavalry Brigade.—The number of regiments in a cavalry brigade in time of peace varies from two to four, but it may be assumed that in time of war all cavalry brigades would have the normal establishment of two regiments; the extra regiments which would thus become available being attached to the various infantry Divisions as Divisional cavalry.

A cavalry brigade would thus stand as follows when on war strength :—

	Generals.	Officers.	Men.	Horses.	Wagons.
Staff.....	1	1	10	14	1
2 Regiments .....	..	55	1,312	1,472	16
Total.....	1	57	1,322	1,486	17
1,380 of all ranks.					

The eight squadrons of which the brigade is composed would furnish 1,353 mounted combatants, of whom 1,056 would be armed with carbines, for each of which 50 rounds of ammunition is carried.

Infantry Division.—An infantry Division when on war strength varies from the peace establishment both in the increased size of the units composing it, and in the new formations which are called into existence on mobilization; but in its general organization it is merely a development of what has existed in peace-time, and is in no respect a new formation. It takes the field with its own commander and its own staff, and the troops comprising it are exclusively those which are permanently associated with it, and between whom there is a bond of union.

Its war strength would be as follows :—

	Generals.	Officers.	Men.	Horses.	Wagons.
Staff	1	29	71	79	10
2 Infantry brigades.....	2	318	12,468	569	114
1 Cavalry regiment .....	..	28	656	736	8
1 Field artillery detachment ..	..	25	696	618	75
1 Pioneer company .....	..	6	214	19	4
1 Divisional bridge train...	..	2	52	88	14
1 Bearer company .....	..	12	240	47	13
Total.....	3	420	14,397	2,155	239
			14,280 of all ranks.		

The 12 battalions of infantry, 4 squadrons of cavalry, and 4 batteries of artillery composing the Division would furnish 12,292 infantry combatants, 624 cavalry combatants, and 24 guns. As mentioned already there is no Divisional ammunition column, and therefore the number of rounds per rifle is the same as that which under ordinary circumstances is carried with a battalion, but in the event of a Division being employed independently, one of the corps ammunition columns would be specially detailed to accompany it.

Cavalry Division.—The cavalry Division being an organization which, except in four instances, does not exist in Germany in time of peace, these units have to be formed as soon as a mobilization is ordered. Although this departure from the custom prevailing in the other branches of the service might seem less suited to the prompt employment of cavalry on the outbreak of war than the Russian plan by which all regular cavalry regiments are permanently united into cavalry Divisions, yet the Germans doubtless consider that with their admirable railway communications they can assemble their cavalry wherever it may be required, in a sufficiently short space of time, and regard whatever drawbacks there may be in their system as more than counterbalanced by the advantages of maintaining thoroughly the principle of localization.

Cavalry Divisions were employed independently in advance of each of the German Armies in the invasion of France in 1870,¹ and it is from the experience of that war, that the normal composition of a German cavalry Division on war strength must be deduced. It would therefore in all probability stand as follows :—

¹ When the war commenced, the 3rd Cavalry Division (16 squadrons and 1 battery) covered the advance of the 1st Army; the 5th, and 6th Cavalry Divisions (56 squadrons and 3 batteries) covered the advance of the 2nd Army, and the 4th Cavalry Division (24 squadrons and 2 batteries) covered the advance of the 3rd Army.

	Generals.	Officers.	Men.	Horses.	Wagons.
Staff.....	1	28	71	79	10
3 Cavalry brigades (24 squadrons).....	3	171	3,966	4,458	51
1 Horse artillery division (3 batteries) .....	..	20	505	708	57
2 Ammunition wagons ....	..	—	7	13	2
Total	4	219	4,549	5,258	120
4,772 of all ranks.					

The 24 squadrons of cavalry and 3 batteries of horse artillery which form the fighting strength of a German cavalry Division would furnish respectively 3,754 mounted combatants and 18 guns, 50 rounds per carbine being carried by each man, with 10 additional rounds in the ammunition wagons.

In case of a cavalry Division being employed independently it might be accompanied by a mounted bearer detachment furnished from the Army Corps which are in rear, but otherwise must be entirely dependent on the regimental surgeons and hospital assistants for whatever medical or surgical aid may be required.

As the destruction of railways is a very important part of the duty of a cavalry Division covering the advance of an invading army, each squadron is supplied with a set of light tools specially adapted to this object, while two spare sets and two similar sets of heavy tools for more serious demolitions are carried as a reserve.

The Army Corps.—The Army Corps, which is the largest unit existing in time of peace, receives on mobilization a considerable development, but as in the Division, the changes which are made do not affect its general organization.

The Army Corps when on war strength would stand as follows :—

	Generals.	Officers.	Men.	Horses.	Wagons.
Headquarters Staff	2	48	224	252	20
2 Infantry Divisions	6	840	28,794	4,310	476
1 Rifle battalion.....	..	25	1,031	40	12
Corps artillery .....	..	54	1,393	1,250	151
10 Ammunition columns ..	..	38	1,782	1,818	256
1 Pioneer company .....	..	6	214	19	4
1 Corps bridge train .....	..	7	191	225	33
Train battalion (forming 5 commissariat and 5 wagon park columns, the field bakery, horse dépôt, 12 field hospitals, and a bearer company) .....	..	149	2,330	2,551	664
Total	8	1,167	35,959	10,415	1,616
37,134 of all ranks.					

The 25 infantry battalions, 8 squadrons of cavalry, and 16 batteries of artillery in an Army Corps give a fighting strength of 25,620 infantry combatants, 1,248 cavalry combatants, and 96 guns. For each infantry rifle there are 172 cartridges provided, and for each cavalry carbine 74, while 256 rounds are carried for each field battery gun, and 288 for each horse artillery gun. There are the means of carrying 8 days' food for each man in the Army Corps, forage for 7 days for all riding, and 9 days for all draught horses.

With regard to the medical establishment of an Army Corps, there is one surgeon to every 203 men of the gross total and one to every 150 of the fighting strength, while the medical assistants, men of the bearer companies, &c., are in the proportion of 1 to every 28 men of the gross total, and 1 to every 20 men of the fighting establishment.

From what has been stated above it will have been seen how carefully the requirements of an Army Corps for service in Europe have been provided for, and all will recognize the merits of the system by which the German Army Corps can be sent on active service under its own Commander, with no more trouble than is required for the despatch of the battalion, cavalry regiment, or battery, which are the largest units to which the orders of our Commander-in-Chief are ordinarily conveyed.

