had engaged his attention even earlier, and in 1839 he invented an improved rotary water motor. Soon afterwards he designed a hydraulic crane, which contained the germ of all the hydraulic machinery for which he and Elswick were subsequently to become famous. This machine depended simply on the pressure of water acting directly in a cylinder on a piston, which was connected with suitable multiplying gear. In the first example, which was erected on the quay at Newcastle in 1846, the necessary pressure was obtained from the ordinary water mains of the town; but the merits and advantages of the device soon became widely appreciated, and a demand arose for the erection of cranes in positions where the pressure afforded by the mains was insufficient. Of course pressure could always be obtained by the aid of special reservoirs, but to build these was not always desirable, or even practicable. Hence, when in 1850 a hydraulic installation was required for a new ferry station at New Holland, on the Humber estuary, the absence of water mains of any kind, coupled with the prohibitive cost of a special reservoir owing to the character of the soil, impelled him to invent a fresh piece of apparatus, the "accumulator," which consists of a large cylinder containing a piston that can be loaded to give any desired pressure, the water being pumped in below it by a steam-engine or other prime mover. This simple device may be looked upon as the crown of the hydraulic system, since by its various modifications the installation of hydraulic power became possible in almost any situation. In particular, it was rendered practicable on board ship, and its application to the manipulation of heavy naval guns and other purposes on warships was not the least important of Armstrong's achievements.

The Elswick works were originally founded for the manufacture of this hydraulic machinery, but it was not long before they became the birthplace of a revolution in gunmaking; indeed, could nothing more be placed to Armstrong's credit than their establishment, his name would still be worthy of remembrance. Modern artillery dates from about 1855, when Armstrong's first gun made its appearance. This weapon embodied all the essential features which distinguish the ordnance of to-day from the cannon of the middle ages—it was built up of rings of metal shrunk upon an inner steel barrel; it was loaded at the breech; it was rifled; and it threw, not a round ball, but an elongated projectile with ogival head. The guns constructed on this principle yielded such excellent results, both in range and accuracy, that they were adopted by the British government in 1859, Armstrong himself being appointed engineer of rifled ordnance and receiving the honour of knighthood. At the same time the Elswick Ordnance Company was formed to manufacture the guns under the supervision of Armstrong, who, however, had no financial interest in the concern; it was merged in the Elswick Engineering Works four years later. Great Britain thus originated a principle of gun construction which has since been universally followed, and obtained an armament superior to that possessed by any other country at that time. But while there was no doubt as to the shooting capacities of these guns, defects in the breech mechanism soon became equally patent, and in a few years caused a reversion to muzzle-loading. Armstrong resigned his position in 1863, and for seventeen years the government adhered to the older method of loading, in spite of the improvements which experiment and research at Elswick and elsewhere had during that period produced in the mechanism and performance of heavy guns. But at last Armstrong's results could no longer be ignored; and wire-wound breech-loading guns were received back into the service in 1880. The use of steel wire for the construction of guns was one of Armstrong's early ideas. He perceived that to coil many turns of thin wire round an inner barrel was a logical extension of the large hooped method already mentioned, and in conjunction with I. K. Brunel, was preparing to put the plan to practical test when the discovery that it had already been patented caused him to abandon his intention, until about 1877. This incident well illustrates the ground of his objection to the British system of patent law, which he looked upon as calculated to strifle invention and impede progress; the patentees in this case did not manage to make a practical success of their invention themselves, but the existence of prior patents was sufficient to turn him aside from a path which conducted him to valuable results when afterwards, owing to the expiry of those patents, he was free to pursue it as he pleased.

Lord Armstrong, who was raised to the peerage in 1887, was the author of *A Visit to Egypt* (1873), and *Electric Movement in Air and Water* (1897), besides many professional papers. He died on the 27th of December 1900, at Rothbury, Northumberland. His title became extinct, but his grand-nephew and heir, W. H. A. F. Watson-Armstrong (b. 1863), was in 1903 created Baron Armstrong of Bamburgh and Cragside.

**ARMY** (from Fr. *armée*, Lat. *armata*), a considerable body of men armed and organized for the purpose of warfare on land (Ger. *Armee*), or the whole armed force at the disposal of a state or person for the same purpose (Ger. *Heer*=host). The application of the term is sometimes restricted to the permanent, active or regular forces of a state. The history of the development of the army systems of the world is dealt with in this article in sections 1 to 38, being followed by sections 39 to 59 on the characteristics of present-day armies. The remainder of the article is devoted to sections on the history of the principal armies of Europe, and that of the United States. For the Japanese Army see JAPAN, and for the existing condition of the army in each country see under the country heading.

## GENERAL HISTORY

1. *Early Armies.*—It is only with the evolution of the specially military function in a tribe or nation, expressed by the separation of a warrior-class, that the history of armies (as now understood) commences. Numerous savage tribes of the present day possess military organizations based on this system, but it first appears in the history of civilization amongst the Egyptians. By the earliest laws of Egypt, provision was made for the support of the warriors. The exploits of her armies under the legendary Sesostris cannot be regarded as historical, but it appears certain that the country possessed an army, capable of waging war in a regular fashion, and divided thus early into separate arms, these being chariots, infantry and archers. The systems of the Assyrians and Babylonians present no particular features of interest, save that horsemen, as distinct from charioteers, appear on the scene. The first historical instance of a military organization resembling those of modern times is that of the Persian empire.

2. *Persia.*—Drawn from a hardy and nomadic race, the armies of Persia at first consisted mainly of cavalry, and owed much of their success to the consequent ease and rapidity of their movements. The warlike Persians constantly extended their power by fresh conquests, and for some time remained a distinctly conquering and military race, attaining their highest power under Cyrus and Cambyses. Cyrus seems to have been the founder of a comprehensive military organization, of which we gather details from Xenophon and other writers. To each province was allotted a certain number of soldiers as standing army. These troops, formed originally of native Persians only, were called the king's troops. They comprised two classes, the one devoted exclusively to garrisoning towns and castles, the other distributed throughout the country. To each province was appointed a military commander, responsible for the number and efficiency of the troops in his district, while the civil governor was answerable for their subsistence and pay. Annual musters were held, either by the king in person or by generals deputed for the purpose and invested with full powers. This organization seems to have fully answered its original purpose, that of holding a vast empire acquired by conquest and promptly repelling inroads or putting down insurrections. But when a great foreign war was contemplated, the standing army was augmented by a levy throughout the empire. The extent of the empire made such a levy a matter of time, and the heterogeneous and unorganized mass of men of all nations so brought together was a source of weakness rather than strength. Indeed, the vast hosts over which the Greeks gained their victories comprised

but a small proportion of the true Persians. The cavalry alone seems to have retained its national character, and with it something of its high reputation, even to the days of Alexander.

3. *Greece.*—The Homeric armies were tribal levies of foot, armed with spear, sword, bow, &c., and commanded by the chiefs in their war-chariots. In historic times all this is changed. Greece becomes a congeries of city-states, each with its own citizen-militia. Federal armies and permanent troops are rare, the former owing to the centrifugal tendency of Greek politics, the latter because the "tyrannies," which must have relied very largely on standing armies to maintain themselves, had ultimately given way to democratic institutions. But the citizen-militia of Athens or Sparta resembled rather a modern "nation in arms" than an auxiliary force. Service was compulsory in almost all states, and as the young men began their career as soldiers with a continuous training of two or three years, Hellenic armies, like those of modern Europe, consisted of men who had undergone a thorough initial training and were subsequently called up as required. Cavalry, as always in the broken country of the Peloponnesus, was not of great importance, and it is only when the theatre of Greek history is extended to the plains of Thessaly that the mounted men become numerous. In the 4th century the mainstay of Greek armies was the *hoplite* (ὁπλίτης), the heavy-armed infantryman who fought in the *corps de bataille*; the light troops were men who could not provide the full equipment of the hoplite, rather than soldiers trained for certain special duties such as skirmishing. The fighting formation was that of the *phalanx*, a solid corps of hoplites armed with long spears. The armies were recruited for each war by calling up one or more classes of men in reserve according to age. It was the duty and privilege of the free citizen to bear arms; the slaves were rarely trusted with weapons.

4. *Sparta.*—So much is common to the various states. In Sparta the idea of the nation in arms was more thoroughly carried out than in any other state in the history of civilization. In other states the individual citizen often lived the life of a soldier, here the nation lived the life of a regiment. Private homes resembled the "married quarters" of a modern army; the unmarried men lived entirely in barracks. Military exercises were only interrupted by actual service in the field, and the whole life of a man of military age was devoted to them. Under these circumstances, the Spartans maintained a practically unchallenged supremacy over the armies of other Greek states; sometimes their superiority was so great that, like the Spanish regulars in the early part of the Dutch War of Independence, they destroyed their enemies with insignificant loss to themselves. The surrender of a Spartan detachment, hopelessly cut off from all assistance, and the victory of a body of well-trained and handy light infantry over a closed battalion of Spartiates were events so unusual as seriously to affect the course of Greek history.

5. *Greek Mercenaries.*—The military system of the 4th century was not called upon to provide armies for continuous service on distant expeditions. When, after the earlier campaigns of the Peloponnesian War, the necessity for such expeditions arose, the system was often strained almost to breaking point, (*e.g.* in the case of the Athenian expedition to Syracuse), and ultimately the states of Greece were driven to choose between unprofitable expenditure of the lives of citizens and recruiting from other sources. Mercenaries serving as light troops, and particularly as *peltasts* (a new form of disciplined "light infantry") soon appeared. The *corps de bataille* remained for long the old phalanx of citizen hoplites. But the heavy losses of many years told severely on the resources of every state, and ultimately non-national recruits—adventurers and soldiers of fortune, broken men who had lost their possessions in the wars, political refugees, runaway slaves, &c.—found their way even into the ranks of the hoplites, and Athens at one great crisis (407) enlisted slaves, with the promise of citizenship as their reward. The Arcadians, like the Scots and the Swiss in modern history, furnished the most numerous contingent to the new professional armies. A truly national army was indeed to appear once more in the history of the Peloponnesus, but in the meantime the professional soldier held the field. The old bond of strict citizenship once broken, the career of the soldier of fortune was open to the adventurous Greek. Taenarum and Corinth became regular *entrepôts* for mercenaries. The younger Cyrus raised his army for the invasion of Persia precisely as the emperors Maximilian and Charles V. raised regiments of *Landsknechte*—by the issue of recruiting commissions to captains of reputation. This army became the famous Ten Thousand. It was a marching city-state, its members not desperate adventurers, but men with the calm self-respect of Greek civilization. On the fall of its generals, it chose the best officers of the army to command, and obeyed implicitly. Cheirisophus the Spartan and Xenophon the Athenian, whom they chose, were not plausible demagogues; they were line officers, who, suddenly promoted to the chief command under circumstances of almost overwhelming difficulty, proved capable of achieving the impossible. The merit of choosing such leaders is not the least title to fame of the Ten Thousand mercenary Greek hoplites. About the same time Iphicrates with a body of mercenary *peltasts* destroyed a *mora* or corps of Spartan hoplites (391 B.C.).

6. *Epaminondas.*—Not many years after this, Spartan oppression roused the Theban revolt, and the Theban revolt became the Theban hegemony. The army which achieved this under the leadership of Epaminondas, one of the great captains of history, had already given proofs of its valour against Xenophon and the Cyreian veterans. Still earlier it had won the great victory of Delium (424 B.C.).

It was organized, as were the professional armies, on the accepted model of the old armies, viz. the phalangite order, but the addition of peltasts now made a Theban army, unlike the Spartans, capable of operating in broken country as well as in the plain. The new tactics of the phalanx, introduced by Epaminondas, embodied, for the first time in the history of war, the modern principle of local superiority of force, and suggested to Frederick the Great the famous "oblique order of battle." Further, the cavalry was more numerous and better led than that of Peloponnesian states. The professional armies had well understood the management of cavalry; Xenophon's handbook of the subject is not without value in the 20th century. In Greek armies the dearth of horses and the consequent numerical weakness of the cavalry prevented the bold use of the arm on the battlefield (see CAVALRY). But Thebes had always to deal with nations which possessed numerous horsemen. Jason of Pherae, for instance, put into the field against Thebes many thousands of Thessalian horse; and thus at the battle of Tegyra in 375 the Theban cavalry under Pelopidas, aided by the *corps d'élite* of infantry called the Sacred Band, carried all before them. At Leuctra Epaminondas won a glorious victory by the use of his "oblique order" tactics; the same methods achieved the second great victory of Mantineia (362 B.C.) at which Epaminondas fell. Pelopidas had already been slain in a battle against the Thessalians, and there was no leader to carry on their work. But the new Greek system was yet to gain its greatest triumphs under Alexander the Great.

7. *Alexander.*—The reforms of Alexander's father, Philip of Macedon, may most justly be compared to those of Frederick William I. in Prussia. Philip had lived at Thebes as a hostage, and had known Iphicrates, Epaminondas and Pelopidas. He grafted the Theban system of tactics on to the Macedonian system of organization. That the latter—a complete territorial system—was efficient was shown by the fact that Philip's blow was always struck before his enemies were ready to meet it. That the new Greek tactics, properly used, were superior to the old was once more demonstrated at Chaeronea (338 B.C.), where the Macedonian infantry militia fought in phalanx, and the cavalry, led by the young Alexander, delivered the last crushing blow. On his accession, like Frederick the Great, Alexander inherited a well-trained and numerous army, and was not slow to use it. The invasion of Asia was carried out by an army of the Greek pattern, formed both of Hellenes and of

non-Hellenes on an exceedingly strong Macedonian nucleus. Alexander's own guard was composed of picked horse and foot. The infantry of the line comprised Macedonian and Greek hoplites, the Macedonians being subdivided into heavy and medium troops. These fought in a grand phalanx, which was subdivided into units corresponding to the modern divisions, brigades and regiments, the fighting formation being normally a line of battalion masses. The arm of the infantry was the 18-foot pike (*sarissa*). The peltasts, Macedonian and Greek, were numerous and well trained, and there was the usual mass of irregular light troops, bowmen, slingers, &c. The cavalry included the Guard (ἄγημα), a body of heavy cavalry composed of chosen Macedonians, the line cavalry of Macedonia (ἑταῖροι) and Thessaly, the numerous small contingents of the Greek states, mercenary corps and light lancers for outpost work. The final blow and the gathering of the fruits of victory were now for the first time the work of the mounted arm. The solid phalanx was almost unbreakable in the earlier stages of the battle, but after a long infantry fight the horsemen had their chance. In former wars they were too few and too poorly mounted to avail themselves of it, and decisive victories were in consequence rarely achieved in battles of Greek versus Greek. Under Epaminondas, and still more under Philip and Alexander, the cavalry was strong enough for its new work. Battles are now ended by the shock action of mounted men, and in Alexander's time it is noted as a novelty that the cavalry carried out the pursuit of a beaten army. There were further, in Alexander's army, artillerymen with a battering train, engineers and departmental troops, and also a medical service, an improvement attributed to Jason of Pherae. The victories of this army, in close order and in open, over every kind of enemy and on every sort of terrain, produced the Hellenistic world, and in that achievement the history of Greek armies closes, for after the return of the greater part of the Europeans to their homes the armies of Alexander and his successors, while preserving much of the old form, become more and more orientalized.

The decisive step was taken in 323, when a picked contingent of Persians, armed mainly with missile weapons, was drafted into the phalanx, in which henceforward they formed the middle ranks of each file of sixteen men. But, like the third rank of Prussian infantry up to 1888, they normally fought as skirmishers in advance, falling into their place behind the pikes of the Macedonian file-leaders only if required for the decisive assault. The new method, of course, depended for success on the steadiness of the thin three-deep line of Macedonians thus left as the line of battle. Alexander's veterans were indeed to be trusted, but as time went on, and little by little the war-trained Greeks left the service, it became less and less safe to array the Hellenistic army in this shallow and articulated order of battle. The purely formal organization of the phalanx sixteen deep became thus the actual tactical formation, and around this solid mass of 16,384 men gathered the heterogeneous levies of a typical oriental army. Pyrrhus, king of Epirus, retained far more of the tradition of Alexander's system than his contemporaries farther east, yet his phalanx, comparatively light and mobile as it was, achieved victories over the Roman legion only at the cost of self-destruction. Even elephants quickly became a necessary adjunct to Hellenistic armies.

8. *Carthage.*—The military systems of the Jews present few features of unusual interest. The expedient of calling out successive contingents from the different tribes, in order to ensure continuity in military operations, should, however, be noticed. David and Solomon possessed numerous permanent troops which served as guards and garrisons; in principle this organization was identical with that of the Persians, and that of Europe in the 16th and 17th centuries. Particular interest attaches to the Carthaginian military forces of the 3rd century B.C. Rarely has any army achieved such renown in the short space of sixty years (264–202 B.C.). Carthage produced a series of great generals, culminating in Hannibal, who is marked out, even by the little that is known of him, as the equal of Napoleon. But Napoleon was supported by a national army, Hannibal and his predecessors were condemned to work with armies of mercenaries. For the first time in the world's history war is a matter with which the civil population has no concern. The merchants of Carthage fought only in the last extremity; the wars in which their markets were extended were conducted by non-national forces and directed by the few Carthaginian citizens who possessed military aptitudes. The civil authorities displayed towards their instruments a spirit of hatred for which it is difficult to find a parallel. Unsuccessful leaders were crucified, the mercenary soldiers were cheated of their pay, and broke out into a mutiny which shook the empire of Carthage to its foundations. But the magnetism of a leader's personality infused a corporate military spirit into these heterogeneous Punic armies, and history has never witnessed so complete an illustration of the power of pure and unaided *esprit de corps* as in the case of Hannibal's army in Italy, which, composed as it was of Spaniards, Africans, Gauls, Numidians, Italians and soldiers of fortune of every country, was yet welded by him into thorough efficiency. The army of Italy was as great in its last fight at Zama as the army of Spain at Rocroi; its victories of the Trebia, Trasimene and Cannae were so appalling that, two hundred years later, the leader to whom these soldiers devoted their lives was still, to a Roman, the "dire" Hannibal.

In their formal organization the Carthaginian armies resembled the new Greek model, and indeed they were created in the first instance by Xanthippus, a Spartan soldier in the service of Carthage, who was called upon to raise and train an army when the Romans were actually at the gates of Carthage, and justified his methods in the brilliant victory of Tunis (255 B.C.). For the solid Macedonian phalanx of 16,000 spears Xanthippus substituted a line of heavy battalions equal in its aggregate power of resistance to the older form, and far more flexible. The triumphs of the cavalry arm in Hannibal's battles far excelled those of Alexander's horsemen. Hannibal chose his fighting ground whenever possible with a view to using their full power, first to defeat the hostile cavalry, then to ride down the shaken infantry masses, and finally to pursue *au fond.* At Cannae, the greatest disaster ever suffered by the Romans, the decisive blow and the slaughter were the work of Hannibal's line cavalry, the relentless pursuit that of his light horse. But a professional long-service army has always the greatest difficulty in making good its losses, and in the present case it was wholly unable to do so. Even Hannibal failed at last before the sustained efforts of the citizen army of Rome.

9. *Roman Army under the Republic.*—The earliest organization of the Roman army is attributed to Romulus, who formed it on the tribal principle, each of the three tribes contributing its contingent of horse and foot. But it was to Servius Tullius that Rome owed, traditionally, the complete classification of her citizen-soldiers. For the details of the Roman military system, see ROMAN ARMY. During the earlier period of Roman history the army was drawn entirely from the first classes of the population, who served without pay and provided their own arms and armour. The wealthiest men (*equites*) furnished the cavalry, the remainder the infantry, while the poorer classes either fought as light troops or escaped altogether the privilege and burden of military service. Each "legion" of 3000 heavy foot was at first formed in a solid phalanx. The introduction of the elastic and handy three-line formation with intervals (similar in many respects to Alexander's) was brought about by the Gallic wars, and is attributed to M. Furius Camillus, who also, during the siege of Veii, introduced the practice of paying the soldiers, and thus removed the chief obstacle to the employment of the poorer classes. The new order of battle was fully developed in the Pyrrhic Wars, and the typical army of the Republic may be taken as dating from the latter part of the 3rd century B.C. The legionary was still possessed of a property qualification, but it had become relatively small. An annual levy was made at Rome to provide for the campaign of the year. Discipline was severe, and the rewards appealed as much to the soldier's honour as to his desire of gain. A legion now consisted of three lines (*Hastati, Principes, Triarii*), each line composed of men of

similar age and experience, and was further subdivided into thirty "maniples," each of two "centuries." The normal establishment of 300 cavalry, 3000 heavy and 1200 light infantry was still maintained, though in practice these figures were often exceeded. In place of the old light-armed and somewhat inferior *rorarii*, the new *velites* performed light infantry duties (211 B.C.), at the same time retaining their place in the maniples, of which they formed the last ranks (compare the Macedonian phalanx as reorganized in 323, § 7 above). The 300 cavalry of the legion were trained for shock action. But the strength of the Roman army lay in the heavy legionary infantry of citizens. The thirty maniples of each legion stood in three lines of battle, but the most notable point of their formation was that each maniple stood by itself on its own small manœuvre-area, free to take ground to front or flank. To the Roman legion was added a legion of allies, somewhat differently organized and possessing more cavalry, and the whole force was called a "double legion" or briefly a "legion." A consul's army consisted nominally of two double legions, but in the Punic wars military exigencies rather than custom dictated the numbers of the army, and the two consuls at Cannae (216 B.C.) commanded two double consular armies, or eight double legions.

10. *Characteristics of the Roman Army.*—Such in outline was the Roman military organization at the time when it was put to the severe test of the Second Punic War. Its elements were good, its military skill superior to that of any other army of ancient history, while its organization was on the whole far better than any that had gone before. The handy formation of maniples at open order was unique in the ancient world, and it did not reappear in history up to the advent of Gustavus Adolphus. In this formation, in which everything was entrusted to the skill of subordinates and the individual courage of the rank and file, the Romans met and withstood with success every type of impact, from the ponderous shock of the Macedonian phalanx and the dangerous rush of Celtic savages to the charge of elephants. Yet it was no particular virtue in the actual form employed that carried the Roman arms to so many victories. There would have been positive danger in thus articulating the legion had it been composed of any but the most trustworthy soldiers. To swiftness and precision of manœuvre they added a dogged obstinacy over which nothing but overwhelming disaster prevailed. It is, therefore, not unnatural to ask wherein the system which produced these soldiers failed, as it did within a century after the battle of Zama. The greatest defect was the want of a single military command. The civil magistrates of Rome were *ex officio* leaders of her armies, and though no Roman officer lacked military training, the views of a consul or praetor were almost invariably influenced by the programme of his political party. When, as sometimes happened, the men under their command sided in the political differences of their leaders, all real control came to an end. The soldiers of the Republic hardly ever forgot that they were citizens with voting powers; they served as a rule only during a campaign; and, while there could be little question as to their patriotism and stubbornness, they lacked almost entirely that *esprit de corps* which is found only amongst the members of a body having a permanent corporate existence. Thus they had the vices as well as the virtues of a nation in arms, and they fell still further short of the ideal because of the dubious and precarious tenure of their generals' commands. The great officers were usually sent home at the end of a campaign, to be replaced by their elected successors, and they showed all the hesitation and fear of responsibility usually found in a temporary commander. Above all, when two armies, each under its own consul or praetor, acted together, the command was either divided or exercised on alternate days.

11. *Roman Empire.*—The essential weaknesses of militia forces and the accidental circumstances of that under consideration led, even in earlier times, to the adoption of various expedients which for a time obviated the evils to which allusion has been made. But a change of far greater importance followed the final exploits of the armies of the old system. The increasing dominions of the Republic, the spread of wealth and luxury, the gradual decadence of the old Roman ideas, all tended to produce an army more suited to the needs of the newer time than the citizen militia of the 3rd century. Permanent troops were a necessity; the rich, in their newly acquired dislike of personal effort, ceased to bear their share in the routine life of the army, and thus the proletariat began to join the legions with the express intention of taking to a military career. The actual change from the old *régime* to the new was in the main the work of Gaius Marius. The urgent demand for men at the time of the Teutonic invasions caused the service to be thrown open to all Roman citizens irrespective of *census*. The new territories furnished cavalry, better and more numerous than the old *equites*, and light troops of various kinds to replace the *velites*. Only the heavy foot remained a purely Italian force, and the spread of the Roman citizenship gradually abolished the distinction between a Roman and an allied legion. The higher classes had repeatedly shown themselves unwilling to serve under plebeians (*e.g.* Varro and Flaminius); Marius preferred to have as soldiers men who did not despise him as an inferior. Under all these influences for good or for evil, the standing army was developed in the first half of the 1st century B.C. The tactical changes in the legion indicate its altered character. The small maniples gave way to heavy "cohorts," ten cohorts forming the legion; as in the Napoleonic wars, light and handy formations became denser and more rigid with the progressive decadence in *moral* of the rank and file. It is more significant still that in the days of Marius the annual oath of allegiance taken by the soldier came to be replaced by a personal vow, taken once and for all, of loyalty to the general. *Ubi bene, ibi patria* was an expression of the new spirit of the army, and Caesar had but to address his men as *quirites* (civilians) to quell a mutiny. *Hastati*, *principes* and *triarii* were now merely expressions in drill and tactics. But perhaps the most important of all these changes was the growth of regimental spirit and tradition. The legions were now numbered throughout the army, and the Tenth Legion has remained a classic instance of a "crack" corps. The *moral* of the Roman army was founded no longer on patriotism, but on professional pride and *esprit de corps*.

With this military system Rome passed through the era of the Civil Wars, at the end of which Augustus found himself with forty-five legions on his hands. As soon as possible he carried through a great reorganization, by which, after ruthlessly rejecting inferior elements, he obtained a smaller picked force of twenty-five legions, with numerous auxiliary forces. These were permanently stationed in the frontier provinces of the Empire, while Italy was garrisoned by the Praetorian cohorts, and thus was formed a regular long-service army, the strength of which has been estimated at 300,000 men. But these measures, temporarily successful, produced in the end an army which not only was perpetually at variance with the civil populations it was supposed to protect, but frequently murdered the emperors to whom it had sworn allegiance when it raised them to the throne. The evil fame of the Italian cohorts has survived in the phrase "praetorianism" used to imply a venal military despotism. The citizens gradually ceased to bear arms, and the practice of self-mutilation became common. The inevitable *dénouement* was delayed from time to time by the work of an energetic prince. But the ever-increasing inefficiency and factiousness of the legions, and the evanescence of all military spirit in the civil population, made it easy for the barbarians, when once the frontier was broken through, to overrun the decadent Empire. The end came when the Gothic heavy horse annihilated the legions of Valens at Adrianople (A.D. 378).

There was now no resource but to take the barbarians into Roman pay. Under the name of *foederati*, the Gothic mercenary cavalry played the most conspicuous part in the succeeding wars of the Empire, and began the reign of the heavy cavalry arm, which lasted for almost a thousand years. Even so soon as within six years of the death of Valens twenty thousand Gothic horse decided a great battle in the emperor's favour. These men, however, became turbulent and factious, and it was not until the emperor Leo I. had regenerated the native Roman soldier

that the balance was maintained between the national and the hired warrior. The work of this emperor and of his successors found eventual expression in the victories of Belisarius and Narses, in which the Romans, in the new rôle of horse-archers, so well combined their efforts with those of the *foederati* that neither the heavy cavalry of the Goths nor the phalanx of Frankish infantry proved to be capable of resisting the imperial forces. At the battle of Casilinum (553) Roman foot-archers and infantry bore no small part of the work. It was thus in the Eastern Empire that the Roman military spirit revived, and the Byzantine army, as evolved from the system of Justinian, became eventually the sole example of a fully organized service to be found in medieval history.

12. *The "Dark Ages."*—In western Europe all traces of Roman military institutions quickly died out, and the conquerors of the new kingdoms developed fresh systems from the simple tribal levy. The men of the plains were horsemen, those of marsh and moor were foot, and the four greater peoples retained these original characteristics long after the conquest had been completed. In organization the Lombards and Franks, Visigoths and English scarcely differed. The whole military population formed the mass of the army, the chiefs and their personal retainers the *élite*. The Lombards and the Visigoths were naturally cavalry; the Franks and the English were, equally naturally, infantry, and the armies of the Merovingian kings differed but little from the English *fyrd* with which Offa and Penda fought their battles. But in these nations the use of horses and armour, at first confined to kings and great chiefs, gradually spread downwards to the ever-growing classes of *thegns*, *comites*, &c. Finally, under Charlemagne were developed the general lines of the military organization which eventually became feudalism. For his distant wars he required an efficient and mobile army. Hence successive "capitularies" were issued dealing with matters of recruiting, organization, discipline and field service work. Very noticeable are his system of forts (*burgi*) with garrisons, his military train of artillery and supplies, and the reappearance of the ancient principle that three or four men should equip and maintain one of themselves as a warrior. These and other measures taken by him tended to produce a strong veteran army, very different in efficiency from the tumultuary levy, to which recourse was had only in the last resort. While war (as a whole) was not yet an art, fighting (from the individual's point of view) had certainly become a special function; after Charlemagne's time the typical feudal army, composed of well-equipped cavalry and ill-armed peasantry serving on foot, rapidly developed. Enemies such as Danes and Magyars could only be dealt with by mounted men who could ride round them, compel them to fight, and annihilate them by the shock of the charge; consequently the practice of leaving the infantry in rear, and even at home, grew up almost as a part of the feudal system of warfare. England, however, sought a different remedy, and thus diverged from the continental methods. This remedy was the creation of a fleet, and, the later Danish wars being there carried out, not by bands of mounted raiders, but by large armies of military settlers, infantry retained its premier position in England up to the day of Hastings. Even the *thegns*, who there, as abroad, were the mainstay of the army, were heavy-armed infantry. The only contribution made by Canute to the military organization of England was the retention of a picked force of *hus carles* (household troops) when the rest of the army with which he had conquered his realm was sent back to Scandinavia. At Hastings, the forces of Harold consisted wholly of infantry. The English array was composed of the king and his personal friends, the *hus carles*, and the contingents of the *fyrd* under the local *thegns*; though better armed, they were organized after the manner of their forefathers. On that field there perished the best infantry in Europe, and henceforward for three centuries there was no serious rival to challenge the predominance of the heavy cavalry.

13. *The Byzantines* (cf. article ROMAN EMPIRE, LATER).—While the west of Europe was evolving feudalism, the Byzantine empire was acquiring an army and military system scarcely surpassed by any of those of antiquity and not often equalled up to the most modern times. The *foederati* disappeared after the time of Justinian, and by A.D. 600 the army had become at once professional and national. For generations, regiments had had a corporate existence. Now brigades and divisions also appeared in war, and, somewhat later, in peace likewise. With the disappearance of the barbarians, the army became one homogeneous service, minutely systematized, and generally resembling an army in the modern sense of the word. The militia of the frontier districts performed efficiently the service of surveillance, and the field forces of disciplined regulars were moved and employed in accordance with well-reasoned principles of war; their maintenance was provided for by a scutage, levied, in lieu of service, on the central provinces of the empire. Later, a complete territorial system of recruiting and command was introduced. Each "theme" (military district) had its own regular garrison, and furnished a field division of some 5000 picked troopers for a campaign in any theatre of war. Provision having been made in peace for a depot system, all weakly men and horses could be left behind, and local duties handed over to second line troops; thus the field forces were practically always on a war footing. Beside the "themes" under their generals, there were certain districts on the frontiers, called "clissuras," placed under chosen officers, and specially organized for emergency service. The corps of officers in the Byzantine army was recruited from the highest classes, and there were many families (*e.g.* that from which came the celebrated Nicephorus Phocas) in which soldiering was the traditional career. The rank and file were either military settlers or men of the yeoman class, and in either case had a personal interest in the safety of the theme which prevented friction between soldiers and civilians. The principal arm was, of course, cavalry, and infantry was employed only in special duties. Engineer, train and medical services were maintained in each theme. Of the *ensemble* of the Byzantine army it has been said that "the art of war as it was understood at Constantinople . . . was the only system of real merit existing. No western nation could have afforded such a training to its officers till the 16th or . . . 17th century." The vitality of such an army remained intact long after the rest of the empire had begun to decay, and though the old army practically ceased to exist after the great disaster of Manzikert (1071), the barbarians and other mercenaries who formed the new service were organized, drilled and trained to the same pitch of military efficiency. Indeed the greatest tactical triumph of the Byzantine system (Calavryta, 1079) was won by an army already largely composed of foreigners. But mercenaries in the end developed praetorianism, as usual, and at last they actually mutinied, in the presence of the enemy, for higher pay (Constantinople, 1204).

14. *Feudalism.*—From the military point of view the change under feudalism was very remarkable. For the first time in the history of western Europe there appears, in however rough a form, a systematized obligation to serve in arms, regulated on a territorial basis. That army organization in the modern sense—organization for tactics and command—did not develop in any degree commensurate with the development of military administration, was due to the peculiar characteristics of the feudal system, and the virtues and weaknesses of medieval armies were its natural outcome. Personal bravery, the primary virtue of the soldier, could not be wanting in the members of a military class, the *métier* of which was war and manly exercises. Pride of caste, ambition and knightly emulation, all helped to raise to a high standard the individual efficiency of the feudal cavalier. But the gravest faults of the system, considered as an army organization, were directly due to this personal element. Indiscipline, impatience of superior control, and dangerous knight-errantry, together with the absence of any chain of command, prevented the feudal cavalry from achieving results at all proportionate to the effort expended and the potentialities of a force with so many soldierly qualities. If such defects were habitually found in the best elements of the army—the feudal tenants and subtenants who formed the heavy cavalry arm—

little could be expected of the despised and ill-armed foot-soldiery of the levy. The swift raids of the Danes and others (see above) had created a precedent which in French and German wars was almost invariably followed. The feudal levy rarely appeared at all on the battlefield, and when it was thus employed it was ridden down by the hostile knights, and even by those of its own party, without offering more than the feeblest resistance. Above all, one disadvantage, common to all classes of feudal soldiers, made an army so composed quite untrustworthy. The service which a king was able to exact from his feudatories was so slight (varying from one month to three in the year) that no military operation which was at all likely to be prolonged could be undertaken with any hope of success.