The Army.—It has been already mentioned that the German Army has eighteen Army Corps similar in composition, with one independent infantry Division (the Hessian), and these corps are in time of war combined to form Armies. The strength of an Army varies according to the circumstances of the campaign, but it may be taken as a rule to be composed of from two to four Army Corps.¹ The staff of an army is naturally dependent on the number of Army Corps of which it consists, and is therefore not laid down, being assembled only when war is inevitable, but those who are to occupy important posts are designated for them beforehand, and by the time the mobilization of the various Army Corps is complete, the superior directing staff is certain to be in working order.

At the head of all, controlling the Commanders of the different Armies, is the Sovereign, with the Great General Staff, established either at Berlin or at some advanced station, as the progress of the campaign may render desirable.

Such is the German Army of the first line, which would have the following total available war strength :—

Generals.	Officers.	Men.	Horses.	Wagons.
223	26,900	794,000	254,500	32,400
821,123 of all ranks.				

Taken according to the arms of the Service there would be 503 battalions of infantry, 203 companies of engineers and foot artillery, 465 squadrons of cavalry, and 340 batteries of artillery.

Before considering the army of the second line, to which the duty of home defence would presumably be confided, the organization of the line of com-

¹ In 1866 two armies were formed, the first consisting of three corps and the second of four. In 1870 the campaign was commenced with three armies, of which the first had two corps, the second four, and the third four, with two independent Divisions.

munications must be taken into account, as the troops required for this service may be furnished either from those of the first line or from those of the second.

Etappen Inspections.—For each separate army which is constituted in time of war an etappen inspection is formed, and this department has the duty of forwarding to each Army Corps in the field the supplies of all kinds which the military authorities in the corresponding Army Corps district wish to send to the front, while it at the same time relieves the corps of all sick, wounded, and prisoners whose presence would tend to impair its efficiency.

Each etappen inspection has the following establishment :—

1 Lieut.-General (Etappen Inspector) with 6 train soldiers, 10 horses, and one 4-horse wagon.

1 Staff Officer with 4 train soldiers, 8 horses, and one 4-horse wagon.

3 Adjutants¹ with 3 train soldiers and 6 horses.

1 Paymaster, with 1 man and 1 horse.

1 Senior veterinary surgeon with 1 man and 1 horse.

2 Veterinary surgeons with 2 horses.

5 Mounted orderlies with 5 horses.

13 Dismounted orderlies.

4 Non-commissioned officers as clerks.

3 Farriers.

The other branches of the etappen inspection are as follows :—

Military Police : 1 Captain, 1 sergeant-major, a number of privates varying with the strength of the army,² 4 train soldiers, with 6 horses and a 2-horse wagon.

Intendance : 24 officials, 42 men, 54 horses, and 7 wagons (three 4-horse, four 2-horse).

Medical : 1 Surgeon-Major, 1 assistant surgeon, 4 men, 5 horses, and a 2-horse wagon.

Legal : 1 etappen auditor, with 1 clerk, 2 men, 2 horses, and a 2-horse wagon.

Telegraph Service : 1 etappen Telegraph Director, with 3 Inspectors, 8 men, 10 horses, and four 2-horse wagons.

Postal Service : 1 Army Postal Director, with 3 Inspectors, 6 men, and 8 horses.

Civil Administration : 1 senior civilian official, with 1 police official, 3 men, 4 horses, and a 2-horse wagon.

The etappen inspection for each army thus consists of at least 178 men, 122 horses, and 17 wagons, and all such inspections are controlled by the Inspector-General of the Etappen, who is in direct communication with the Great General Staff. The Staff of the Inspector-General of Etappen amounts in all to 101 men, with 105 horses, and 15 wagons, and includes representatives of the legal department, the intendance, the medical, the telegraph and the postal services, as well as a special staff for field railway work.

Second Line Troops.—The troops of the second line are furnished by the landwehr as already explained (page 303), and these are organized in a manner similar to that adopted by the first line, except that there is no unit of reserve troops larger than the Division.

Reserve Infantry Brigade.—The landwehr battalions for which cadres are maintained in time of peace are formed on mobilization into landwehr regiments of three battalions each, and two such regiments constitute a reserve brigade, the establishment of which will be as follows :—

¹ A Captain of artillery, a Captain of engineers, and a Lieutenant.

² In the proportion of 20 for each Army Corps of which the army consists.

	Generals.	Officers.	Men.	Horses.	Wagons.
Staff	1	1	10	14	1
2 Regiments .....	..	156	5,002	263	56
Total	1	157	5,012	282	57
5,170 of all ranks.					

The 6 battalions of which the brigade consists would furnish 4,954 combatants, of whom 4,664 would be armed with rifles.

The number of landwehr infantry brigades which could be formed in each Army Corps district amounts as a rule to three,¹ but as each district would presumably only mobilize one reserve Division, a considerable force of landwehr infantry would remain to be disposed of, and these troops, amounting to eighty-three battalions, would be available for employment wherever they might be most required.

Reserve Infantry Division.—A reserve infantry Division has a composition generally similar to that of a Division of the first line; with the addition of certain units which there form part of the Army Corps establishment. Its war strength is as follows:—

	Generals.	Officers.	Men.	Horses.	Wagons.
Staff	1	29	71	79	10
2 Reserve infantry brigades	2	314	10,024	564	114
1 Reserve cavalry regiment	..	28	656	736	8
1 Reserve field artillery detachment ² .....	..	20	526	468	55
1 Reserve pioneer company	..	6	214	19	4
2 Reserve infantry ammunition columns .....	..	6	348	350	43
1 Reserve artillery ammunition column .....	..	7	169	197	23
1 Reserve bearer company ..	..	12	240	47	13
3 Reserve field hospitals ..	..	24	144	96	18
2 Reserve commissariat columns .....	..	6	230	334	64
Total	3	452	12,642	2,890	362
13,097 of all ranks.					

The twelve battalions of which the reserve infantry Division consists may be increased, if considered desirable, by a reserve rifle battalion formed as already mentioned from the reserve rifle companies which are raised on mobilization, but as this additional battalion is not a necessary part of the infantry Division it has not been included above. The total fighting strength of a reserve infantry Division would thus be 12 battalions, or

¹ The IXth, Xth, XIIIth, and XIVth Army Corps districts furnish rather less.