15. *Medieval Mercenaries.*—It was natural, therefore, that a sovereign who contemplated a great war should employ mercenaries. These were usually foreigners, as practically all national forces served on feudal terms. While the greater lords rode with him on all his expeditions, the bulk of his army consisted of professional soldiers, paid by the levy of *scutage* imposed upon the feudal tenantry. There had always been soldiers of fortune. William's host at Hastings contained many such men; later, the Flemings who invaded England in the days of Henry I. sang to each other—

"Hop, hop, Willeken, hop! England is mine and thine,"—

and from all the evidence it is clear that in earlier days the hired soldiers were adventurers seeking lands and homes. But these men usually proved to be most undesirable subjects, and sovereigns soon began to pay a money wage for the services of mercenaries properly so called. Such were the troops which figured in English history under Stephen. Such troops, moreover, formed the main part of the armies of the early Plantagenets. They were, as a matter of course, armed and armoured like the knights, with whom they formed the men-at-arms (*gendarmes*) of the army. Indeed, in the 11th and 12th centuries, the typical army of France or the Empire contains a relatively small percentage of "knights," evidence of which fact may be found even in so fanciful a romance as *Aucassin and Nicolete.* It must be noted, however, that not all the mercenaries were heavy cavalry; the Brabançon pikeman and the Italian crossbowman (the value of whose weapon was universally recognized) often formed part of a feudal army.

16. *Infantry in Feudal Times.*—These mercenary foot soldiers came as a rule from districts in which the infantry arm had maintained its ancient predominance in unbroken continuity. The cities of Flanders and Brabant, and those of the Lombard plain, had escaped feudal interference with their methods of fighting, and their burgher militia had developed into solid bodies of heavy-armed pikemen. These were very different from those of the feudal levy, and individual knightly bravery usually failed to make the slightest impression on a band of infantry held together by the stringent corporate feeling of a trade-gild. The more adventurous of the young men, like those of the Greek cities, took service abroad and fought with credit in their customary manner. The reign of the "Brabançon" as a mercenary was indeed short, but he continued, in his own country, to fight in the old way, and his successor in the profession of arms, the Genoese crossbowman, was always highly valued. In England, moreover, the infantry of the old *fyrd* was not suffered to decay into a rabble of half-armed countrymen, and in France a burgher infantry was established by Louis VI. under the name of the *milice des communes*, with the idea of creating a counterpoise to the power of the feudatories. Feudalism, therefore, as a military system, was short-lived. Its limitations had always necessitated the employment of mercenaries, and in several places a solid infantry was coming into existence, which was drawn from the sturdy and self-respecting middle classes, and in a few generations was to prove itself a worthy opponent not only to the knight, but to the professional man-at-arms.

17. *The Crusades.*—It is an undoubted fact that the long wars of the Crusades produced, directly, but slight improvement in the feudal armies of Europe. In the East large bodies of men were successfully kept under arms for a considerable period, but the application of crusading methods to European war was altogether impracticable. In the first place, much of the permanent force of these armies was contributed by the military orders, which had no place in European political activities. Secondly, enthusiasm mitigated much of the evil of individualism. In the third place, there was no custom to limit the period of service, since the Crusaders had undertaken a definite task and would merely have stultified their own purpose in leaving the work only half done. There were, therefore, sharp contrasts between crusading and European armies. In the latter, systematization was confined to details of recruiting; in the armies of the Cross, men were from time to time obtained by the accident of religious fervour, while at the same time continuous service produced a relatively high system of tactical organization. Different conditions, therefore, produced different methods, and crusading unity and discipline could not have been imposed on an ordinary army, which indeed with its paid auxiliaries was fairly adequate for the somewhat desultory European wars of that time. The statement that the Crusaders had a direct influence on the revival of infantry is hardly susceptible of convincing demonstration, but it is at any rate beyond question that the social and economic results of the Crusades materially contributed to the downfall of the feudal knight, and in consequence to a rise in the relative importance of the middle classes. Further, not only were the Crusading knights compelled by their own want of numbers to rely on the good qualities of the foot, but the foot themselves were the "survivors of the fittest," for the weakly men died before they reached the Holy Land, and with them there were always knights who had lost their horses and could not obtain remounts. Moreover, when "simple" and "gentle" both took the Cross there could be no question of treating Crusaders as if they were the mere feudal levy. But the little direct influence of the whole of these wars upon military progress in Europe is shown clearly enough by the fact that at the very close of the Crusades a great battle was lost through knight-errantry of the true feudal type (Mansurah).

18. *The Period of Transition* (1290–1490).—Besides the infantry already mentioned, that of Scotland and that of the German cities fought with credit on many fields. Their arm was the pike, and they were always formed in solid masses (called in Scotland, *schiltrons*). The basis of the medieval commune being the suppression of the individual in the social unit, it was natural that the burgher infantry should fight "in serried ranks and in better order" than a line of individual knights, who, moreover, were almost powerless before walled cities. But these forces lacked offensive power, and it was left for the English archers, whose importance dates from the latter years of the 13th century, to show afresh, at Creçy, Poitiers and Agincourt, the value of missile action. When properly supported by other arms, they proved themselves capable of meeting both the man-at-arms and the pikeman. The greatest importance attaches to the evolution of this idea of mutual support and combination. Once it was realized, war became an art, and armies became specially organized bodies of troops of different arms. It cannot be admitted, indeed, as has been claimed, that the 14th century had a scientific system of tactics, or that the campaign of Poitiers was arranged by the French "general staff." Nevertheless, during this century armies were steadily coming to consist of expert soldiers, to the exclusion of national levies and casual mercenaries. It is true that, by his system of "indents," Edward III. of England raised national armies of a professional type, but the English soldier thus enrolled, when discharged by his own sovereign, naturally sought similar employment elsewhere. This system produced, moreover, a class of unemployed soldiers, and these, with others who became adventurers from choice or necessity, and even with foreign troops, formed the armies which fought in the Wars of the Roses —armies which differed but slightly from others of the time. The natural result of these wars was to implant a hatred of soldiery in the heart of a nation which had formerly produced the best fighting men in Europe, a hatred which left a deep imprint on the constitutional and social life of the people. In

France, where Joan of Arc passed like a meteor across the military firmament, the idea of a national regular army took a practical form in the middle of the 15th century. Still, the forces thus brought into existence were not numerous, and the soldier of fortune, in spite of such experiences of his methods as those of the Wars of the Roses, was yet to attain the zenith of his career.

19. *The Condottieri.*— The immediate result of this confused period of destruction and reconstruction was the *condottiere*, who becomes important about 1300. In Italy, where the *condottieri* chiefly flourished, they were in demand owing to the want of feudal cavalry, and the inability of burgher infantry to undertake wars of aggression. The "free companies" (who served in great numbers in France and Spain as well as in Italy) were "military societies very much like trade-gilds," which (so to speak) were hawked from place to place by their managing directors, and hired temporarily by princes who needed their services. Unlike the older hirelings, they were permanently organized, and thus, with their experience and discipline, became the best troops in existence. But the carrying on of war "in the spirit of a handicraft" led to bloodless battles, indecisive campaigns, and other unsatisfactory results, and the reign of the *condottieri* proper was over by 1400, subsequent free companies being raised on a more strictly national basis. With all their defects, however, they were the pioneers of modern organization. In the inextricable tangle of old and new methods which constitutes the military system of the 15th century, it is possible to discern three marked tendencies. One is the result of a purely military conception of the now special art of war, and its exposition as an art by men who devote their whole career to it. The second is the idea of a national army, resulting from many social, economical and political causes. The third is the tendency towards minuter organization and subdivision within the army. Whereas the individual feudatories had disliked the close supervision of a minor commander, and their army had in consequence remained always a loosely-knit unit, the men who made war into an art belonged to small bands or corps, and naturally began their organization from the lower units. Herein, therefore, was the germ of the regimental system of the present day.

20. *The Swiss.*—The best description of a typical European army at the opening of the new period of development is that of the French army in Italy in 1494, written by Paolo Giovio. He notes with surprise that the various corps of infantry and cavalry are distinct, the usual practice of the time being to combine one lancer, one archer, one groom, &c., into a small unit furnished and commanded by the lancer. There were Swiss and German infantry, armed with pike and halbert, with a few "shot," who marched in good order to music. There were the heavy men-at-arms (*gendarmes*), accompanied as of old by mounted archers, who, however, now fought independently. There were, further, Gascon slingers and crossbowmen, who had probably acquired, from contact with Spain, some of the lightness and dash of their neighbours. The artillery train was composed of 140 heavy pieces and a great number of lighter guns; these were then and for many generations thereafter a special arm outside the military establishments (see ARTILLERY). In all this the only relic of the days of Creçy is the administrative combination of the men-at-arms and the horse archers, and even this is no longer practised in action. The most important element in the army is the heavy infantry of Swiss and Germans. The Swiss had for a century past gradually developed into the most formidable troops of the day. The wars of Žižka (*q.v.*) in Bohemia (1420) materially assisted in the downfall of the heavy cavalry; and the victories of the Swiss, beginning with Sempach (1382), had by 1480 proved that their solid battalions, armed with the long pike and the halberd, were practically invulnerable to all but missile and shock action combined. By fortune of war, they never met the English, who had shown the way to deal with the *schiltron* as early as Falkirk. So great was their confidence against ordinary troops, that on one occasion (1444) they detached 1600 men to engage 50,000. It was natural that a series of victories such as Granson, Morat and Nancy should place them in the forefront of the military nations of Europe. The whole people devoted itself thereupon to professional soldiering, particularly in the French service, and though their monopoly of mercenary employment lasted a short time only, they continued to furnish regiments to the armies of France, Spain and the Pope up to the most modern times. But their efficiency was thoroughly sapped by the growth of a mutinous and insubordinate spirit, the memory of which has survived in the proverb *Point d'argent, point de Suisse*, and inspired Machiavelli with the hatred of mercenaries which marks every page of his work on the art of war. One of their devices for extorting money was to appear at the muster with many more soldiers than had been contracted for by their employers, who were forced to submit to this form of blackmail. At last the French, tired of these caprices, inflicted on the Swiss the crushing defeat of Marignan (*q.v.*), and their tactical system received its death-blow from the Spaniards at Pavia (1525).

21. *The Landsknechts.*—The modern army owes far more of its organization and administrative methods to the Landsknechts ("men of the country," as distinct from foreigners) than to the Swiss. As the latter were traditionally the friends of France, so these Swabians were the mainstay of the Imperial armies, though both were mercenaries. The emperor Maximilian exerted himself to improve the new force, which soon became the model for military Europe. A corps of Landsknechts was usually raised by a system resembling that of "indents," commissions being issued by the sovereign to leaders of repute to enlist men. A "colour" (*Fähnlein*) numbered usually about 400 men, a corps consisted of a varying number of colours, some corps having 12,000 men. From these troops, with their intense pride, *esprit de corps* and comradeship, there has come down to modern times much of present-day etiquette, interior economy and "regimental customs"— in other words, nearly all that is comprised in the "regimental" system. Amongst the most notable features of their system were the functions of the provost, who combined the modern offices of provost-marshal, transport and supply officer, and canteen manager; the disciplinary code, which admitted the right of the rank and file to judge offences touching the honour of the regiment; and the women who, lawfully or unlawfully attached to the soldiers, marched with the regiment and had a definite place in its corporate life. The conception of the regiment as the home of the soldier was thus realized in fact.

22. *The Spanish Army.*— The tendencies towards professional soldiering and towards subdivision had now pronounced themselves. At the same time, while national armies, as dreamed of by Machiavelli, were not yet in existence, two at least of the powers were beginning to work towards an ideal. This ideal was an army which was entirely at the disposal of its own sovereign, trained to the due professional standard, and organized in the best way found by experience to be applicable to military needs. On these bases was formed the old Spanish army which, from Pavia (1525) to Rocroi (1643), was held by common consent to be the finest service in existence. Almost immediately after emerging from the period of internal development, Spain found herself obliged to maintain an army for the Italian wars. In the first instance this was raised from amongst veterans of the war of Granada, who enlisted for an indefinite time. Probably the oldest line regiments in Europe are those descended from the famous *tercios*, whose formation marks the beginning of military establishments, just as the Landsknechts were the founders of military manners and customs. The great captains who led the new army soon assimilated the best points of the Swiss system, and it was the Spanish army which evolved the typical combination of pike and musket which flourished up to 1700. Outside the domain the tactics, it must be credited with an important contribution to the science of army organization, in the depot system, whereby the *tercios* in the field were continually "fed" and kept up to strength. The social position of the soldier was that of a gentleman, and the young nobles (who soon came to prefer the *tercios* to the cavalry service) thought it no shame,

when their commands were reduced, to "take a pike" in another regiment. The provost and his gallows were as much in evidence in a Spanish camp as in one of Landsknechts, but the comradeship and *esprit de corps* of a *tercio* were the admiration of all contemporary soldiers. With all its good qualities, however, this army was not truly national; men soon came from all the various nations ruled by the Habsburgs, and the soldier of fortune found employment in a *tercio* as readily as elsewhere. But it was a great gain that corps, as such, were fully recognized as belonging to the government, however shifting the *personnel* might be. Permanence of regimental existence had now been attained, though the universal acceptance and thorough application of the principle were still far distant. During the 16th century, the French regular army (originating in the *compagnies d'ordonnance* of 1445), which was always in existence, even when the Swiss and *gendarmes* were the best part of the field forces, underwent a considerable development, producing amongst other things the military terminology of the present day. But the wars of religion effectually checked all progress in the latter part of the century, and the European reputation of the French army dates only from the latter part of the Thirty Years' War.

23. *The Sixteenth Century.*—The battle of St Quentin (1557) is usually taken as the date from which the last type of a purely mercenary *arm* (as distinct from *corps*) comes into prominence. "Brabançon" or "Swiss" implied pikemen without further qualification, the new term "Reiter" similarly implied mercenary cavalry fighting with the pistol. Heavy cavalry could disperse arquebusiers and musketeers, but it was helpless against solid masses of pikemen; the Reiters solved the difficulty by the use of the pistol. They were well armoured and had little to fear from musket-balls. Arrayed in deep squadrons, therefore, they rode up to the pikes with impunity, and fired methodically *dans le tas*, each rank when it had discharged its pistols filing to the rear to reload. These Reiters were organized in squadrons of variable strength, and recruited in the same manner as were the Landsknechts. They were much inferior, however, to the latter in their discipline and general conduct, for cavalry had many more individual opportunities of plunder than the foot, and the rapacity and selfishness of the Reiters were consequently in marked contrast to the good order and mutual helpfulness in the field and in quarters which characterized the regimental system of the Landsknechts.

24. *Dutch System.*—The most interesting feature of the Dutch system, which was gradually evolved by the patriots in the long War of Independence, was its minute attention to detail. In the first years of the war, William the Silent had to depend, for field operations, on mutinous and inefficient mercenaries and on raw countrymen who had nothing but devotion to oppose to the discipline and skill of the best regular army in the world. Such troops were, from the point of view of soldiers like Alva, mere *canaille*, and the ludicrous ease with which their armies were destroyed (as at Jemmingen and Mookerheyde), at the cost of the lives of perhaps a dozen Spanish veterans, went far to justify this view. But, fortunately for the Dutch, their fortified towns were exceedingly numerous, and the individual bravery of citizen-militia, who were fighting for the lives of every soul within their walls, baffled time after time all the efforts of Alva's men. In the open, Spanish officers took incredible liberties with the enemy; once, at any rate, they marched for hours together along submerged embankments with hostile vessels firing into them from either side. Behind walls the Dutch were practically a match for the most furious valour of the assailants.

The insurgents' first important victory in the open field, that of Rymenant near Malines (1577), was won by the skill of "Bras de Fer," de la Noue, a veteran French general, and the stubbornness of the English contingent of the Dutch army—for England, from 1572 onwards, sent out an ever-increasing number of volunteers. This battle was soon followed by the great defeat of Gembloux (1578), and William the Silent was not destined to see the rise of the Dutch army. Maurice of Nassau was the real organizer of victory. In the wreck of all feudal and burgher military institutions, he turned to the old models of Xenophon, Polybius, Aelian and the rest. Drill, as rigid and as complicated as that of the Macedonian phalanx, came into vogue, the infantry was organized more strictly into companies and regiments, the cavalry into troops or cornets. The *Reiter* tactics of the pistol were followed by the latter, the former consisted of pikes, halberts and "shot." This form was generally followed in central Europe, as usual, without the spirit, but in Holland it was the greater trustworthiness of the rank and file that allowed of more flexible formations, and here we no longer see the foot of an army drawn up, as at Jemmingen, in one solid and immovable "square." In their own country and with the system best suited thereto, the Dutch, who moreover acquired greater skill and steadiness day by day, maintained their ground against all the efforts of a Parma and a Spinola. Indeed, it is the best tribute to the vitality of the Spanish system that the inevitable *débâcle* was so long delayed. The campaigns of Spinola in Germany demonstrated that the "Dutch" system, as a system for general use, was at any rate no better than the system over which it had locally asserted its superiority, and the spirit, and not the form, of Maurice's practice achieved the ultimate victory of the Netherlanders. In the Thirty Years' War, the unsuccessful armies of Mansfeld and many others were modelled on the Dutch system,—the forces of Spinola, of Tilly and of Wallenstein, on the Spanish. In other words, these systems as such meant little; the discipline and spirit behind them, everything. Yet the contribution made by the Dutch system to the armies of to-day was not small; to Maurice and his comrades we owe, first the introduction of careful and accurate drill, and secondly the beginnings of an acknowledged science of war, the groundwork of both being the theory and practice of antiquity. The present method of "forming fours" in the British infantry is ultimately derived from Aelian, just as the first beats of the drums in a march represent the regimental calls of the Landsknechts, and the depots and the drafts for the service battalions date from the Italian wars of Spain.

25. *The Thirty Years' War.*—Hitherto all armies had been raised or reduced according to the military and political situation of the moment. Spain had indeed maintained a relatively high effective in peace, but elsewhere a few personal guards, small garrisons, and sometimes a small regular army to serve as a nucleus, constituted the only permanent forces kept under arms by sovereigns, though, in this era of perpetual wars, armies were almost always on a war footing. The expense of maintenance at that time practically forbade any other system than this, called in German *Werbe-system*, a term for which in English there is no nearer equivalent than "enlistment" or "levy" system. It is worth noticing that this very system is identical in principle with that of the United States at the present day, viz., a small permanent force, inflated to any required size at the moment of need. The exceptional conditions of the Dutch army, indeed, secured for its regiments a long life; yet when danger was finally over, a large portion of the army was at once reduced. The history of the British army from about 1740 to 1820 is a most striking, if belated, example of the *Werbe-system* in practice. But the Thirty Years' War naturally produced an unusual continuity of service in corps raised about 1620–1630, and fifty years later the principle of the standing army was universally accepted. It is thus that the senior regiments of the Prussian and Austrian armies date from about 1630. At this time an event took place which was destined to have a profound influence on the military art. Gustavus Adolphus of Sweden landed in Germany with an army better organized, trained and equipped than any which had preceded it. This army, by its great victory of Breitenfeld (1631), inaugurated the era of "modern" warfare, and it is to the system of Gustavus that the student must turn for the initial point of the progressive development which has produced the armies of to-day. Spanish and Dutch methods at once became as obsolete as those of the Landsknechts.

26. *The Swedish Army.*—The Swedish army was raised by a carefully regulated system of conscription, which was "preached in every pulpit in Sweden." There were indeed enlisted regiments of the usual type, and it would seem that Gustavus

obtained the best even of the soldiers of fortune. But the national regiments were raised on the *Indelta* system. Each officer and man, under this scheme, received a land grant within the territorial district of his corps, and each of these districts supplied recruits in numbers proportionate to its population. This curious mixture of feudal and modern methods produced the best elements of an army, which, aided by the tactical and technical improvements introduced by Gustavus, proved itself incomparably superior to its rivals. Of course the long and bloody campaigns of 1630–34 led to the admission of great numbers of mercenaries even into the Swedish corps; and German, Scottish and other regiments figured largely, not only in the armies of Duke Bernhard and his successors, but in the army of Gustavus' own lifetime. As early as 1632 one brigade of the army was distinguished by the title "Swedish," as alone containing no foreigners. Yet the framework was much the same as it had been in 1630. The battle-organization of two lines and two wings, which was typical of the later "linear" tactics, began to supplant the system of the *tercios*. How cumbrous the latter had become by 1630 may be judged from any battle-plan of the period, and notably from that of Lützen. Gustavus' cavalry fought four or three deep only, and depended as little as possible on the pistol. The work of riding down the pikes was indeed rendered easier by the improved tactical handiness of the musketeers, but it was fiery leading which alone compelled victory, for there were relatively few Swedish horse and many squadrons of Germans and others, who in themselves were far less likely to charge boldly than the "Pappenheimers" and other crack corps of the enemy. The infantry was of the highest class, and only on that condition could loose and supple lines be trusted to oppose the solid *tercios* of Tilly and Wallenstein. Cumbrous indeed these were, but by long practice they had acquired no small manœuvring power, of which Breitenfeld affords a striking example. The Swedes, however, completely surpassed them. The progress thus made may be gauged from the fact that under Gustavus the largest closed body of infantry was less than 300 strong. Briefly, the genius of a great commander, the ardour of a born cavalry leader, better arms and better organization, carried the Swedes to the end of their career of victory, but how personal was the *vis viva* which inspired the army was quickly noticeable after the death of Gustavus. Even a Bernhard could, in the end, evoke no more heroism from a Swedish army than from any other, and the real Swedish troops fought their last battle at Nördlingen (1634). After this, little distinguished the "Swedish" forces from the general mass of the armies of the time, save their system, to which, and to its influence on the training of such leaders as Banér, Torstensson and Wrangel, all their later victories were due. So much of Gustavus' work survived even the carnage of Nördlingen, and his system always obtained better results, even with the heterogeneous troops of this later period, than any other of the time.

27. *The English Civil War* (see GREAT REBELLION).—The armies on either side which, about the same time, were fighting out the constitutional quarrel in England were essentially different from all those of the continent, though their formal organization was similar to that of the Swedes. The military expression of a national conscience had appeared rarely indeed in the Thirty Years' War, which was a means of livelihood for, rather than an assertion of principle by, those who engaged in it. In England, on the other hand, there were no mercenaries, and the whole character of the operations was settled by the burning desire of a true "nation in arms" to decide at once, by the arbitrament of battle, the vital points at issue. A German critic (Fritz Hoenig) has indicated Worcester as the prototype of Sedan; at any rate, battles of this kind invariably resulted in failure when entrusted to a "standing" army of the 18th century. But the national armies disappeared at the end of the struggle; after the Restoration, English political aims became, so far as military activity was concerned, similar in scope and execution to those of the continent; and the example of Cromwell and the "New Model," which might have revolutionized military Europe, passed away without having any marked influence on the armies of other nations.

28. *Standing Armies.*—Nine years after Nördlingen, the old Spanish army fought its last and most honourable battle at Rocroi. Its conquerors were the new French troops, whose victory created as great a sensation as Pavia and Creçy had done. Infusing a new military spirit into the formal organization of Gustavus' system, the French army was now to "set the fashion" for a century. France had been the first power to revive regular forces, and the famous "Picardie" regiment disputed for precedence even with the old *tercios*. The country had emerged from the confusion of the past century with the foreign and domestic strength of a practically absolute central power. The Fronde continued the military history of the army from the end of the Thirty Years' War; and when the period of consolidation was finally closed, all was prepared for the introduction of a "standing army," practically always at war strength, and entirely at the disposal of the sovereign. The reorganization of the military establishments by Louvois may be taken as the formal date at which standing armies came into prominence (see historical sketch of the French army below). Other powers rapidly followed the lead of France, for the defects of enlisted troops had become very clear, and the possession of an army always ready for war was an obvious advantage in dynastic politics. The French proprietary system of regiments, and the general scheme of army administration which replaced it, may be taken as typical of the armies of other great powers in the time of Louis XIV.

29. *Character of the Standing Armies.*—A peculiar character was from the first imparted to the new organizations by the results of the Thirty Years' War. A well-founded horror of military barbarity had the effect of separating the soldier from the civilian by an impassable gulf. The drain of thirty years on the population, resources and finances of almost every country in middle Europe, everywhere limited the size of the new armies; and the decision in 1648 of all questions save those of dynastic interest dictated the nature of their employment. The best soldiers of the time pronounced in favour of small field armies, for in the then state of communications and agriculture large forces proved in practice too cumbrous for good work. In every country, therefore, the army took the form of a professional body, nearly though not quite independent of extra recruits for war, set apart entirely from all contact with civil life, rigidly restricted as to conduct in peace and war, and employed mostly in the "maintenance" of their superiors' private quarrels. Iron discipline produced splendid tenacity in action, and wholesale desertion at all times. In the Seven Years' War, for instance, the Austrians stated one-fifth of their total loss as due to desertion, and Thackeray's *Barry Lyndon* gives no untrue picture of the life of a soldier under the old régime. Further, since men were costly, rigid economy of their lives in action, and minute care for their feeding and shelter on the march, occupied a disproportionate amount of the attention of their generals. Armies necessarily moved slowly and remained concentrated to facilitate supply and to check desertion, and thus, when a commander had every unit of his troops within a short ride of his headquarters, there was little need for intermediate general officers, and still less for a highly trained staff.

30. *Organization in the 18th Century.*—All armies were now almost equal in fighting value, and war was consequently reduced to a set of rules (not principles), since superiority was only to be gained by methods, not by men. Soldiers such as Marlborough, who were superior to these jejune prescriptions, met indeed with uniform success. But the methods of the 18th century failed to receive full illustration, save by the accident of a great captain's direction, even amidst the circumstances for which they were designed. It is hardly to be wondered at, therefore, that they failed, when forced by a new phase of development to cope with events completely beyond their element. The inner organization was not markedly altered. Artillery was still outside the normal organization of the line of battle, though in the period 1660–1740 much was done in all countries to improve

the material, and above all to turn the *personnel* into disciplined soldiers. Cavalry was organized in regiments and squadrons, and armed with sabre and pistol. Infantry had by 1703 begun to assume its three-deep line formation and the typical weapons of the arm, musket and bayonet. Regiments and battalions were the units of combat as well as organization. In the fight the company was entirely merged in the higher unit, but as an administrative body it still remained. As for the higher organization, an army consisted simply of a greater or less number of battalions and squadrons, without, as a rule, intermediate commands and groupings. The army was arrayed as a whole in two lines of battle, with the infantry in the centre and the cavalry on the flanks, and an advanced guard; the so-called reserve consisting merely of troops not assigned to the regular commands. It was divided, for command in action, into right and left wings, both of cavalry and infantry, of each line. This was the famous "linear" organization, which in theory produced the maximum effort in the minimum time, but in practice, handled by officers whose chief care was to avoid the expenditure of effort, achieved only negative results. To see its defects one need only suppose a battalion of the first line hard pressed by the enemy. A battalion of the second line was directly behind it, but there was no authority, less than that of the wing commander, which could order it up to support the first. All the conditions of the time were opposed to tactical subdivision, as the term is now understood. That the 18th century did not revive *schiltrons* was due to the new fire tactics, to which everything but control was sacrificed. This "control," as has been said, implied not so much command as police supervision. But far beyond any faults of organization and recruiting, the inherent vice of these armies was, as Machiavelli had pointed out two centuries previously, and as Prussia was to learn to her cost in 1806, that once they were thoroughly defeated, the only thing left to be done was to make peace at once, since there was no other armed force capable of retrieving a failure.

31. *Frederick the Great.*—The military career of Frederick the Great is very different from those of his predecessors. With an army organized on the customary system, and trained and equipped, better indeed, but still on the same lines as those of his rivals, the king of Prussia achieved results out of all proportion to those imagined by contemporary soldiers. It is to his campaigns, therefore, that the student must refer for the real, if usually latent, possibilities of the army of the 18th century. The prime secret of his success lay in the fact that he was his own master, and responsible to no superior for the uses to which he put his men. This position had never, since the introduction of standing armies, been attained by any one, even Eugene and Leopold of Dessau being subject to the common restriction; and with this extraordinary advantage over his opponents, Frederick had further the firmness and ruthless energy of a great commander. Prussia, moreover, was more strictly organized than other countries, and there was relatively little of that opposition of local authorities to the movement of troops which was conspicuous in Austria. The military successes of Prussia, therefore, up to 1757, were not primarily due to the system and the formal tactics, but were the logical outcome of greater energy in the leading, and less friction in the administration, of her armies. But the conditions were totally different in 1758–1762, when the full force of the alliance against Prussia developed itself in four theatres of war. Frederick was driven back to the old methods of making war, and his men were no longer the soldiers of Leuthen and Hohenfriedberg. If discipline was severe before, it was merciless then; the king obtained men by force and fraud from every part of Germany, and had both to repress and to train them in the face of the enemy. That under such conditions, and with such men, the weaker party finally emerged triumphant, was indeed a startling phenomenon. Yet its result for soldiers was not the production of the national army, though the dynastic forces had once more shown themselves incapable of compassing decisive victories, nor yet the removal of the barrier between army and people, for the operations of Frederick's recruiting agents made a lasting impression, and, further, large numbers of men who had thought to make a profession of arms were turned adrift at the end of the war. On the contrary, all that the great and prolonged *tour de force* of these years produced was a tendency, quite in the spirit of the age, to make a formal science out of the art of war. Better working and better methods were less sought after than systematization of the special practices of the most successful commanders. Thus Frederick's methods, since 1758 essentially the same as those of others, were taken as the basis of the science now for the first time called "strategy," the fact that his opponents had also practised it without success being strangely ignored. Along with this came a mania for imitation. Prussian drill, uniforms and hair-powder were slavishly copied by every state, and for the next twenty years, and especially when the war-trained officers and men had left active service, the purest pedantry reigned in all the armies of Europe, including that of Prussia. One of the ablest of Frederick's subordinates wrote a book in which he urged that the cadence of the infantry step should be increased by one pace per minute. The only exceptions to the universal prevalence of this spirit were in the Austrian army, which was saved from atrophy by its Turkish wars, and in a few British and French troops who served in the American War of Independence. The British regiments were sent to die of fever in the West Indies; when the storm of the French Revolution broke over Europe, the Austrian army was the only stable element of resistance.

32. *The French Revolution.*—Very different were the armies of the Revolution. Europe, after being given over to professional soldiers for five hundred years, at last produced the modern system of the "nation in arms." The French volunteers of 1792 were a force by which the routine generals of the enemy, working with instruments and by rules designed for other conditions, were completely puzzled, and France gained a short respite. The year 1793 witnessed the most remarkable event that is recorded in the history of armies. Raw enthusiasm was replaced, after the disasters and defections which marked the beginning of the campaign, by a systematic and unsparing conscription, and the masses of men thus enrolled, inspired by ardent patriotism and directed by the ferocious energy of the Committee of Public Safety, met the disciplined formalists with an opposition before which the attack completely collapsed. It was less marvellous in fact than in appearance that this should be so. Not to mention the influence of pedantry and senility on the course of the operations, it may be admitted that Frederick and his army at their best would have been unable to accomplish the downfall of the now thoroughly roused French. Tactically, the fire of the regulars' line caused the Revolutionary levies to melt away by thousands, but men were ready to fill the gaps. No complicated supply system bound the French to magazines and fortresses, for Europe could once more feed an army without convoys, and roads were now good and numerous. No fear of desertion kept them concentrated under canvas, for each man was personally concerned with the issue. If the allies tried to oppose them on an equal front, they were weak at all points, and the old organization had no provision for the working of a scattered army. While ten victorious campaigns had not carried Marlborough nearer to Paris than some marches beyond the Sambre, two campaigns now carried a French army to within a few miles of Vienna. It was obvious that, before such forces and such mobility, the old system was doomed, and with each successive failure the old armies became more discouraged. Napoleon's victories finally closed this chapter of military development, and by 1808 the only army left to represent it was the British. Even to this the Peninsular War opened a line of progress, which, if different in many essentials from continental practice, was in any case much more than a copy of an obsolete model.

33. *The Conscription.*—In 1793, at a moment when the danger to France was so great as to produce the rigorous emergency methods of the Reign of Terror, the combined enemies of the Republic had less than 300,000 men in the field between Basel and Dunkirk. On the other hand, the call of the "country in

danger" produced more than four times this number of men for the French armies within a few months. Louis XIV., even when all France had been awakened to warlike enthusiasm by a similar threat (1709), had not been able to put in the field more than one-fifth of this force. The methods of the great war minister Carnot were enforced by the ruthless committee, and when men's lives were safer before the bayonets of the allies than before the civil tribunals at home, there was no difficulty in enlisting the whole military spirit of France. There is therefore not much to be said as to the earliest application of the conscription, at least as regards its formal working, since any system possessing elasticity would equally have served the purpose. In the meanwhile, the older plans of organization had proved inadequate for dealing with such imposing masses of men. Even with disciplined soldiers they had long been known as applicable only to small armies, and the deficiencies of the French, with their consequences in tactics and strategy, soon produced the first illustrations of modern methods. Unable to meet the allies in the plain, they fought in broken ground and on the widest possible front. This of course produced decentralization and subdivision; and it became absolutely necessary that each detachment on a front of battle 30 m. long (*e.g.* Stokach) should be properly commanded and self-sufficing. The army was therefore constituted in a number of *divisions*, each of two or more brigades with cavalry and artillery sufficient for its own needs. It was even more important that each divisional general, with his own staff, should be a real commander, and not merely the supervisor of a section of the line of battle, for he was almost in the position that a commander-in-chief had formerly held. The need of generals was easily supplied when there was so wide a field of selection. For the allies the mere adoption of new forms was without result, since it was contrary both to tradition and to existing organization. The attempts which were made in this direction did not tend to mitigate the evils of inferior numbers and *moral*. The French soon followed up the divisional system with the further organization of groups of divisions under specially selected general officers; this again quickly developed into the modern army corps.

34. *Napoleon.*—Revolutionary government, however, gave way in a few years to more ordinary institutions, and the spirit of French politics had become that of aggrandizement in the name of liberty. The ruthless application of the new principle of masses had been terribly costly, and the disasters of 1799 reawakened in the mass of the people the old dislike of war and service. Even before this it had been found necessary to frame a new act, the famous law proposed by General Jourdan (1798). With this the conscription for general service began. The legal term of five years was so far exceeded that the service came to be looked upon as a career, or servitude, for life; it was therefore both unavoidable and profitable to admit substitutes. Even in 1806 one quarter of Napoleon's conscripts failed to come up for duty. The *Grande Armée* thus from its inception contained elements of doubtful value, and only the tradition of victory and the 50% of veterans still serving aided the genius of Napoleon to win the brilliant victories of 1805 and 1806. But these veterans were gradually eliminated by bloodshed and service exposure, and when, after the peace of Tilsit, "French" armies began to be recruited from all sorts of nations, decay had set in. As early as 1806 the emperor had had to "anticipate" the conscription, that is, call up the conscripts before their time, and by 1810 the percentage of absentees in France had grown to about 80, the remainder being largely those who lacked courage to oppose the authorities. Finally, the armies of Napoleon became masses of men of all nations fighting even more unwillingly than the armies of the old régime. Little success attended the emperor's attempt to convert a "nation in arms" into a great dynastic army. Considered as such, it had even fewer elements of solidity than the standing armies of the 18th century, for it lacked the discipline which had made the regiments of Frederick invincible. After 1812 it was attacked by huge armies of patriots which possessed advantages of organization and skilful direction that the *levée en masse* of 1793 had lacked. Only the now fully developed genius and magnificent tenacity of Napoleon staved off for a time the *débâcle* which was as inevitable as had been that of the old régime.