² 3 batteries, but in some cases 4.

9,912 infantry combatants; 4 squadrons or 624 mounted combatants, and 3 or 4 batteries of artillery (18 or 24 guns) with the small force of pioneers.

For each Army Corps of the first line there would be a reserve Division constituted as here shown, and in addition there would remain for disposal a considerable force of landwehr of all arms, being the surplus after the formation of the eighteen reserve Divisions. The numbers of the landwehr troops, considered under these two heads, would be as follows:—

	Generals.	Officers.	Men.	Horses.	Wagons.
18 Reserve infantry Divisions.....	54	8,136	227,718	52,020	6,516
Surplus .....	..	6,147	207,645	11,025	2,533
Total	54	14,283	435,363	63,045	9,054

Third Line Troops.—The German troops of the third line consist of the landsturm, but as the men of this category have never yet been called out, the strength of the military force which might thus be supplied must remain a matter of conjecture. The total number of men liable for service as members of the landsturm is, however, very large, being no less than 3,634,210 in the year 1880, but if only those are considered who have passed through the ranks of the regular army and the landwehr, and who are still fit for service, the number of such men thoroughly trained, and not exceeding 42 years of age, is estimated at 965,000, from which at a very moderate computation 300 regiments of infantry and 100 regiments of cavalry might be formed.

The numbers of the troops mentioned above as comprising the force which Germany could put in the field, if it were requisite to employ the whole of her military resources, would be approximately as follows:—

1st line troops	821,120 of all ranks.
2nd „	449,700 „
3rd „ (landsturm).....	965,000 „
Total.....	2,235,820

To these, however, must be added the strength of the dépôt and garrison troops already referred to, and these would stand as follows:—

Infantry { 161 dépôt battalions	199,479 of all ranks.
{ 66 garrison battalions	67,496 „
{ 20 dépôt rifle companies	5,140 „
Cavalry, { 93 dépôt squadrons.....	19,530 „
{ 74 dépôt batteries	13,367 „
Artillery { 31 foot landwehr battalions	19,809 „
Pioneers, { 42 dépôt and fortress companies....	8,652 „
Train, { 18 train detachments	9,252 „
	342,725 „

thus making a total of 2,578,545 of all ranks.

If we put on one side the landsturm, and consider only the available resources of the Empire in men between the ages of 20 and 32, it becomes interesting to note what proportion the total of 1,613,535 who compose the German Army on a war footing bears to the number of those who have been

actually trained as soldiers. Counting men in the ranks and those belonging to the reserve and the landwehr, 12 annual contingents will be available, i.e., $12 \times 150,000$ or 1,800,000, less an allowance for the normal decrease. The average decrease has been calculated to be 5·4 per cent., and after making this deduction it appears that 1,702,800 thoroughly trained men will be available. But in addition to these men the German Government can draw on the Ersatz Reserve, and though the bulk of these men have had no military instruction, the number of those partially trained, under the system introduced in 1881, already amounts to about 100,000, and is increasing every year. The further reserves of men which might be drawn on in case of a great national emergency are the 2nd class of the Ersatz Reserve and the landsturm.

Thus it appears that without counting the untrained men of the 1st class of the Ersatz Reserve, who must number nearly 200,000 more, the system in force in Germany will provide 1,900,000 trained men to fill up the cadres of an army which on war strength amounts to something over 1,600,000. The further reserves of men which might be drawn on in case of a great national emergency are the 2nd class of the Ersatz Reserve and the landsturm.

X.—CLOTHING, EQUIPMENT, AND ARMS.

Before entering on any description of the clothing of the German soldier, it may be as well to remark briefly on the system by which clothing and equipment are supplied. In Germany there is no great central clothing department, but everything connected with the supply of uniform is left absolutely in the hands of the regimental Officers. In each regiment, the Colonel is held responsible that his men are properly clothed and equipped, but the machinery by which this result is obtained is a Board of Officers who attend to the details. This Clothing Board (*Bekleidungs Kommission*) is generally appointed annually, and consists of five members, viz., a Field Officer as President, a Captain, two Lieutenants, and a Paymaster. In infantry regiments there is also a Battalion Clothing Board in each battalion, consisting of a Captain as President, and a Lieutenant and the Paymaster as members. These Boards receive the money allowance granted to the unit, and with the approval of the regimental commander enter into contracts for the purchase of materials, and arrange for the making-up of the uniforms in the regimental workshops. The money allowance has been calculated with extreme nicety, so that the most rigid economy is necessary to bring the cost of the articles produced within the grant, and leave a balance to be added to the clothing fund; but from the fact that the headquarters of a regiment are always established at the same place, contracts can be obtained on favourable terms, and the materials are made up by the tradesmen attached to the regiment, and, if extra hands are required, by the wives of the non-commissioned officers, who are paid at a low rate.

The clothing when completed is put in store, there being rooms provided for this purpose, for each company, squadron, battalion, or regiment.

The company or squadron store contains ordinarily three complete suits for every man of the peace establishment, viz., the war uniform (*krieg's-garnitur*) which is only issued on mobilization, the parade uniform (*parade-garnitur*) which is worn on State occasions, and the Sunday uniform (*Sonntag's-garnitur*) in which the troops appear on Sundays and at inspections.

The battalion store, or the corresponding store for each artillery division, contains a complete outfit of clothing and equipment for every man required to raise the unit from the peace to the war establishment.

The regimental store consists of four branches, viz., (1) the regimental dépôt store, (2) the landwehr regiment store, (3) the landwehr dépôt store, and (4) the reserve store.

(1) The regimental *dépôt* store contains complete stores for the *dépôt* battalion (or other corresponding formation) which is raised on mobilization.

(2) The landwehr regiment store has similar stores for the landwehr battalions, &c., when called up.

(3) The landwehr *dépôt* store is in the same way calculated for the requirements of the landwehr *dépôt* battalion, or garrison battalion.

(4) The reserve store is for the purpose of meeting unforeseen demands, and contains all that is necessary for two companies on war strength.

The number of outfits which are thus permanently maintained in each German infantry regiment are sufficient for $7\frac{1}{2}$ battalions on war strength,¹ and if we add the four or five suits which are kept for each man on the peace establishment, we arrive at a total of from 10,000 to 12,000 uniforms in possession of each regiment.