35. *The Grande Armée.*—In 1805–1806, when the older spirit of the Revolution was already represented by one-half only of French soldiers, the actual steadiness and manœuvring power of the *Grande Armée* had attained its highest level. The army at this time was organized into brigades, divisions and corps, the last-named unit being as a rule a marshal's command, and always completed as a small army with all the necessary arms and services. Several such corps (usually of unequal strength) formed the army. The greatest weakness of the organization, which was in other respects most pliant and adaptable, was the want of good staff-officers. The emperor had so far cowed his marshals that few of them could take the slightest individual responsibility, and the combatant staff-officers remained, as they had been in the 18th century, either confidential clerks or merely gallopers. No one but a Napoleon could have managed huge armies upon these terms; in fact the marshals, from Berthier downwards, generally failed when in independent commands. Of the three arms, infantry and cavalry regiments were organized in much the same way as in Frederick's day, though tactical methods were very different, and discipline far inferior. The greatest advance had taken place in the artillery service. Field and horse batteries, as organized and disciplined units, had come into general use during the Revolutionary wars, and the division, corps and army commanders had always batteries assigned to their several commands as a permanent and integral part of the fighting troops. Napoleon himself, and his brilliant artillery officers Sénarmont and Drouot, brought the arm to such a pitch of efficiency that it enabled him to win splendid victories almost by its own action. As a typical organization we may take the III. corps of Marshal Davout in 1806. This was formed of the following troops:—

Cavalry brigade—General Vialannes—three regiments, 1538 men.
Corps artillery, 12 guns.
1st Division—General Morand—five infantry regiments in three brigades, 12 guns, 10,820 men.
2nd Division—General Friant—five regiments in three brigades, 8 guns, 8758 men.
3rd Division—General Gudin—four regiments in three brigades, 12 guns, 9077 men.

A comparison of this *ordre de bataille* with that of a modern army corps will show that the general idea of corps organization has undergone but slight modification since the days of Napoleon. More troops allotted to departmental duties, and additional engineers for the working of modern scientific aids, are the only new features in the formal organization of a corps in the 20th century. Yet the spirit of 1806 and that of 1906 were essentially different, and the story of the development of this difference through the 19th century closes for the present the history of progress in tactical organization.

36. *The Wars of Liberation.*—The Prussian defeat at Jena was followed by a national surrender so abject as to prove conclusively the eternal truth, that a divorce of armies from national interests is completely fatal to national well-being. But the oppression of the victors soon began to produce a spirit of ardent patriotism which, carefully directed by a small band of able soldiers, led in the end to a national uprising of a steadier and more lasting kind than that of the French Revolution. Prussia was compelled, by the rigorous treaty of peace, to keep a small force only under arms, and circumstances thus drove her into the path of military development which she subsequently followed. The stipulation of the treaty was evaded by the *Krümper* system, by which men were passed through the ranks as hastily as possible and dismissed to the reserve, their places being taken by recruits. The regimental establishments were therefore mere *cadres*, and the *personnel*, recruited by universal service with few exemptions, ever-changing. This system depended on the willingness of the reserves to come up when called upon, and the arrogance of

the French was quite sufficient to ensure this. The *dénouement* of the Napoleonic wars came too swiftly for the full development of the armed strength of Prussia on these lines; and at the outbreak of the Wars of Liberation a newly formed *Landwehr* and numerous volunteer corps took the field with no more training than the French had had in 1793. Still, the principles of universal service (*allgemeine Wehrpflicht*) and of the army reserve were, for the first time in modern history, systematically put into action, and modern military development has concerned itself more with the consolidation of the *Krümper* system than with the creation of another. The début of the new Prussian army was most unsuccessful, for Napoleon had now attained the highest point of soldierly skill, and managed to inflict heavy defeats on the allies. But the Prussians were not discouraged; like the French in 1793 they took to broken ground, and managed to win combats against all leaders opposed to them except Napoleon himself. The Russian army formed a solid background for the Prussians, and in the end Austria joined the coalition. Reconstituted on modern lines, the Austrian army in 1813, except in the higher leading, was probably the best-organized on the continent. After three desperate campaigns the Napoleonic régime came to an end, and men felt that there would be no such struggle again in their lifetime. Military Europe settled down into grooves along which it ran until 1866. France, exhausted of its manhood, sought a field for military activities in colonial wars waged by long-service troops. The conscription was still in force, but the citizens served most unwillingly, and substitution produced a professional army, which as usual became a dynastic tool. Austria, always menaced with foreign war and internal disorder, maintained the best army in Europe. The British army, though employed far differently, retained substantially the Peninsular system.

37. *European Armies 1815–1870.*—The events of the period 1815–1859 showed afresh that such long-service armies were incomparably the best form of military machine for the purpose of giving expression to a hostile "view" (not "feeling"). Austrian armies triumphed in Italy, French armies in Spain, Belgium, Algeria, Italy and Russia, British in innumerable and exacting colonial wars. Only the Prussian forces retained the characteristics of the levies of 1813, and the enthusiasm which had carried these through Leipzig and the other great battles was hardly to be expected of their sons, ranged on the side of despotism in the troubled times of 1848–1850. But the principle was not permitted to die out. The Bronnzell-Olmütz incident of 1850 (see SEVEN WEEKS' WAR) showed that the organization of 1813 was defective, and this was altered in spite of the fiercest opposition of all classes. Soon afterwards, and before the new Prussian army proved itself on a great battlefield, the American Civil War, a fiercer struggle than any of those which followed it in Europe, illustrated the capabilities and the weaknesses of voluntary-service troops. Here the hostile "view" was replaced by a hostile "feeling," and the battles of the disciplined enthusiasts on either side were of a very different kind from those of contemporary Europe. But, if the experiences of 1861–1865 proved that armies voluntarily enlisted "for the war" were capable of unexcelled feats of endurance, they proved further that such armies, whose discipline and training in peace were relatively little, or indeed wholly absent, were incapable of forcing a swift decision. The European "nation in arms," whatever its other failings, certainly achieved its task, or failed decisively to do so, in the shortest possible time. Only the special characteristics of the American theatre of war gave the Union and Confederate volunteers the space and time necessary for the creation of armies, and so the great struggle in North America passed without affecting seriously the war ideas and preparations of Europe. The weakness of the staff work with which both sides were credited helped further to confirm the belief of the Prussians in their system, and in this instance they were justified by the immense superiority of their own general staff to that of any army in existence. It was in this particular that a corps of 1870 differed so essentially from a corps of Napoleon's time. The formal organization had not been altered save as the varying relative importance of the separate arms had dictated. The almost intangible spirit which animates the members of a general staff, causes them not merely to "think" —that was always in the quartermaster-general's department—but to "think alike," so that a few simple orders called "directives" sufficed to set armies in motion with a definite purpose before them, whereas formerly elaborate and detailed plans of battle had to be devised and distributed in order to achieve the object in view. A comparison of the number of orders and letters written by a marshal and by his chief of staff in Napoleon's time with similar documents in 1870 indicates clearly the changed position of the staff. In the *Grande Armée* and in the French army of 1870 the officers of the general staff were often absent entirely from the scene of action. In Prussia the new staff system produced a far different result—indeed, the staff, rather than the Prussian military system, was the actual victor of 1870. Still, the system would probably have conquered in the end in any case, and other nations, convinced by events that their departure from the ideal of 1813, however convenient formerly, was no longer justified, promptly copied Prussia as exactly, and, as a matter of fact, as slavishly, as they had done after the Seven Years' War.

38. *Modern Developments.*—Since 1870, then, with the single exception of Great Britain, all the major European powers have adopted the principle of compulsory short service with reserves. Along with this has come the fullest development of the territorial system (see below). The natural consequence therefore of the heavy work falling upon the shoulders of the Prussian officer, who had to instruct his men, was, in the first place, a general staff of the highest class, and in the second, a system of distributing the troops over the whole country in such a way that the regiments were permanently stationed in the district in which they recruited and from which they drew their reserves. Prussia realized that if the reservists were to be obtained when required the unit must be strictly localized; France, on the contrary, lost much time and spent much trouble, in the mobilization of 1870, in forwarding the reservists to a regiment distant, perhaps, 300 m. The Prussian system did not work satisfactorily at first, for until all the district staff-officers were trained in the same way there was great inequality in the efficiency of the various army corps, and central control, before the modern development of railways, was relatively slight. Further, the mobilization must be completed, or nearly so, before concentration begins, and thus an active professional army, always at war strength, might annihilate the frontier corps before those in the interior were ready to move. But the advantages far outweighed the defects of the system, and, such professional armies having after 1870 disappeared, there was little to fear. Everywhere, therefore, save in Great Britain (for at that time the United States was hardly counted as a great military power, in spite of its two million war-trained veterans in civil life), the German model was followed, and is now followed, with but slight divergence. The period of reforms after the Prussian model (about 1873–1890) practically established the military systems which are treated below as those of the present day. The last quarter of the century witnessed a very great development of military forces, without important organic changes. The chief interest to the student of this period lies in the severe competition between the great military powers for predominance in numbers, expressed usually in the reduction of the period of service with the colours to a minimum. The final results of this cannot well be predicted: it is enough to say that it is the *Leitmotiv* in the present stage in the development of armies. Below will be found short historical sketches of various armies of the present day which are of interest in respect of their historical development. Details of existing forces are given in articles dealing with the several states to which they belong. Historical accounts of the armies of Japan and of Egypt will be found in the articles on those states. The Japanese wars of 1894–95 and 1904–5 contributed little to the history of military organization as a pure science. The

true lessons of this war were the demonstration of the wide applicability of the German methods, upon which exclusively the Japanese army had formed itself, and still more the first illustration of the new moral force of nationalities as the decisive factor. The form of armies remained unaltered. Neither the events of the Boer War of 1899–1902 nor the Manchurian operations were held by European soldiers to warrant any serious modifications in organization. It is to the moral force alluded to above, rather than to mere technical improvements, that the best soldiers of Europe, and notably those of the French general staff (see the works of General H. Bonnal), have of late years devoted their most earnest attention.

### Present-Day Armies

39. The main principles of all military organization as developed in history would seem to be national recruiting and allegiance, distinctive methods of training and administration, continuity of service and general homogeneity of form. The method of raising men is of course different in different states. In this regard armies may conveniently be classed as voluntarily enlisted, levied or conscript, and militia, represented respectively by the forces of Great Britain, Germany and Switzerland. It must not be forgotten, however, that voluntary troops may be and are maintained even in states in which the bulk of the army is levied by compulsion, and the simple militia obligation of defending the country is universally recognized.

40. *Compulsory Service.*—Universal liability to service (*allgemeine Wehrpflicht*) draws into the active army all, or nearly all, the men of military age for a continuous period of short service, after which they pass successively to the reserve, the second and the third line troops (*Landwehr*, *Landsturm*, &c.). In this way the greatest number of soldiers is obtained at the cheapest rate and the number of trained men in reserve available to keep the army up to strength is in theory that of the able-bodied manhood of the country. In practice the annual levy is, however, not exhaustive, and increased numerical strength is obtained by reducing the term of colour-service to a minimum. This may be less in a hard-worked conscript army than in one which depends upon the attractions of the service to induce recruits to join. In conscript armies, training for war is carried out with undeviating rigour. In these circumstances the recruits are too numerous and the time available is too limited for the work of training to be committed to a few selected instructors, and every officer has therefore to instruct his own men. The result is usually a corps of officers whose capacity is beyond question, while the general staff is composed of men whose ability is above a high general average. As to the rank and file, the men taken for service are in many respects the best of the nation, and this superiority is progressively enhanced, since increase of population is not often accompanied by a corresponding increase in the military establishments. In Germany in 1905, it is stated, nearly half the contingent was excused from serving in peace time, over and above the usual numbers exempted or medically rejected. The financial aspect of compulsory service may be summed up in a few words. The state does not offer a wage, the pay of the soldier is a mere trifle, and, for a given expenditure, at least three times as many men may be kept under arms as under any known "voluntary" system. Above all, the state has at its disposal for war an almost inexhaustible supply of trained soldiers. This aspect of compulsory service has indeed led its admirers sometimes to sacrifice quality to quantity; but, provided always that the regular training is adequate, it may be admitted that there is no limit to the numbers which are susceptible of useful employment. There are, however, many grave defects inherent in all armies raised by compulsory levy (see Conscription, for a discussion of the chief economical and social questions involved). Most of the advantages of universal service result, not from the compulsory enlistment, but from the principle of short service and reserves. But the cost of maintaining huge armies of the modern European type on the voluntary system would be entirely prohibitive, and those nations which have adopted the *allgemeine Wehrpflicht* have done so with full cognizance of the evil as well as of the good points of the system.

The chief of these evils is the doubtful element which exists in all such armies. Under the merciless discipline of the old régime the most unwilling men feared their officers more than the enemy. Modern short service, however, demands the good-will of all ranks and may fail altogether to make recalcitrants into good soldiers, and it may be taken for granted that every conscript army contains many men who cannot be induced to fight. Herein lies the justification of the principle of "masses," and of reduced colour-service; by drawing into the ranks the maximum number of men, the government has an eventual residuum of the bravest men in the nation left in the ranks. What has been said of the officers of these armies cannot be applied to the non-commissioned officers. Their promotion is necessarily rapid, and the field of selection is restricted to those men who are willing to re-engage, *i.e.* to serve beyond their compulsory term of two or three years. Many men do so to avoid the struggles of civil life, and such "fugitive and cloistered virtue" scarcely fosters the moral strength required for command. As the best men return to civil life, there is no choice but to promote inferior men, and the latter, when invested with authority, not infrequently abuse it. Indeed in some armies the soldier regards his officer chiefly as his protector from the rapacity or cruelty of his sergeant or corporal. A true short-service army is almost incapable of being employed on peace service abroad; quite apart from other considerations, the cost of conveying to and from home annually one-third or one-half of the troops would be prohibitive. If, as must be the case, a professional force is maintained for oversea service many men would join it who would otherwise be serving as non-commissioned officers at home and the prevailing difficulty would thus be enhanced. When colonial defence calls for relatively large numbers of men, *i.e.* an army, home resources are severely strained.

41. *Conscription* in the proper sense, *i.e.* selection by lot of a proportion of the able-bodied manhood of a country, is now rarely practised. The obvious unfairness of selection by lot has always had the result of admitting substitutes procured by those on whom the lot has fallen; hence the poorer classes are unduly burdened with the defence of the country, while the rich escape with a money payment. In practice, conscription invariably produces a professional long-service army in which each soldier is paid to discharge the obligations of several successive conscripts. Such an army is therefore a voluntary long-service army in the main, *plus* a proportion of the unwilling men found in every forced levy. The gravest disadvantage is, however, the fact that the bulk of the nation has not been through the regular army at all; it is almost impossible to maintain a large and costly standing army and at the same time to give a full training to auxiliary forces. The difference between a "national guard" such as that of the siege of Paris in 1870–71 and a *Landwehr* produced under the German system, was very wide. Regarded as a compromise between universal and voluntary service, conscription still maintains a precarious existence in Europe. As the cardinal principle of recruiting armies, it is completely obsolete.

42. *Voluntary Service.*—Existing voluntary armies have usually developed from armies of the old régime, and seem to owe their continued existence either to the fact that only comparatively small armaments are maintained in peace, other and larger armies being specially recruited during a war (a modification of the "enlistment system"), or to the necessities of garrisoning colonial empires. The military advantages and disadvantages of voluntary service are naturally the faults and merits of the opposite system. The voluntary army is available for general service. It includes few unwilling soldiers, and its resultant advantage over an army of the ordinary type has been stated to be as high as 30%. At all events, we need only examine military history to find that with conscript armies wholesale shirking is far from unknown. That loss from this cause does not paralyse operations as it paralysed those of the 18th century.

is due to the fact that such fugitives do not desert to the enemy, but reappear in the ranks of their own side; it must not therefore be assumed that men have become braver because the "missing" are not so numerous. In colonial and savage warfare the superior personal qualities of the voluntary soldier often count for more than skill on the part of the officers. These would be diminished by shortening the time of service, and this fact, with the expense of transport, entails that a reasonably long period must be spent with the colours. On the other hand, the provision of the large armies of modern warfare requires the maintenance of a reserve, and no reserve is possible if the whole period for which men will enlist is spent with the colours. The demand for long service in the individual, and for trained men in the aggregate, thus produces a compromise. The principle of long service, *i.e.* ten years or more with the colours, is not applicable to the needs of the modern *grande guerre*; it gives neither great initial strength nor great reserves. The force thus produced is costly and not lightly to be risked; it affords relatively little opportunity for the training of officers, and tends to become a class apart from the rest of the population. On the other hand, such a force is the best possible army for foreign and colonial service. A state therefore which relies on voluntary enlistment for its forces at home and abroad, must either keep an army which is adaptable to both functions or maintain a separate service for each.