Infantry.—The following are the articles of clothing and equipment of a German infantry soldier for service in the field.²

Clothing.—1 forage cap with cockade, 1 tunic, 1 neckcloth, 1 pair cloth trousers, 1 pair linen trousers, 1 pair drawers, 1 great-coat, 1 pair cloth ear flaps, 1 pair boots, 1 pair shoes, 1 pair half-soles, 2 shirts.

Equipment.—1 helmet, 1 knapsack and straps, 1 waist-belt and plate, 1 great-coat strap, 1 havresack, 1 flask, 1 sword-knot, 2 cartridge pouches, 1 rifle-sling, 1 box of spare parts for rifle, 1 grease-box, 1 canteen and straps, 1 bag to hold rice, 1 bag for coffee, 1 bag for salt.

Miscellaneous Articles.—1 bag containing bandages (carried in the trousers pocket), 1 mark of identity, and in some cases a small coffee-mill, of which 52 per battalion are carried distributed among the men.

The mark of identity is a small tin label worn round the neck, and stamped with the number of the man's regiment, squadron, or company, as well as with his own regimental number.

Tools.—The tools which are carried with a battalion are as follows :—

Carried by the men :—400 small spades,
40 pickaxes,
20 hatchets.

Carried in the wagons :— 54 large spades,
18 mattocks,
12 axes,
27 hatchets.

Regimental Distinctions.—The distinctive characteristics in the uniforms of infantry regiments are to be found in the colours of the lace, the facings, and shoulder-straps, and in the numbers or initials on the shoulder-straps.

It was formerly possible to ascertain by the colour of the shoulder-straps the Army Corps to which a man belonged, certain colours having been adopted by certain corps, but since the formation of the XVth Corps there have been a considerable number of transfers of regiments, which have retained their old colours on their shoulder-straps, and it is not always possible to identify troops by this mark.³

Most regiments have their number on the shoulder-straps, but it may be as well to observe that the only regiments whose shoulder-straps are without

¹ 3 active, 1 *dépôt*, 2 landwehr, 1 garrison, and $\frac{1}{2}$ in reserve.

² Additional particulars as to value and time of wear will be found in No. 503 of the "Revue Militaire de l'Etranger," May, 1880.

³ The colours of the shoulder-straps were as follows : Ist and IIInd Corps, white ; IIIrd and IVth, bright red ; Vth and VIth, yellow ; VIIth and VIIIth, blue. The series of colours being recommenced with the IXth and Xth Corps. Corps with uneven numbers were further distinguished by a white piping to the facings.

either a number or the cipher of their honorary Colonel, are the four regiments of Prussian Foot Guards and the Guard Fusilier regiment.

The men of each battalion have a different coloured acorn on the sword-knot; this being white for 1st battalions, red for 2nd, and yellow for 3rd.¹ Men of the different companies are further distinguished by the colour of the crown and of the slide on the sword-knot, which are white for the 1st company, red for the 2nd, yellow for the 3rd, and blue for the 4th. The companies of a German regiment being numbered throughout the battalions from 1 to 12, these numbers are marked on the button of the shoulder-strap, so that it is always easy to recognize to what company a man belongs.

Depôt troops have the same dress and accoutrements as the corresponding field troops, and the only difference between the men of the landwehr and the line is that the former wear on the front of their helmets or forage caps the plain white cross, known as the landwehr cross.

The tunic worn by the German infantry is single-breasted, of dark-blue cloth, except in Bavaria, where light-blue is worn, with red collar, piping, and cuffs; the trousers are dark-blue with red piping (light-blue in Bavaria), and on the march are generally worn inside the long boots. The helmet (*pickelhaube*) is made of black leather with a peak both before and behind, decorated with an eagle in front and a cockade on the right side. This cockade is of the national colours of the State from which the regiment originates, and is black and white for Prussia, white and light-blue for Bavaria, black and red for Wurtemberg, and so on, each minor State or Principality having its own combination of colours. In Bavaria the metal spike on top of the helmet is replaced by a black woollen plume extending from the back to the top, from which this head-dress is called a *Itaupen-helm*.

Riflemen wear dark-green tunics with red facings, and have grey trousers with red piping, the head-dress being a shako with a plume, instead of the helmet.

All German infantry wear a grey great-coat, which, when not in use, is carried in a roll extending diagonally across the body over the left shoulder.

Distinctive Marks of Rank.—It will be convenient before considering the arms of the German infantry soldier to mention the distinguishing marks of the various ranks. These are as follows:—

Non-commissioned Officers.—Lance-corporals wear a button embossed with an eagle on each side of the collar of the tunic. Non-commissioned officers of whatever grade have either silver or gold lace on the collar and cuffs, according as the buttons of the tunic are of white metal or brass, and generally wear a sword-knot of the national colours. Sergeants and sergeants-major have in addition a large eagle button on the collar of the tunic, sergeants-major being distinguished by their wearing an Officer's sword.

Portepée Filhricks wear Officers' sword-knots and cockades, but are in all other respects dressed like sergeants-major, except that they have no eagle button on the collar.

Company Officers.—All infantry Officers wear a silver sash, and in the field Second Lieutenants may be known by plain silver shoulder-cords, with the number of their regiment on them in gold, while First Lieutenants and Captains wear the same with the addition of one gold star for the former, and two gold stars for the latter. For full dress, epaulettes are worn bearing stars similar to those just mentioned as indications of rank.

Field Officers.—Field Officers have twisted silver shoulder-cords with the number of the regiment, a Major having no star, a Lieutenant-Colonel one, and a Colonel two, exactly as in the junior ranks. The epaulettes which Field Officers wear in full dress differ from those of company Officers in having bullion fringes, but the distinctions of rank are similarly shown.

¹ Fourth battalions (formed on mobilization) have a blue acorn.

Medical Officers.—Medical Officers wear shoulder-cords carrying stars to indicate their relative rank, but their shoulder-cords have silk worked in, and rest on a blue or red velvet ground. They are further distinguished from combatant Officers by wearing on the shoulder-cord a peculiar badge—the rod of Esculapius—and in action have always a white band with the Geneva cross on the upper part of the left arm. This band is worn by all members of the bearer companies, including the train soldiers employed as drivers, but the regimental stretcher-bearers previously referred to are distinguished by a red band, worn also on the left arm, but without a Geneva cross on it.

Paymasters.—Paymasters are distinguished by wearing on the shoulder-cords a coat of arms, and by their facings being generally dark-blue, with white buttons and helmet ornaments.

Volunteers.—One-year volunteers wear a twist of worsted of their national colours round the shoulder-straps, but are in other respects dressed as privates. Three-year volunteers have no distinguishing mark.

Generals.—General Officers wear blue tunics with red facings, the twisted shoulder-cords which they wear in the field being made of two strands of gold cord and one of silver. On these the rank badges are fixed in the usual way; a Major-General having no star, a Lieutenant-General one, and a General two. They wear silver epaulettes in full dress, with corresponding rank badges, the head-dress being a helmet with gold mountings and a black and white feather plume for parade, and their trousers having a broad red stripe.

Staff.—Officers of the General Staff have a dress similar to that of General Officers, but with crimson facings and double trouser-stripes, the lace and buttons being silver. Their helmet has silver mountings and a white horse-hair plume for parade, and all Staff Officers, with the exception of the Chief of the Staff of an Army Corps, are further distinguished by wearing the sash over the right shoulder.

Adjutants.—Adjutants wear their regimental uniform, but carry the sash over the right shoulder instead of round the waist.

Intendance.—Officers of the Intendance Department wear shoulder-cords of blue silk and silver lace twisted together; their tunics being blue with crimson facings, and their helmets ornamented with silver mountings.

Legal.—Auditors wear a uniform similar to that of Officers of the Intendance Department, but with red facings instead of crimson.

Chaplains.—Military chaplains wear the ordinary dress of their profession, with the addition of a band of violet silk with a white stripe on each side, worn on the upper part of the left arm.

Infantry Arms.—The German infantry are armed with the Mauser rifle, model 1871; a central-fire breech-loading arm of which the following are the principal data:—

Length without bayonet	4 ft. 5 in.
" with bayonet	5 ft. 11½ in.
Diameter of bore	0·435 in.
Number of grooves	4
Twist	1 turn in 50 calibres.
Weight without bayonet	9 lbs. 9 oz.
" with bayonet	11 lbs. 3½ oz.
Charge of powder	77 grains.
Weight of bullet	382·4 grains.
Weight of cartridge complete	648 grains.

The Mauser rifle is sighted up to 1,600 metres, and with an elevation of 35° has an extreme range of about 3,000 metres.

The bayonet adopted for the German infantry is a sword-bayonet of which 10 per cent. are furnished with a saw back. Those non-commissioned officers

who do not carry rifles are armed with swords similar to those worn by Officers.

Weight carried.—The total weight carried by a German soldier, including his arms and 80 rounds of ammunition, is nearly 70 lbs., without counting the weight of the entrenching tool or the coffee-mill which may form an addition to his load.

Infantry Officers wear a small black leather knapsack when on active service, but their great-coats and baggage are conveyed in the company wagons.¹

Cavalry.—The following are the articles of clothing and equipment of a German cavalry soldier for service in the field :—

Clothing.—1 forage cap with cockade, 1 tunic, 1 linen jacket, 1 neckcloth, 1 pair trousers strapped with leather, 1 pair stable trousers, 2 pairs drawers, 1 cloak, 1 pair gloves, 1 pair boots, 1 pair short boots, 1 pair half-soles, 2 shirts.

Equipment.—1 helmet (or other head-dress), 1 cuirass (for cuirassiers only), 1 pair wallets, 1 sword-belt, 1 sabretache and girdle (for hussars only), 1 sword-knot, 1 pair spurs, 1 cross-belt and cartridge pouch, 1 carbine bucket and strap, sling, box of spare parts, grease-box, and 2 cartridge-boxes for men armed with carbines, and a pistol case and straps for men armed with pistols. Lancers have a lance, pennon, and straps, with 2 lance-buckets, and all cavalry carry canteens and bags for rice, salt, and coffee.

Miscellaneous Articles.—1 bag of bandages, 1 mark of identity, and a bag of cleaning materials. Small coffee-mills are also carried in the proportion of eight or nine per squadron.

Tools.—In each squadron 34 hatchets are carried on the troop horses, and besides these 6 hatchets and 8 spades are conveyed in each squadron wagon. Every squadron has moreover the set of light tools for the destruction of railways which has been already mentioned. These are secured in seven cases which are fitted for pack transport.

Cavalry Pioneers.—In the Bavarian and Saxon cavalry peculiar attention appears to have been devoted to the equipment of cavalry pioneers, four to six men per squadron being allotted to this duty and supplied with tools both for destruction and repair. These pioneers are armed only with sabre and pistol. In the rest of the German Army whatever steps may have been taken in this direction are kept secret.

Regimental Distinctions.—*Cuirassiers:* the jacket (*Koller*) is of white kersey fastened with hooks and eyes, with facings of a distinctive colour² the shoulder-straps being white, with an edging of the regimental colour, and bearing the number or distinguishing cipher of the regiment. Pantaloon of white kersey are worn with high boots reaching above the knee, but grey cloth trousers and linen stable trousers are also worn. The cuirass is of white metal, and consists of breast-plate and back-piece, and weighs about 16 lbs. All cuirassiers wear metal helmets, those of the Guard and the 6th Regiment being of brass, and the rest of white metal. In the Guards, the helmet is surmounted by an eagle for parade occasions, but in other regiments by a spike.

Arms.—Cuirassiers are armed with a straight sword (*Pallasch*) 37 inches long, and weighing 3 lbs. without the scabbard. Twenty-five men in each squadron are armed with Mauser carbines, and the rest carry six-chambered revolvers.

Squadron Distinctions.—In all German cavalry regiments the squadrons may be distinguished in the same way as the companies of an infantry

¹ A Captain is allowed 55 lbs., and a subaltern 46 lbs.

² Full particulars as to these colours are given in "*Deutschland's Streitkräfte*," and in Colonel Rivière's work.

battalion, viz., by the colour of the sword-knot, which is white for the 1st squadron, red for the 2nd, yellow for the 3rd, light-blue for the 4th, and green for the 5th.

Lancers.—The Prussian Lancers wear a short tunic (*Uhlanke*) of dark-blue cloth with collar and cuffs of the regimental colour, and for parade lappels of the same colour are worn. Dark-blue pantaloons, strapped with leather are worn, with boots reaching to the knee. The head-dress is the ordinary lancer hat (*Czapka*) of black leather with brass chain and white plume.