In a state where relatively small armaments are maintained in peace, voluntary armies are infinitely superior to any that could be obtained under any system of compulsion. The state can afford to give a good wage, and can therefore choose its recruits carefully. It can thus have either a few incomparable veteran soldiers (long-service), or a fairly large number of men of superior physique and intelligence, who have received an adequate short-service training. Even the youngest of such men are capable of good service, while the veterans are probably better soldiers than any to be found in conscript armies. This is, however, a special case. The raw material of any but a small voluntary army usually tends to be drawn from inferior sources; the cost of a larger force, paid the full wages of skilled labourers, would be very great, and numbers commensurate with those of an army of the other model could only be obtained at an exorbitant price. The short-service principle is therefore accepted. Here, however, as recruiting depends upon the good-will of the people, it is impossible to work the soldiers with any degree of rigour. Hence the voluntary soldier must serve longer than a conscript in order to attain the same proficiency. The reserve is thus weakened, and the total trained regular force diminished. Moreover, as fewer recruits are required annually, there is less work for the officers to do. In the particular case of Great Britain it is practically certain that in future, reliance will be placed upon the auxiliary forces and the civil population for the provision of the enormous reserves required in a great war; this course is, however, only feasible in the case of an insular nation which has time to collect its strength for the final and decisive blow overseas. The application of the same principle to a continental military power depends on the capacity for stern and unflagging resistance displayed by the *corps de couverture* charged with the duty of gaining the time necessary for the development and concentration of the national masses. In Great Britain (except in the case of a surprise invasion) the place of this corps would be taken by "command of the sea." Abroad, the spirit of the exposed regiments themselves furnishes the only guarantee, and this can hardly be calculated with sufficient certainty, under modern conditions, to justify the adoption of this new "enlistment system." Voluntary service, therefore, with all its intrinsic merits, is only applicable to the conditions of a great war when the war reserve can be trained *ad hoc*.

43. The militia idea (see MILITIA) has been applied most completely in Switzerland, which has no regular army, but trains almost the whole nation as a militia. The system, with many serious disadvantages, has the great merit that the maximum number of men receives a certain amount of training at a minimum cost both to the state and to the individual. Mention should also be made of the system of augmenting the national forces by recruiting "foreign legions." This is, of course, a relic of the *Werbe-system;* it was practised habitually by the British governments of the 18th and early 19th centuries. "Hessians" figured conspicuously in the British armies in the American War of Independence, and the "King's German Legion" was only the best and most famous of many foreign corps in the service of George III. during the Revolutionary and Napoleonic wars. A new German Legion was raised during the Crimean War, but the almost universal adoption of the *Krümper* system has naturally put an end to the old method, for all the best recruits are now accounted for in the service of their own countries.

### ARMY ORGANIZATION

44. *Arms of the Service.*—Organization into "arms" is produced by the multiplicity of the weapons used, their functions and their limitations. The "three arms"—a term universally applied to infantry (*q.v.*), cavalry (*q.v.*) and artillery (*q.v.*)—coexist owing to the fact that each can undertake functions which the others cannot properly fulfil. Thus cavalry can close with an enemy at the quickest pace, infantry can work in difficult ground, and artillery is effective at great ranges. Infantry indeed, having the power of engaging both at close quarters and at a distance, constitutes the chief part of a fighting force. Other "arms," such as mounted infantry, cyclists, engineers, &c., are again differentiated from the three chief arms by their proper functions. In deciding upon the establishment in peace, or the composition of a force for war, it is therefore necessary to settle beforehand the relative importance of these functions in carrying out the work in hand. Thus an army operating in Essex would be unusually strong in infantry, one on Salisbury Plain would possess a great number of guns, and an army operating on the South African veldt would consist very largely of mounted men. The normal European war has, however, naturally been taken as the basis upon which the relative proportions of the three arms are calculated. At the battle of Kolin (1757) the cavalry was more than half as strong as the infantry engaged. At Borodino (1812) there were 39 cavalry to 100 of other arms, and 5 guns per 1000 men. In 1870 the Germans had at the outset 7 cavalrymen to every 100 men of other arms, the French 10. As for guns, the German artillery had 3, the French $3\frac{1}{2}$ per 1000 men. In more modern times the proportions have undergone some alteration, the artillery having been increased, and the cavalry brought nearer to the Napoleonic standard. Thus the relative proportions, in peace time, now stand at 5 or 6 guns per 1000 men, and 16 cavalry soldiers to 100 men of other arms. It must be borne in mind that cavalry and artillery are maintained in peace at a higher effective than infantry, the strength of the latter being much inflated in war, while cavalry and artillery are not easily extemporized. Thus in the Manchurian campaign these proportions were very different. The Russian army on the eve of the battle of Mukden (20th of February 1905) consisted of 370 battalions, 142 squadrons and 153 field batteries (1200 guns), with, in addition, over 200 heavy guns. The strength of this force, which was organized in three armies, was about 300,000 infantry and 18,000 cavalry and Cossacks, with $3\frac{1}{2}$ guns per 1000 men of other arms. The Japanese armies consisted of 300,000 infantry, 11,000 cavalry, 900 field and 170 heavy guns, the proportion of field artillery being $2\frac{1}{2}$ guns per 1000 men.

It is perhaps not superfluous to mention that all the smaller units in a modern army consist of one arm only. Formerly several dissimilar weapons were combined in the same unit. The knight with his four or five variously armed retainers constituted an example of this method of organization, which slowly died out as weapons became more uniform and their functions better defined.

45. *Command.*—The first essential of a good organization is to ensure that each member of the organized body, in his own sphere of action, should contribute his share to the achievement of the common object. Further, it is entirely beyond the power

of one man, or of a few, to control every action and provide for every want of a great number of individuals. The modern system of command, therefore, provides for a system of grades, in which, theoretically, officers of each grade control a group of the next lower units. A lieutenant-colonel, for instance, may be in charge of a group of eight companies, each of which is under a captain. In practice, all armies are permanently organized on these lines, up to the colonel's or lieutenant-colonel's command, and most of them are permanently divided into various higher units under general officers, the brigade, division and army corps. The almost invariable practice is to organize *infantry* into companies, battalions and regiments. *Cavalry* is divided into troops, squadrons and regiments. *Artillery* is organized in batteries, these being usually grouped in various ways. The other arms and departments are subdivided in the same general way. The commands of general officers are the *brigade* of infantry, cavalry, and in some cases artillery, the *division* of two or more infantry brigades and a force of artillery and mounted troops, or of cavalry and horse artillery, and the *army corps* of two or more divisions and " corps troops." *Armies* of several corps, and *groups of armies* are also formed.

46. A *brigade* is the command of a brigadier or major-general, or of a colonel. It consists almost invariably of one arm only. In armies of the old régime it was not usual to assign troops of all arms to the subordinate generals. Hence the brigade is a much older form of organization than the division of all arms, and in fact dates from the 16th century. The infantry brigade consists, in the British service, of the brigadier and his staff, four battalions of infantry, and adminstrative and medical units, the combatant strength being about 4000 men. In Germany and France the brigade is composed of the staff, and two regiments (6 battalions) with a total of over 6000 combatants at war strength. The cavalry brigade is sometimes formed of three, sometimes of two regiments; the number of squadrons to a regiment on service is usually four, exceptionally three, and rarely five and six. The " brigade " of artillery in Great Britain is a lieutenant-colonel's command, and the term here corresponds to the *Abtheilung* of the German, and the *groupe* of the French armies (see ARTILLERY). In Germany and France, however, an artillery brigade consists of two or more regiments, or twelve batteries at least, under the command of an artillery general officer.

47. A *division* is an organization containing troops of all arms. Since the virtual abolition of the " corps artillery " (see ARTILLERY), the force of field artillery forming part of an infantry division is sometimes as high as 72 guns (Germany); in Great Britain the augmented division of 1906 has 54 field guns, 12 field howitzers, and 4 heavy guns, a total of 70. The term " infantry " division is, in strictness, no longer applicable, since such a unit is a miniature army corps of infantry, artillery and cavalry, with the necessary services for the supply of ammunition, food and forage, and for the care of the sick and wounded. A more exact title would be " army " division. In general it is composed, so far as combatants are concerned, of the divisional commander and his staff, two or more infantry brigades, a number of batteries of field artillery forming a regiment, brigade or group, a small force, varying from a squadron to a regiment, of cavalry (divisional cavalry), with some engineers. The force of the old British division (1905) may be taken, on an average, as 10,000 men, increased in the 1906 reorganization to about 15,000 combatants. In other armies the fighting force of the division amounts to rather more than 14,000. The *cavalry division* (see CAVALRY) is composed of the staff, two or three cavalry brigades, horse artillery, with perhaps mounted infantry, cyclists, or even light infantry in addition. In many, if not most, armies cavalry divisions are formed only in war. In the field the cavalry division is usually an independent unit with its own commander and staff. " Cavalry corps " of several divisions have very rarely been formed in the past, a division having been regarded as the largest unit capable of being led by one man. There is, however, a growing tendency in favour of the corps organization, at any rate in war.

48. *Army Corps.*—The " corps " of the 18th century was simply a large detachment, more or less complete in itself, organized for some particular purpose (*e.g.* to cover a siege), and placed for the time being under some general officer other than the chief commander. The modern army corps is a development from the division of all arms, which originated in the French Revolutionary wars. It is a unit of considerable strength, furnished with the due proportion of troops of all arms and of the auxiliary and medical services, and permanently placed under the command of one general. The corps organization (though a *corps d'armée* was often spoken of as an *armée*) was used in Napoleon's army in all the campaigns of the Empire. It may be mentioned, as a curious feature of Napoleon's methods, that he invariably constituted each *corps d'armée* of a different strength, so that the enemy would not be able to estimate his force by the simple process of counting the corps flags which marked the marshals' headquarters. Thus in 1812 he constituted one corps of 72,000 men, while another had but 18,000. After the fall of Napoleon a further advance was made. The adoption of universal service amongst the great military nations brought in its train the territorial organization, and the corps, representing a large district, soon became a unit of peace formation. For the smooth working of the new military system it was essential that the framework of the war army should exist in peace. The Prussians were the first to bring the system to perfection; long before 1866 Prussia was permanently divided into army corps districts, all the troops of the III. army corps being Brandenburgers, all those of the VI. Silesians, and so on, though political reasons required, and to some extent still require, modifications of this principle in dealing with annexed territory (*e.g.* Hanover and Alsace-Lorraine). The events of 1866 and of 1870–71 caused the almost universal adoption of the army corps regional system. In the case of the British army, operating as it usually did in minor wars, and rarely having more than sixty or seventy thousand men on one theatre even in continental wars, there was less need of so large a unit as the corps. Not only was a British army small in numbers, but it preserved high traditions of discipline, and was sufficiently well trained to be susceptible as a unit to the impulse given by one man. Even where the term " corps " does appear in Peninsular annals, the implication is of a corps in the old sense of a grand detachment. Neither cavalry nor artillery was assigned to any of the British " corps " at Waterloo.

49. *Constitution of the Army Corps.*—In 1870–71 the III. German army corps (with which compare Marshal Davout's *ordre de bataille* above) consisted of the following combatant units: (*a*) staff; (*b*) two infantry divisions (4 brigades, 8 regiments or 24 battalions), with, in each division, a cavalry regiment, 4 batteries of artillery or 24 guns, and engineers; (*c*) corps troops, artillery (6 field batteries), pioneer battalion (engineers), train battalion (supply and transport). A rifle battalion was attached to one of the divisions.

This *ordre de bataille* was followed more or less generally by all countries up to the most modern times, but between 1890 and 1902 came a very considerable change in the point of view from which the corps was regarded as a fighting unit. This change was expressed in the abolition of the corps artillery. Formerly the corps commander controlled the greater part of the field artillery, as well as troops of other arms; at the present time he has a mere handful of troops. Unless battalions are taken from the divisions to form a corps reserve, the direct influence of the corps organization on the battle is due almost solely to the fact that the commander has at his disposal the special natures of artillery and also some horse artillery. Thus the (augmented) division is regarded by many as the fighting unit of the 20th, as the corps was that of the 19th century. In Europe there is even a tendency to substitute the ancient phrase " reserve artillery " for " corps artillery," showing that the rôle to be played by the corps batteries is subordinated to the operations of the masses of divisional artillery, the whole being subject, of course, to the technical supervision of the artillery general officer who accompanies the corps headquarters. Thus limited, the army corps has now

come to consist of the staff, two or more divisions, the corps or reserve artillery (of special batteries), a small force of "corps" cavalry, and various technical and departmental troops. The cavalry is never very numerous, owing to the demands of the independent cavalry divisions on the one hand and those of the divisional cavalry on the other. The engineers of an army corps include telegraph, balloon and pontoon units. Attached to the corps are reserves of munitions and supplies in ammunition columns, field parks, supply parks, &c. The term and the organization were discontinued in England in 1906, on the augmentation of the divisions and the assignment of certain former "corps troops" to the direct control of the army commanders. It should be noticed that the Japanese, who had no corps organization during the war of 1904–5, afterwards increased the strength of their divisions from 15,000 to 20,000; the augmented "division," with the above *peace* strength, becomes to all intents and purposes a corps, and the generals commanding divisions were in 1906 given the title of generals-in-chief.

50. *Army.*—The term "army" is applied, in war time, to any command of several army corps, or even of several divisions, operating under the orders of one commander-in-chief. The army in this sense (distinguished by a number or by a special title) varies, therefore, with circumstances. In the American Civil War, the Army of the Ohio consisted in 1864 only of the army staff and the XXIII. corps. At the other extreme we find that the German II. Army in 1870 consisted of seven army corps and two cavalry divisions, and the III. Army of six army corps and two cavalry divisions. The term "army" in this sense is therefore very elastic in its application, but it is generally held that large groups of corps operating in one theatre of war should be subdivided into armies, and that the strength of an army should not exceed about 150,000 men, if indeed this figure is reached at all. This again depends upon circumstances. It might be advisable to divide a force of five corps into two armies, or on the other hand it might be impossible to find suitable leaders for more than two armies when half a million men were present for duty. In France, organization has been carried a step further. The bulk of the national forces is, in case of war, organized into a "group of armies" under a commander, usually, though incorrectly, called the *generalissimo*. This office, of course, does not exist in peace, but the insignia, the distinctive marks of the headquarters flag, &c., are stated in official publications, and the names of the generalissimo and of his chief of staff are known. Under the generalissimo would be four or five army commanders, each with three or four army corps under him. Independent of this "group of armies" there would be other and minor "armies" where required.

51. *Chief Command.*—The leading of the "group of armies" referred to above does not, in France, imply the supreme command, which would be exercised by the minister of war in Paris. The German system, on the other hand, is based upon the leadership of the national forces by the sovereign in person, and even though the headquarters of the "supreme war lord" (*Oberste Kriegsherr*) are actually in the field in one theatre of operations, he directs the movements of the German armies in all quarters. Similarly, in 1864, General Grant accompanied and controlled as a "group" the Armies of the Potomac and the James, supervising at the same time the operations of other groups and armies. In the same campaign a subordinate general, Sherman, commanded a "group" consisting of the Armies of the Tennessee, the Cumberland and the Ohio. The question as to whether the supreme command and the command of the principal group of armies should be in the same hands is very difficult of solution. In practice, the method adopted in each case usually grows out of the military and political conditions. The advantage of the German method is that the supreme commander is in actual contact with the troops, and can therefore form an accurate judgment of their powers. Under these conditions the risk of having cabinet strategy forced upon the generals is at its minimum, and more especially so if the supreme commander is the head of the state. On the other hand, his judgment is very liable to be influenced unduly by facts, coming under his own notice, which may in reality have no more than a local significance. Further, the supreme commander is at the mercy of distant subordinates to a far greater degree than he would be if free to go from one army to another. Thus, in 1870 the king of Prussia's headquarters before Paris were subjected to such pressure from subordinate army commanders that on several occasions selected staff-officers had to be sent to examine, for the king's private information, the real state of things at the front. The conduct of operations by one group commander in the campaign of 1864 seemed, at a distance, so eccentric and dangerous that General Grant actually left his own group of armies and went in person to take over command at the threatened point. Balanced judgment is thus often impossible unless the supreme command is independent of, and in a position to exercise general supervision over, each and every group or army. At the other end of the scale is the system of command employed by the Turks in 1877, in which four armies, three of them being actually on the same theatre of war, were directed from Constantinople. This system may be condemned unreservedly. It is recognized that, once the armies on either side have become seriously engaged, a commander-in-chief on the spot must direct them. Thus in 1904, while the Japanese and Russian armies were under the supreme command of their respective sovereigns, General Kuropatkin and Marshal Oyama personally commanded the chief groups of armies in the field. This is substantially the same as the system of the French army. It is therefore permissible to regard the system pursued by the Germans in 1870, and by the Union government in 1864, more as suited to special circumstances than as a general rule. As has been said above, the special feature of the German system of command is the personal leadership of the German emperor, and this brings the student at once to the consideration of another important part of the "superior leading."

52. The *Chief of the General Staff* is, as his title implies, the chief staff officer of the service, and as such, he has duties of the highest possible importance, both in peace and war. For the general subject of staff duties see STAFF. Here we are concerned only with the peculiar position of the chief of staff under a system in which the sovereign is the actual commander-in-chief. It is obvious in the first place that the sovereign may not be a great soldier, fitted by mental gifts, training and character to be placed at the head of an army of, perhaps, a million men. Allowing that it is imperative that, whatever he may be in himself, the sovereign should *ex officio* command the armies, it is easy to see that the ablest general in these armies must be selected to act as his adviser, irrespective of rank and seniority. This officer must therefore be assigned to a station beyond that of his army rank, and his orders are in fact those of the sovereign himself. Nor is it sufficient that he should occupy an unofficial position as adviser, or *ad latus*. If he were no more than this, the sovereign could act without his adviser being even aware of the action taken. As the staff is the machinery for the transmission of orders and despatches, all orders of the commander-in-chief are signed by the chief of staff as a matter of course, and this position is therefore that in which the adviser has the necessary influence. The relations between the sovereign and his chief military adviser are thus of the first importance to the smooth working of the great military machine, and never have the possibilities of this apparently strange system been more fully exploited than by King William and his chief of staff von Moltke in 1866 and in 1870–71. It is not true to say that the king was the mere figurehead of the German armies, or that Moltke was the real commander-in-chief. Those who have said this forget that the sole responsibility for the consequences of every order lay with the king, and that it is precisely the fear of this responsibilty that has made so many brilliant subordinates fail when in chief command. The characters of the two men supplemented each other, as also in the case of Blücher and Gneisenau and that of Radetzky and Hess. Under these circumstances, the German system of command works, on the whole, smoothly. Matters would, however, be different if either of the two officers failed to realize their mutual interdependence, and the system is in any

case only required when the self-sufficing great soldier is not available for the chief executive command.

53. *First and Second Lines.*—The organization into arms and units is of course maintained in peace as well as for war. Military forces are further organized, in peace, into active and reserve troops, first and second lines, &c., according to the power possessed by the executive over the men. Broadly speaking, the latter fall into three classes, regulars, auxiliary forces and irregular troops. The regulars or active troops are usually liable to serve at all times and in any country to which they may be sent. Auxiliary forces may be defined as all troops which undergo actual military training without being constantly under arms, and in Great Britain these were until 1908 represented by the Militia, the Yeomanry and the Volunteers, and now by the Territorial Force and the Special Reserve. In a country in which recruiting is by voluntary enlistment the classification is, of course, very different from that prevailing in a conscript army. The various "lines" are usually composed of separate organizations; the men are recruited upon different engagements, and receive a varying amount of training. Of the men not permanently embodied, only the reserve of the active army has actually served a continuous term with the colours. Other troops, called by various appellations, of which "militia" may be taken as generic, go through their military training at intervals. The general lines of army organization in the case of a country recruiting by universal service are as follows:—The male population is divided into classes, by ages, and the total period of liability to service is usually about 25 years. Thus at any given time, assuming two years' colour-service, the men of 20 and 21 years of age would constitute the active army serving with the colours, those of, say, 22 and 23, the reserve. The *Landwehr* or second line army would consist of all men who had been through the active army and were now aged 24 to 36. The third line would similarly consist of men whose ages were between 36 and 44. Assuming the same annual levy, the active army would consist of 200,000 men, its reserve 200,000, the second line of 1,300,000, and the third of 800,000. Thus of 2,500,000 men liable to, and trained for, military service, 200,000 only would be under arms at any given time. The simple system here outlined is of course modified and complicated in practice owing to re-engagements by non-commissioned officers, the speedy dismissal to the reserve of intelligent and educated men, &c.

54. *War Reserves.*—In war, the reserves increase the field armies to 400,000 men, the whole or part of the second line is called up and formed into auxiliary regiments, brigades and divisions, and in case of necessity the third line is also called upon, though usually this is only in the last resort and for home defence only. The proportion of reservists to men with the colours varies of course with the length of service. Thus in France or Germany, with two years' service in force, half of the rank and file of a unit in war would be men recalled from civil life. The true military value of reservists is often questioned, and under certain circumstances it is probable that units would take the field at peace strength without waiting for their reservists. The frontier guards of the continental military powers, which are expected to move at the earliest possible moment after hostilities have begun, are maintained at a higher effective than other units, and do not depend to any great extent on receiving reservists. The peace footing of cavalry and artillery units is similarly maintained at an artificial level. An operation of the nature of a *coup de main* would in any case be carried out by the troops available at the moment, however large might be the force required—twenty weak battalions would, in fact, be employed instead of ten strong ones. There is another class of troops, which may be called depot troops. These consist of officers and men left behind when the active corps completed with reserves takes the field, and they have (*a*) to furnish drafts for the front—and (*b*) to form a nucleus upon which all later formations are built up. The troops of the second line undertake minor work, such as guarding railways, and also furnish drafts for the field army. Later, when they have been for some time under arms, the second line troops are often employed by themselves in first line. A year's training under war conditions should bring such troops to the highest efficiency. As for irregulars, they have real military value only when the various permanent establishments do not take up the whole fighting strength of the nation, and thus states having universal service armies do not, as a rule, contemplate the employment of combatants other than those shown on the peace rolls. The status of irregulars is ill defined, but it is practically agreed that combatants, over whose conduct the military authorities have no disciplinary power, should be denied the privileges of recognized soldiers, and put to death if captured. So drastic a procedure is naturally open to abuse and is not always expedient. Still, it is perfectly right that the same man shall not be allowed, for example, to shoot a sentry at one moment, and to claim the privileges of a harmless civilian at the next. The division into first, second and third lines follows generally from the above. The first line troops, in a conscript army, are the "active army" or regulars, permanently under arms in peace time, and its reserves, which are used on the outbreak of war to complete the existing units to full strength. The German terms *Landwehr* and *Landsturm* are often applied to armies of the second and the third lines.

55. The military characteristics of the various types of regular troops have been dealt with in considering the advantages and disadvantages of the several forms of recruiting. It only remains to give some indication of the advantages which such forces (irrespective of their time of service) possess over troops which only come up for training at intervals. Physically, the men with the colours are always superior to the rest, owing to their constant exercise and the regularity and order under which they live; as soldiers, they are more under the control of their officers, who are their leaders in daily life, in closer touch with army methods and discipline, and, as regards their formal training, they possess infinitely greater power of strategic and tactical manœuvre. Their steadiness under fire is of course more to be relied upon than that of other troops. Wellington, speaking of the contrast between old and young soldiers (regulars), was of opinion that the chief difference lay in the greater hardiness, power of endurance, and general campaigning qualities given by experience. This is of course more than ever true in respect of regular and auxiliary troops, as was strikingly demonstrated in the Spanish-American War. On the whole, it is true to say that only a regular army can endure defeat without dissolution, and that volunteers, reservists or militiamen fresh from civil life may win a victory but cannot make the fullest use of it when won. At the same time, when they have been through one or two arduous campaigns, raw troops become to all intents and purposes equal to any regulars. On the other hand, the greatest military virtue of auxiliary forces is their enthusiasm. With this quality were won the great victories of 1792–94 in France, those of 1813 in Germany, and the beginnings of Italian unity at Calatafimi and Palermo. The earlier days of the American Civil War witnessed desperate fighting, of which Shiloh is the best example, between armies which had had but the slightest military training. In the same war the first battle of Bull Run illustrated what has been said above as to the weaknesses of unprofessional armies. Both sides, raw and untrained, fought for a long time with the greatest determination, after which the defeated army was completely dissolved in rout and the victors quite unable to pursue. So far it is the relative military value of the professional soldier and the citizen-soldier that has been reviewed. A continental army of the French or German stamp is differently constituted. It is, first of all, clear that the drilled citizen-soldier combines the qualities of training and enthusiasm. From this it follows that a hostile "feeling" as well as a hostile "view" must animate such an army if it is to do good service. If a modern "nation in arms" is engaged in a purely dynastic quarrel against a professional army of inferior strength, the result will probably be victory for the latter. But the active army of France or Germany constitutes but a small part of the "nation in arms," and the army for war is

composed in addition of men who have at some period in the past gone through a regular training. Herein lies the difference between continental and British auxiliary forces. In the French army, an ex-soldier during his ten years of reserve service was by the law of 1905 only liable for two months' training, and for the rest of his military career for two weeks' service only. The further reduction of this liability was proposed in 1907 and led to much controversy. The question of the value of auxiliary forces, then, as between the continous work of, say, English territorials, and the permanent though dwindling influence of an original period of active soldiering, is one of considerable importance. It is largely decided in any given case by the average age of the men in the ranks.

56. The transfer of troops from the state of peace to that of war is called *mobilization*. This is, of course, a matter which primarily depends on good administration, and its minutest details are in all states laid down beforehand. Reservists have to be summoned, and, on arrival, to be clothed and equipped out of stores maintained in peace. Officers and men of the regular army on leave have to be recalled, the whole medically examined for physical fitness to serve, and a thousand details have to be worked out before the unit is ready to move to its concentration station. The concentration and the strategic deployment are, of course, dependent upon the circumstances of each war, and the peace organization ceases to be applicable. But throughout a war the depots at home, the recruiting districts of second-line troops, and above all the various arsenals, manufactories and offices controlled by the war department are continually at work in maintaining the troops in the field at proper strength and effectiveness.

57. *Territorial System.*—The feudal system was of course a territorial system in principle. Indeed, as has been shown above, a feudal army was chiefly at fault owing to the dislocation of the various levies. Concentration was equally the characteristic of the professional armies which succeeded those of feudalism, and only such militia forces as remained in existence preserved a local character. The origin of territorial recruiting for first-line troops is to be found in the " cantonal " system, said to have been introduced by Louis XIV., but brought to the greatest perfection in Prussia under Frederick William I. But long service and the absence of a reserve vitiated the system in practice, since losses had to be made good by general recruiting, and even the French Revolution may hardly be said to have produced the territorial system as we understand it to-day. It was only in the deliberate preparation of the Prussian army on short-service lines that we find the beginning of the " territorial system of dislocation and command." This is so intimately connected with the general system of organization that it cannot be considered merely as a method of recruiting by districts. It may be defined as a system whereby, for purposes of command in peace, recruiting, and of organization generally, the country is divided into districts, which are again divided and subdivided as may be required. In a country in which universal service prevails, an army corps district is divided into divisional districts, these being made up of brigade and of regimental districts. Each of these units recruits, and is in peace usually stationed, in its own area; the artillery, cavalry and special arms are recruited for the corps throughout the whole allotted area, and stationed at various points within the same. Thus in the German army the III. army corps is composed entirely of Brandenburgers. The infantry of the corps is stationed in ten towns, the cavalry in four and the artillery in five. In countries which adhere to voluntary recruiting, the system, depending as it does on the calculable certainty of recruiting, is not so fully developed, but in Great Britain the auxiliary forces have been reorganized in divisions of all arms on a strictly territorial basis. The advantage of the system as carried into effect in Germany is obvious. Training is carried out with a minimum of friction and expense, as each unit has an ample area for training. Whilst the brigadiers can exercise general control over the colonels, and the divisional generals over the brigadiers, there is little undue interference of superior authority in the work of each grade, and the men, if soldiers by compulsion, at any rate are serving close to their own homes. Most of the reservists required on mobilization reside within a few miles of their barracks. Living in the midst of the civil population, the troops do not tend to become a class apart. Small garrisons are not, as formerly, allowed to stagnate, since modern communications make supervision easy. Further, it must be borne in mind that the essence of the system is the organization and training for war of the whole military population. Now so great a mass of men could not be administered except through this decentralization of authority, and the corollary of short service universally applied is the full territorial system, in which the whole enrolled strength of the district is subjected to the authority of the district commander. Practice, however, falls short of theory, and the dangers of drawing whole units from disaffected or unmilitary districts are often foreseen and discounted by distributing the recruits, non-regionally, amongst more or less distant regiments.

58. *Army Administration.*—The existing systems of command and organization, being usually based upon purely military considerations, have thus much, indeed almost all, in common. *Administration* differs from them in one important respect. While the methods of command and organization are the result of the accumulated experience of many armies through many hundred years, the central administration in each case is the product of the historical evolution of the particular country, and is dependent upon forms of government, constitutions and political parties. Thus France, after 1870, remodelled the organization of her forces in accordance with the methods which were presumed to have given Germany the victory, but the headquarters staff at Paris is very different in all branches from that of Berlin. Great Britain adopted German tactics, and to some extent even uniform, but the Army Council has no counterpart in the administration of the German emperor's forces.

The first point for consideration, therefore, is, what is the ultimate, and what is the proximate, authority supervising the administration? The former is, in most countries, the people or its representatives in parliament, for it is in their power to stop supplies, and without money the whole military fabric must crumble. The constitutional chief of the army is the sovereign, or, in republics, the president, but in most countries the direct control of army matters by the representatives of the people extends over all affairs into which the well-being of the civil population, the expenditure of money, alleged miscarriages of military justice, &c., enter, and it is not unusual to find grand strategy, and even the technical deficiencies of a field-gun or rifle, the subject of interpellation and debate. The peculiar influence of the sovereign is in what may be termed patronage (that is, the selection of officers to fill important positions and the general supervision of the officer-corps), and in the fact that loyalty is the foundation of the discipline and soldierly honour which it is the task of the officers to inculate into their men. In all cases the head of the state is *ipso facto* the head of the army. The difference between various systems may then be held to depend on the degree of power allowed to or held by him. This reacts upon the central administration of the army, and is the cause of the differences of system alluded to. For the civil chief of the executive is not necessarily a soldier, much less an expert and capable soldier; he must, therefore, be provided with technical advisers. The chief of the general staff is often the principal of these, though in some cases a special commander-in-chief, or the minister for war, or, as in France and England, a committee or council, has the duty of advising the executive on technical matters.

59. *Branches of Administration.*—In these circumstances the only general principle of army administration common to all systems is the division of the labour between two great branches. Military administration, in respect of the troops and material which it has to control, is divided between the departments of the *War Office* and the *General Staff*. In the staff work of subordinate units, *e.g.* army corps and divisions, the same classification of duties is adopted, " general staff " duties being performed by one set of officers, " routine staff " duties by another.

The work of a *General Staff* may be taken as consisting in preparation for war, and this again, both in Great Britain and abroad, consists of military policy in all its branches, staff duties in war, the collection of intelligence, mobilization, plans of operations and concentration, training, military history and geography, and the preparation of war regulations. These subjects are usually subdivided into four or five groups, each of which is dealt with by a separate section of the general staff, the actual division of the work, of course, varying in different countries. Thus, the second section of the French staff deals with "the organization and tactics of foreign armies, study of foreign theatres of war, and military missions abroad." A *War Office* is concerned with peace administration and with the provision of men and material in war. Under the former category fall such matters as "routine" administration, finance, justice, recruiting, promotion of officers (though not always), barracks and buildings generally, armament, equipment and clothing, &c., in fact all matters not directly relevant to the training of the troops for and the employment of the troops in war. In war, some of the functions of a war office are suspended, but on the other hand the work necessary for the provision of men and material to augment the army and to make good its losses is vastly increased. In 1870 the minister of war, von Roon, accompanied the headquarters in the field, but this arrangement did not work well, and will not be employed again. The chief duties other than those of the general staff fall into two classes, the "routine staff," administration or adjutant-general's branch, which deals with all matters affecting *personnel*, and the quartermaster-general's branch, which supervises the provision and issue of supplies, stores and *matériel* of all kinds. Over and above these, provision has to be made for control of all the technical parts of administration, such as artillery and engineer services (in Great Britain, this, with a portion of the quartermaster-general's department, is under the master-general of the ordnance), and for military legislation, preparation of estimates, &c. These are, of course, special subjects, not directly belonging to the general administrative system. It is only requisite that the latter should be sufficiently elastic to admit of these departments being formed as required. However these subordinate offices may be multiplied, the main work of the war office is in the two departments of the adjutant-general (*personnel*) and the quartermaster-general (*matériel*). Beyond and wholly distinct from these is the general staff, the creation of which is perhaps the most important contribution of the past century to the pure science of military organization.

### British Army

60. Prior to the Norman Conquest the armed force of England was essentially a national militia. Every freeman was bound to bear arms for the defence of the country, or for the maintenance of order. To give some organization and training to the levy, the several sheriffs had authority to call out the contingents of their shires for exercise. The "fyrd," as the levy was named, was available for home service only, and could not be moved even from its county except in the case of emergency; and it

Comparative Strength of Various Armies

(*a*) *Compulsory Service* (1906).

| | France. | Germany. | Russia. | Austria-Hungary. | Italy. |
|---|---|---|---|---|---|
| Annual Contingent for the Colours | 230,000 | 222,000 | 254,000 | 128,000 | 83,000 |
| Medically unfit and exempt | 90,000 | 127,000 | 120,000 | 57,000 | 110,000 |
| Excused from Service in Peace, able-bodied | .. | 291,000 | 606,000 | 285,000 | 122,000 |
| Total of Men becoming liable for Service in 1907 | 320,000 | 540,000 | 980,000 | 470,000 | 315,000 |
| Total Permanent Armed Force in Peace | 610,000 (not including colonial troops) | 610,000 | 1,226,000 | 356,000 | 269,000 |
| First-Line Troops, war-strength (estimated) | 1,350,000 | 1,675,000 | 2,187,000 | 950,000 | 800,000 |
| Second-Line Troops, war-strength (estimated) | 3,000,000 | 2,275,000 | 1,429,000 | 1,450,000 | 1,150,000 |
| Numbers available in excess of these (estimated) | 450,000 | 3,950,000 | 9,384,000 | 5,000,000 | 1,200,000 |
| Total War Resources of all kinds | 4,800,000 | 7,900,000 | 13,000,000 | 7,400,000 | 3,150,000 |
| Annual Military Expenditure—total | £27,720,000 | £32,228,000 | £36,080,000 | £15,840,000 | £11,280,000 |
| Annual Military Expenditure—per head of population (approximate) | 13s. 9d. | 10s. 9d. | 5s. 3d. | 6s. 8d. | 6s. 5d. |

(*b*) *Authorized Establishments and Approximate Military Resources of the British Empire* (1906–1907).

| | British Regular Army. | Reserves for Regular Army. | Auxiliary Forces. | Native Troops (Regular, Reserve, &c.). | Colonial Forces (various). | Total. |
|---|---|---|---|---|---|---|
| Great Britain | 117,000 | 120,000 | 500,000 | .. | .. | 737,000 |
| Channel Islands, Malta, Bermuda, Colonies and Dependencies | 65,000 | .. | 6,000 | .. | 30,000 | 101,000 |
| India | 75,000 | .. | 30,000 | 202,000 | .. | 307,000 |
| Canadian Forces | .. | .. | 46,000 | .. | 59,000 (reserves) | 105,000 |
| Australian Forces (including New Zealand) | .. | .. | 70,000 (appr.) | .. | .. | 70,000 |
| South African Forces | .. | .. | 20,000 (appr.) | .. | .. | 20,000 |
| Totals | 257,000 | 120,000 | 672,000 | 202,000 | 89,000 | 1,340,000 |

*Note.*—Ex-soldiers of regular and auxiliary forces, still fit for service, and estimated *levées en masse*, are not counted. Enlistment chiefly voluntary.