Arms.—Lancers are armed with the lance, a light curved sabre, and a breech-loading carbine which is similar in construction to the infantry rifle and takes the same ammunition. The lance is 10 feet long, and weighs 4½ lbs. It has a four-edged tip 6 inches in length made of steel.

Dragoons.—In Germany dragoons wear a tunic of cornflower blue cloth, with collars and facings of the regimental colour, and a single row of buttons. Tight-fitting pantaloons of dark-blue are worn as in the lancers, the boots being of the same pattern. The infantry helmet is worn, with yellow or white mountings according to the colour of the buttons.

Arms.—Dragoons are armed with the same carbine as that adopted for the cavalry generally (model 1871), and with a cavalry sabre somewhat heavier than that used by the lancers.

Hussars.—The German hussars wear a short tunic (*Attila*) of various colours, red, black, brown, green, blue, &c., with five rows of worsted lace across the breast. The pantaloons are like those of the dragoons; with a narrow stripe of the same colour as the lace on the tunic. They are worn with a boot which reaches only to the middle of the calf of the leg. The hussars' head-dress is a busby with a plume, and a bag of the same colour as the tunic. In the Guard Regiment, and in the 3rd, 12th, and 15th Regiments, a blue pelisse lined with fur is worn either as an overcoat or hung over the left shoulder.

Arms.—The armament of hussars is exactly the same as that of dragoons.

Saxon and Bavarian Uniforms.—In the different contingents of which the German Army is composed, several differences have been retained, as for instance in the Saxon Lancers, which have light-blue tunics and pantaloons, and the Bavarian Lancers, whose uniform is a gray-green. The Bavarian heavy cavalry wear light-blue tunics with dark-blue pantaloons and leather helmets, while the Bavarian light cavalry wear a green tunic and green pantaloons, their head-dress being a helmet similar to that of the Bavarian infantry.

Weights.—The weight of a cuirassier or uhlan in complete marching order, with one day's oats and one ration of bread, may be taken as 22 stone, while that of a hussar or dragoon is about 18 stone.

Artillery.—*Field Artillery.*—The principal difference between gunners and infantry soldiers in the German Army is that the gunner's helmet is surmounted by a ball instead of a spike, and that the shoulder-straps are always red, with the number of the brigade marked on them in yellow. Drivers have pantaloons strapped with leather and high boots like dragoons, and horse artillery men are dressed almost in the same way, but have hair plumes to their helmets.

Arms.—Gunnery of field batteries are armed with the artillery fascine knife, but gunners of horse artillery batteries, non-commissioned officers, trumpeters, and drivers have a sabre similar to that used by the uhlans, and a revolver. Dismounted men of ammunition columns are armed with carbines, and sword bayonets.

Tools.—The entrenching tools carried with a battery, either of field or horse artillery, are 14 axes, 36 hatchets, 18 picks, and 29 spades.

Field Guns.—It has been mentioned already that the field battery and

horse artillery guns are known respectively as the 9-centimetre and 8-centimetre guns, and of these guns the following are the most important data :—

	8-cm.	9-cm.
Calibre.....	7.85 cm.	8.8 cm.
Length.....	82.68 inches.	82.68 inches.
Weight	7.67 cwt.	8.86 cwt.
Number of grooves	24	24
Twist in calibres	1 in 50	1 in 50.
Exterior diameter of gun at muzzle..	5.12 inches.	5.51 inches.
" " " at breech....	8.46 "	9.05 "

The breech mechanism is similar in both guns, being the system known as Krupp's cylindro-prismatic wedge.

The following are some of the details as to the ammunition used with the German field guns :—

	8-cm.	9-cm.
Charge	2 lbs. 12 oz.	3 lbs. 5 oz.
Weight of common shell (loaded)....	11 " 3 "	15 " 7 "
Bursting charge	6 oz. 14 dr.	9 oz. 14 dr.
Weight of shrapnel (loaded)	12 lbs. 3 oz.	17 lbs. 15 oz.
Bursting charge	10½ dr.	12½ dr.
Number of balls	122	209
Effective range, common shell, 25° elevation	6,196 yards	6,551 yards.

The gun-carriages are made of steel, and the ammunition boxes of sheet iron. All the wheels are of similar construction, viz., of wood with metal naves, and of the same diameter (55.1 inches), so as to be interchangeable. The number of the regiment to which the battery belongs, the number of the battery, and the number of the gun are painted in white on each gun-carriage, and the other carriages of the battery are similarly marked. For example, the 5th gun of the 3rd Horse Artillery Battery of the 1st Regiment of Artillery of the Guard would be marked "1 G.A.R. 3.r. B. 5."

Pioneers.—There is practically no difference between the uniform of pioneers and that of infantry, except that the ornaments on the helmets of pioneers are always of white metal, and that they have only one pouch on the waist-belt instead of two.

Tools.—The tools carried by the men of a pioneer company are as follows : 18 hatchets, 44 pickaxes, 45 axes, and 88 large spades. In addition to these, however, 60 large spades, 30 pickaxes, 20 axes, 12 saws, and other tools are carried in the company tool wagon.

Telegraph detachments may be recognized by their wearing a T on the shoulder-strap, and railway troops by an E. The latter troops do not wear a helmet.

Arms.—Pioneers are armed with converted Chassepôt rifles, but have only 20 rounds of ammunition.

Train.—Train soldiers are equipped like infantry soldiers when attached to dismounted branches, and like cavalry when with mounted troops. Men of the train when permanently attached to other branches of the Service are dressed like the troops to which they are attached, but wear a forage cap with a peak, instead of a helmet.

The ordinary tunic of a train soldier is of dark-blue cloth with light-blue collar and cuffs, and when on duty with a train battalion he wears a shako and is armed with a converted Chassepôt rifle. Officers belonging to the train do not wear the shako, but have a helmet like that of infantry Officers.

XI.—OFFICERS.

The efficiency of the German Army is so closely connected with the system under which its Officers are appointed and trained, that even a brief sketch like the present would not be complete without some reference to this subject. The principle which is adopted, and which is most strictly followed, is that no post in the Army shall be held by anyone who is not *thoroughly* competent to perform its duties, every consideration being made to give way to what is really for the good of the Service. In accordance with this principle it is recognized that Officers should in all cases be of good social position, in order to maintain their authority over their men, and thus promotion from the ranks is practically unknown. As a general rule, a young man who wishes to become an Officer must first serve with the regiment as a *Portepée Fähnrich*, a position which he may attain in one or other of two ways. He may have become a cadet, and on completing the course of instruction laid down, be appointed to a regiment as a *Portepée Fähnrich*, or in a few cases of exceptional merit as a Lieutenant, or else he may, if between the ages of 17 and 23, enter the Army with the expressed intention of becoming an Officer in the regiment whose ranks he joins. A young man cannot, however, join a regiment under these conditions without the consent of its Colonel, and this consent is absolutely refused to any candidate whose character will not bear the severest scrutiny, and who does not appear in every respect suitable for admission as an Officer. A test examination must be passed, and the "*avantageur*," as he is styled, must also show that he has sufficient private means to enable him to live like a gentleman, besides proving his claim to gentle birth. When all these conditions are complied with, the *avantageur* joins the regiment as a private soldier, being required to perform all duties, other than those of a menial nature, exactly as other recruits, but as a rule being allowed a separate room in barracks, or one shared with another *avantageur*. He is, however, from the first accepted as an associate by the Officers of the regiment, and is allowed to dine at mess, where his behaviour is naturally a matter of careful scrutiny.

After some five months' service, having by this time thoroughly learnt his duties and been dismissed drill, he is given the rank of non-commissioned officer on the recommendation of his Captain, and after about ten months' service is sent to the War School with the rank of *Fähnrich*, being there instructed in tactics, fortification, and other military subjects. At the end of his course he rejoins his regiment and serves as a *Fähnrich*, but now wearing an Officer's sword and doing Officer's duty, until a vacancy occurs among the Lieutenants. His name is then submitted at a meeting of all the Officers of the regiment, who have to give their votes individually for or against his admission as their comrade. If all are unanimously in his favour he is at once recommended for a commission, but if he has only a majority of the votes, those who are opposed to his admission are called on to state their objections in writing, and a summary of these opinions is laid before the Commander of the Army Corps, by whom the question is finally decided. If the majority are against the candidate, and consider him unfit to become an Officer, he is at once rejected, and can never hope to obtain a reversal of this decision.

When a young man has once become an Officer his promotion generally goes forward by seniority, always supposing that he has proved himself fit for the duties of a higher rank. His fitness in this respect is, however, not ascertained by examination as we understand that term, but by the manner in which he has executed a number of military problems submitted to him in the course of his service, as well as by the manner in which his ordinary duties

¹ There are in all nine of these schools, established at Potsdam, Metz, Anklam, Neisse, Engers, Glogau, Hanover, Cassel, and Munich.

are performed. As high military training is not a matter of recent introduction in the German Service, it follows that the superior Officers are thoroughly conversant with every detail of their subordinates' duties, and perfectly capable of judging of their fitness for promotion, so that if an Officer is considered unsuited for a rank higher than that which he holds, he will be remorselessly passed over, and no amount of interest or favouritism will enable him to reach a position in which he might, by his ignorance or inefficiency, cause or conduce to a military disaster.

Those Officers who have peculiar ability and ambition seek to belong to the General Staff, by which they obtain more rapid promotion than falls to the lot of the regimental Officer, and through which alone they can hope to reach the highest posts in the Army. Any subaltern Officer of more than three years' service may present himself for admission to the Krieg's Akademie, and from those who present themselves 100 are annually selected. This selection is made partly on the basis of the results of an examination which all must pass, but to a greater extent on the personal report of the candidate made by the Officers under whom he has been serving. After three years spent at the Krieg's Akademie the Officers are sent back to their regiments, there being no final examination at the end of the course of study, and are afterwards chosen for duty with the Headquarters Staff in accordance with the reports which have been received of their ability and industry during the time passed at the college. In the year and a half which these selected Officers spend at Headquarters they are under the eye of Field-Marshal von Moltke, and those of them who are recommended by him are transferred to the Staff Corps and promoted to the rank of Captain, by which step the Staff Officer usually gains about one year's seniority over the regimental Officer. After about two or two and a half years' duty on the Staff, the Captain is sent to command a company, squadron, or battery, according to his arm of the Service, for about two years, and if he continues to show a constant zeal and interest in his profession he is then promoted to the rank of Major, and thus gains a total advantage of from five to six years' seniority. In every rank the Staff Officer does duty both on the Staff and with a regiment of his original arm of the Service, but not among his old comrades whom he has superseded, and if at any time it appears that his physical powers are failing, or that he is less zealous or less devoted to his duties than he formerly was, his military career is practically at an end.

Officers who have not passed through the Krieg's Akademie are also selected on the recommendation of their Commanding Officers, and their merits are tested by certain military problems sent to them by Field-Marshal von Moltke. If these are dealt with satisfactorily, the Officers are attached to the Great General Staff and further tested in the same way as those who have successfully passed through the Krieg's Akademie, when, if their work meets with approval, they obtain the same reward, namely, admission to the Staff Corps.

Promotion in the German Army in peace-time is slow, especially in the lower ranks, the average time spent as a subaltern being 12 years, and as a Captain from 6 to 8, so that the advantages held out to those who prove themselves worthy of Staff employ are very substantial, but to reap the full benefit of these advantages the Officer must never relax his diligence, but must always prove himself the superior of the highly educated regimental Officers over whom he is placed in the intervals of his Staff service.

In considering this German system of advancement by merit not determined by the hard and fast rules of the percentage of marks gained at an examination, one cannot help being struck by the evident absence of any fear that the selection of individuals might be attributed to jobbery. The efficiency of the Army is so keenly felt by every German to be a matter of life and death to the

nation, that the idea that any possible consideration should interfere with securing the services of the very best man for each post seems never to enter the mind of any critic, whether civil or military.

XII.—MILITARY DISCIPLINE.

Habits of discipline are well understood by every German before he joins the Army, having been learnt by home teaching as well as by the training to which he is subjected in the Government schools throughout the country, and consequently the recruit adapts himself naturally to barrack life. But with such a high standard of intelligence and education as the average German recruit brings with him, it is more necessary to guard against his cavilling at the orders which he may receive, than to provide for direct disobedience of those orders; and this is secured by the personal influence of the Officers quite as much as by the infliction of punishment.

Officers, however, are armed with considerable powers; the punishments which they can award being as follows:—

For non-commissioned officers: reprimand, with various degrees of publicity; extra duty; confinement to barracks up to four weeks, or in lock-up to three weeks.

For lance-corporals and privates: extra duties, or attendance at roll call in specified dress; deprivation of control over pay for a limited time; obligation to return to barracks at an earlier hour than tattoo for the space of four weeks; arrest in barracks (open arrest) up to four weeks; arrest in lock-up (medium arrest) up to three weeks; arrest in cells (close arrest) up to fourteen days.

The extent to which Officers can award summary punishment varies with their rank. Thus, while the commander of a regiment can give the heaviest punishments above mentioned, the commander of a battalion can only give up to 14 days' arrest in barracks for non-commissioned officers and privates, up to 10 days' arrest in lock-up, and up to 7 days' in cells, for privates only. In the same way the company commander cannot give more than 8 days' arrest in barracks to non-commissioned officers and privates, and 5 days' arrest in lock-up, or 3 in cells, to the privates under his command.

Officers are liable to be punished either by reprimand, or by arrest in quarters up to 14 days, but arrest for this period can only be awarded by the General commanding the Army Corps. A Divisional commander can sentence an Officer to 10 days' arrest, and a regimental commander may give 6 days, but if a battalion commander finds it necessary to place an Officer in arrest he must report at once to the regimental commander, by whom the duration of the arrest is determined.

Where the offence is too serious to be dealt with summarily, the case is submitted either to a regimental or to a general court-martial, after having been first investigated by a court of inquiry. The regimental court-martial has the following composition: a Captain is President, the members being two First Lieutenants, two Second Lieutenants, two non-commissioned officers, and two privates; these latter being replaced by two non-commissioned officers where the prisoner is a non-commissioned officer. The other nature of court-martial is called a general or garrison court, and consists of five ranks of members, of whom the President is one, with a Deputy Judge Advocate or investigating Officer as assessor. The composition of the court varies according to the rank of the prisoner, as shown by the following table:—

Rank of accused.	Field-Marshal.	Generals of infantry.	Lieut.-Generals.	Major-Generals.	Colonels.	Lieut.-Colonels.	Majors.	Captains.	1st Lieutenants.	2nd Lieutenants.	Sergants.	Non-commissioned officers.	Privates.
Private	P	2	2	..	..	..	3
Non-commissioned officer	P	2	2	..	..	..	..
Lieutenant	P	2	2	2	..	..	..	..
Captain	P	2	2	2	2	..	..	..	..
Major or Lieut.-Colonel	P	..	2	2	2	..	..	..	..	..
Colonel	P	2	3	2	2	..	..	..	..	..	..
Major-General	3	3	3	..	..	..	..	..	..	..	..
Lieut.-General	3	3	3	..	..	..	..	..	..	..	3	..
Field-Marshal	3	3	3	..	..	..	..	..	..	..	..	..	..

} and a General of superior rank as President.

When the offence with which the prisoner is charged is grave, and entails capital punishment or imprisonment for life, there are three members of each rank in addition to the President.

The punishments to which a German soldier is liable are death, confinement (i.e., imprisonment, detention in a fortress, or arrest), and, when the offence is of a dishonourable nature, dismissal from the Service with incapacity to serve again in the Army or the Navy. A sentence of arrest is given when the period of confinement does not exceed six weeks, but one of detention in a fortress or imprisonment may be for life. The maximum period of close arrest is not to exceed four weeks, during which time the prisoner is in solitary confinement in the dark with a hard board for a bed, and bread and water as food, except every third or fourth day, when he is given his usual bed and diet.

When on active service and means are not at hand for carrying out sentences of confinement, offenders are instead tied up to a post for a certain number of hours during the day, or left fastened all night in a similar manner.

Courts of Honour.—Differences between Officers are referred to tribunals known as courts of honour, whose duty it is also to guard the honour of the cloth by taking proceedings against any Officer whose conduct appears to be unworthy of the position he holds. These courts are of two kinds: one, for the trial of Captains and subalterns, formed of all the brother Officers of the accused under the presidency of the Colonel, and one for the trial of a Field Officer, composed exclusively of Field Officers of the Army Corps, under the presidency of a General specially detailed.

Councils of Honour.—From the members of each court of honour a sort of standing committee called a council of honour is annually elected. This council, which for a regiment consists of a Captain and First Lieutenant and Second Lieutenant, and for an Army Corps of a Colonel, a Lieutenant-Colonel, and a Major, has the duty of calling attention to the conduct of any Officer whom they consider to have acted in an unbecoming manner, and on being so ordered by the Commanding Officer, may make a preliminary inquiry into the circumstances of the case. When this inquiry is completed the council lay their report, together with the defence of the accused Officer, before the court of honour, and this court then gives its judgment. Its verdict may be to the

effect that it is incompetent to try the case, or that the investigation should be more fully gone into, or it may either acquit the accused or recommend him for punishment. The punishments which a court of honour is competent to recommend are that the accused Officer should be reprimanded, that he should be allowed to retire from the Service, or that he should be dismissed from the corps of Officers. The recommendation of the court having been put into the form of a judgment by the council of honour, is sent with the proceedings to the Emperor for his decision. It is to be observed that the members of a court of honour are not sworn, and have no power to administer an oath to a witness, but in adjudicating on a case they are placed on their honour, and the Officers who appear before them as witnesses give their evidence under the same conditions.

In concluding this short outline of some of the most salient features of the German Army, it may be as well to note that as yet, in spite of the adoption of a Colonial policy by Germany, no provision appears to have been made for the despatch abroad of such small expeditions as those which we have so frequently been obliged to send to our Colonies. It remains to be seen whether, when the emergency arises, Germany will be more successful than France has been in overcoming the difficulties of combining such expeditions with a system of universal military service, but if we consider this highly organized German Army as it stands, merely with reference to its employment in Europe, the question inevitably presents itself, "Against whom will this powerful engine next be employed?"

That it will be against either France or Russia, or the forces of both these Powers combined, seems more than likely, but though in any case a far more severe struggle than that of 1870-71 may be anticipated, those who are best acquainted with the German Army and the German people have little doubt as to the result; and to us Englishmen it may well be a source of satisfaction that this paramount position as a military Power should be occupied by the nation to whom we are most closely allied by ties of policy, as well as by the bonds of race and religion.