(*c*) The Regular Army of the United States has a maximum authorized establishment (1906) of 60,000 enlisted men; the Organized Militia was at the same date 110,000 strong. Voluntary enlistment throughout. (See United States.) In 1906–1907 the total numbers available for a *levée en masse* were estimated at 13,000,000.

was principally to repel oversea invasions that its services were required. Yet even in those days the necessity of some more permanent force was felt, and bodies of paid troops were maintained by the kings at their own cost. Thus Canute and his successors, and even some of the great earls kept up a household force (*huscarles*). The English army at Hastings consisted of the *fyrd* and the corps of *huscarles*.

The English had fought on foot; but the mailed horseman had now become the chief factor in war, and the Conqueror introduced into England the system of tenure by knight-service familiar in Normandy. This was based on the unit of the feudal host, the *constabularia* of ten knights, the Conqueror granting lands in return for finding one or more of these units (in the case of great barons) or some fraction of them (in the case of lesser tenants). The obligation was to provide knights to serve, with horse and arms, for forty days in each year at their own charges. This obligation could be handed on by sub-enfeoffment through a whole series of under-tenants. The system being based, not on the duty of personal service, but on the obligation to supply one or more knights (or it might be only the fraction of a knight), it was early found convenient to commute this for a money payment known as "scutage" (see KNIGHT SERVICE and SCUTAGE). This money enabled the king to hire mercenaries, or pay such of the feudal troops as were willing to serve beyond the usual time. From time to time proclamations and statutes were issued reminding the holders of knights' fees of their duties; but the immediate object was generally to raise money rather than to enforce personal service, which became more and more rare. The feudal system had not, however, abrogated the old Saxon levies, and from these arose two national institutions—the *posse comitatus*, liable to be called out by the sheriff to maintain the king's peace, and later the *militia* (*q.v.*). The *posse comitatus*, or power of the county, included all males able to bear arms, peers and spiritual men excepted; and though primarily a police force it was also bound to assist in the defence of the country. This levy was organized by the Assize of Arms under Henry II. (1181), and subsequently under Edward I. (1285) by the so-called "Statute of Winchester," which determined the numbers and description of weapons to be kept by each man according to his property, and also provided for their periodical inspection. The early Plantagenets made free use of mercenaries. But the weakness of the feudal system in England was preparing, through the 12th and 13th centuries, a nation in arms absolutely unique in the middle ages. The Scottish and Welsh wars were, of course, fought by the feudal levy, but this levy was far from being the mob of unwilling peasants usual abroad, and from the *fyrd* came the English archers, whose fame was established by Edward I.'s wars, and carried to the continent by Edward III. Edward III. realized that there was better material to be had in his own country than abroad, and the army with which he invaded France was an army of national mercenaries, or, more simply, of English soldiers. The army at Creçy was composed exclusively of English, Welsh and Irish. From the pay list of the army at the siege of Calais (1346) it appears that all ranks, from the prince of Wales downward, were paid, no attempt being made to force even the feudal nobles to serve abroad at their own expense. These armies were raised mainly by contracts entered into "with some knight or gentleman expert in war, and of great revenue and livelihood in the country, to serve the king in war with a number of men." Copies of the indentures executed when Henry V. raised his army for the invasion of France in 1415 are in existence. Under these the contracting party agreed to serve the king abroad for one year, with a given number of men equipped according to agreement, and at a stipulated rate of pay. A certain sum was usually paid in advance, and in many cases the crown jewels and plate were given in pledge for the rest. The profession of arms seems to have been profitable. The pay of the soldier was high as compared with that of the ordinary labourer, and he had the prospect of a share of plunder in addition, so that it was not difficult to raise men where the commander had a good military reputation. Edward III. is said to have declined the services of numbers of foreign mercenaries who wished to enrol under him in his wars against France.

The funds for the payment of these armies were provided partly from the royal revenues, partly from the fines paid in lieu of military service, and other fines arbitrarily imposed, and partly by grants from parliament. As the soldier's contract usually ended with the war, and the king had seldom funds to renew it even if he so wished, the armies disbanded of themselves at the close of each war. To secure the services of the soldier during his contract, acts were passed (18 Henry VI. c. 19; and 7 Henry VII. c. 1) inflicting penalties for desertion; and in Edward VI.'s reign an act "touching the true service of captains and soldiers" was passed, somewhat of the nature of a Mutiny Act.

61. It is difficult to summarize the history of the army between the Hundred Years' War and 1642. The final failure of the English arms in France was soon followed by the Wars of the Roses, and in the long period of civil strife the only national force remaining to England was the Calais garrison. Henry VIII. was a soldier-king, but he shared the public feeling for the old bow and bill, and English armies which served abroad did not, it seems, win the respect of the advanced professional soldiers of the continent. In 1519 the Venetian ambassador described the English forces as consisting of 150,000 men whose peculiar, though not exclusive, weapon was the long bow (Fortescue i. 117). The national levy made in 1588 to resist the Armada and the threat of invasion produced about 750 lancers (heavy-armed cavalry), 2000 light horse and 56,000 foot, beside 20,000 men employed in watching the coasts. The small proportion of mounted men is very remarkable in a country in which Cromwell was before long to illustrate the full power of cavalry on the battlefield. It is indeed not unfair to regard this army as a miscellaneous levy of inferior quality.

It was in cavalry that England was weakest, and by three different acts it was sought to improve the breed of horses, though the light horse of the northern counties had a good reputation, and even won the admiration of the emperor Charles V. Perhaps the best organized force in England at this time was the London volunteer association which ultimately became the Honourable Artillery Company. At Flodden the spirit of the old English yeomanry triumphed over the outward form of continental battalions which the Scots had adopted, and doubtless the great victory did much to retard military progress in England. The chief service of Henry VIII. to the British army was the formation of an artillery train, in which he took a special interest. Before he died the forces came to consist of a few permanent troops (the bodyguard and the fortress artillery service), the militia or general levy, which was for home, and indeed for county, service only, and the paid armies which were collected for a foreign war and disbanded at the conclusion of peace, and were recruited on the same principle of indents which had served in the Hundred Years' War. In the reign of Mary, the old Statute of Winchester was revised (1553), and the new act provided for a readjustment of the county contingents and in some degree for the rearmament of the militia. But, from the fall of Calais and the expedition to Havre up to the battle of the Dunes a century later, the intervention of British forces in foreign wars was always futile and generally disastrous. During this time, however, the numerous British regiments in the service of Holland learned, in the long war of Dutch independence, the art of war as it had developed on the continent since 1450, and assimilated the regimental system and the drill and armament of the best models. Thus it was that in 1642 there were many hundreds of trained and war-experienced officers and sergeants available for the armies of the king and the parliament. By this time bows and bills had long disappeared even from the militia, and the Thirty Years' War, which, even more than the Low Countries, offered a career for the adventurous man, contributed yet more trained officers and soldiers to the English and Scottish forces. So closely indeed was war now studied by Englishmen that the respective adherents of the Dutch and the Swedish systems quarrelled on the eve of the battle of Edgehill. Francis

and Horace Vere, Sir John Norris, and other Englishmen had become generals of European reputation. Skippon, Astley, Goring, Rupert, and many others soon to be famous were distinguished as company and regimental officers in the battles and sieges of Germany and the Low Countries.

The home forces of England had, as has been said, little or nothing to revive their ancient renown. Instead, they had come to be regarded as a menace to the constitution. In Queen Elizabeth's time the demands of the Irish wars had led to frequent forced levies, and the occasional billeting of the troops in England also gave rise to murmurs, but the brilliancy and energy of her reign covered a great deal, and the peaceful policy of her successor removed all immediate cause of complaint. But after the accession of Charles I. we find the army a constant and principal source of dispute between the king and parliament, until under William III. it is finally established on a constitutional footing. Charles, wishing to support the Elector Palatine in the Thirty Years' War, raised an army of 10,000 men. He was already encumbered with debts, and the parliament refused all grants, on which he had recourse to forced loans. The army was sent to Spain, but returned without effecting anything, and was not disbanded, as usual, but billeted on the inhabitants. The billeting was the more deeply resented as it appeared that the troops were purposely billeted on those who had resisted the loan. Forced loans, billeting and martial law—all directly connected with the maintenance of the army— formed the main substance of the grievances set forth in the Petition of Right. In accepting this petition, Charles gave up the right to maintain an army without consent of parliament; and when in 1639 he wished to raise one to act against the rebellious Scots, parliament was called together, and its sanction obtained, on the plea that the army was necessary for the defence of England. This army again became the source of dispute between the king and parliament, and finally both sides appealed to arms.

62. The first years of the Great Rebellion (*q.v.*) showed primarily the abundance of good officers produced by the wars on the continent, and in the second place the absolute inadequacy of the military system of the country; the commissions of array, militia ordinances, &c., had at last to give way to regular methods of enlistment and a central army administration. It was clear, at the same time, that when the struggle was one of principles and not of dynastic politics, excellent recruits, far different from the wretched levies who had been gathered together for the Spanish war, were to be had in any reasonable number. These causes combined to produce the "New Model" which, originating in Cromwell's own cavalry and the London trained bands of foot, formed of picked men and officers, severely disciplined, and organized and administered in the right way, quickly proved its superiority over all other armies in the field, and in a few years raised its general to supreme civil power. The 15th of February 1645 was the birthday of the British standing army, and from its first concentration at Windsor Park dates the scarlet uniform. The men were for the most part voluntarily enlisted from existing corps, though deficiencies had immediately to be made good by impressment.

Four months later the New Model decided the quarrel of king and parliament at Naseby. When Cromwell, the first lieutenant-general and the second captain-general of the army, sent his veterans to take part in the wars of the continent they proved themselves a match for the best soldiers in Europe. On the restoration of the monarchy in 1660 the army, now some 80,000 strong, was disbanded. It had enforced the execution of Charles I., it had dissolved parliament, and England had been for years governed under a military régime. Thus the most popular measure of the Restoration was the dissolution of the army. Only Monk's regiment of foot (now the Coldstream Guards) survived to represent the New Model in the army of to-day. At the same time the troops (now regiments) of household cavalry, and the regiment of foot which afterwards became the Grenadier Guards, were formed, chiefly from Royalists, though the disbanded New Model contributed many experienced recruits. The permanent forces of the crown came to consist once more of the "garrisons and guards," maintained by the king from the revenue allotted to him for carrying on the government of the country. The "garrisons" were commissioned to special fortresses—the Tower of London, Portsmouth, &c. The "guards" comprised the sovereign's bodyguards ("the yeomen of the guard" and "gentlemen-at-arms," who had existed since the times of Henry VII. and VIII.), and the regiments mentioned above. Even this small force, at first not exceeding 3000 men, was looked on with jealousy by parliament, and every attempt to increase it was opposed. The acquisition of Tangier and Bombay, as part of the dower of the infanta of Portugal, led to the formation of a troop of horse (now the 1st Royal Dragoons) and a regiment of infantry (the 2nd, now Queen's R.W. Surrey, regiment) for the protection of the former; and a regiment of infantry (afterwards transferred to the East India Company) to hold the latter (1661). These troops, not being stationed in the kingdom, created no distrust; but whenever, as on several occasions during Charles's reign, considerable armies were raised, they were mostly disbanded when the occasion ceased. Several regiments, however, were added to the permanent force, including Dumbarton's regiment (the 1st or Royal Scots, nicknamed Pontius Pilate's Bodyguard)—which had a long record of service in the armies of the continent, and represented the Scots brigade of Gustavus Adolphus's army—and the 3rd Buffs, representing the English regiments of the Dutch army and through them the volunteers of 1572, and on Charles's death in 1685 the total force of "guards and garrisons" had risen to 16,500, of whom about one-half formed what we should now call the standing army.

63. James II., an experienced soldier and sailor, was more obstinate than his predecessor in his efforts to increase the army, and Monmouth's rebellion afforded him the opportunity. A force of about 20,000 men was maintained in England, and a large camp formed at Hounslow. Eight cavalry and twelve infantry regiments (the senior of which was the 7th "Royal" Fusiliers, formed on a new French model) were raised, and given the numbers which, with few exceptions, they still bear. James even proposed to disband the militia, which had not distinguished itself in the late rebellion, and further augment the standing army; and although the proposal was instantly rejected, he continued to add to the army till the Revolution deprived him of his throne. The army which he had raised was to a great extent disbanded, the Irish soldiers especially, whom he had introduced in large numbers on account of their religion, being all sent home.

The condition of the army immediately engaged the attention of parliament. The Bill of Rights had definitely established that "the raising or keeping of a standing army within the kingdom, unless it be by the consent of parliament, is against the law," and past experience made them very jealous of such a force. But civil war was imminent, foreign war certain; and William had only a few Dutch troops, and the remains of James's army, with which to meet the storm. Parliament therefore sanctioned a standing army, trusting to the checks established by the Bill of Rights and Act of Settlement, and by placing the pay of the army under the control of the Commons. An event soon showed the altered position of the army. A regiment mutinied and declared for James. It was surrounded and compelled to lay down its arms; but William found himself without legal power to deal with the mutineers. He therefore applied to parliament, and in 1689 was passed the first Mutiny Act, which, after repeating the provisions regarding the army inserted in the Bill of Rights, and declaring the illegality of martial law, gave power to the crown to deal with the offences of mutiny and desertion by courts-martial. From this event is often dated the history of the standing army as a constitutional force (but see Fortescue, *British Army*, i. 335).

64. Under William the army was considerably augmented. The old regiments of James's army were reorganized, retaining, however, their original numbers, and three of cavalry and eleven of infantry (numbered to the 28th) were added. In 1690 parliament sanctioned a force of 62,000 men, further increased to

65,000 in 1691; but on peace being made in 1697 the Commons immediately passed resolutions to the effect that the land forces be reduced to 7000 men in England and 12,000 in Ireland. The War of the Spanish Succession quickly obliged Great Britain again to raise a large army, at one time exceeding 200,000 men; but of these the greater number were foreign troops engaged for the continental war. Fortescue (*op. cit.* i. 555) estimates the British forces at home and abroad as 70,000 men at the highest figure. After the peace of Utrecht the force was again reduced to 8000 men in Great Britain and 11,000 in the plantations (*i.e.* colonies) and abroad. From that time to the present the strength of the army has been determined by the annual votes of parliament, and though frequently the subject of warm debates in both houses, it has ceased to be a matter of dispute between the crown and parliament. The following table shows the fluctuations from that time onward—the peace years showing the average peace strength, the war years the maximum to which the forces were raised:—

| Peace. | | War. | |
|---|---|---|---|
| Year. | Number. | Year. | Number. |
| 1750 | 18,857 | 1745 | 74,187 |
| 1793 | 17,013 | 1761 | 67,776 |
| 1822 | 71,790 | 1777 | 90,734 |
| 1845 | 100,011 | 1812 | 245,996 |
| 1857 | 156,995 | 1856 | 275,079 |
| 1866 | 203,404 | 1858 | 222,874 |

*Note.*—Prior to 1856 the British forces serving in India are not included.

During William's reign the small English army bore an honourable part in the wars against Louis XIV., and especially distinguished itself under the king at Steinkirk, Neerwinden and Namur. Twenty English regiments took part in the campaign of 1694. In the great wars of Queen Anne's reign the British army under Marlborough acquired a European reputation. The cavalry, which had called forth the admiration of Prince Eugene when passed in review before him after its long march across Germany (1704), especially distinguished itself in the battle of Blenheim, and Ramillies, Oudenarde and Malplaquet were added to the list of English victories. But the army as usual was reduced at once, and even the cadres of old regiments were disbanded, though the alarm of Jacobite insurrections soon brought about the re-creation of many of these. During the reign of the first and second Georges an artillery corps was organized, and the army further increased by five regiments of cavalry and thirty-five of infantry. Fresh laurels were won at Dettingen (1743), in which battle twenty English regiments took part; and though Fontenoy (*q.v.*) was a day of disaster for the English arms, it did not lower their reputation, but rather added to it. Six regiments of infantry won the chief glory of Prince Ferdinand's victory of Minden (*q.v.*) in 1759, and throughout the latter part of the Seven Years' War the British contingent of Ferdinand's army served with almost unvarying distinction in numerous actions. About this time the first English regiments were sent to India, and the 39th shared in Clive's victory at Plassey. During the first half of George III.'s reign the army was principally occupied in America; and though the conquest of Canada may be counted with pride among its exploits, this page in its history is certainly the darkest. English armies capitulated at Saratoga and at Yorktown, and the war ended by the evacuation of the revolted *states of America and the acknowledgment of their independence.*

*65. Before passing to the great French Revolutionary wars,* from which a fresh period in the history of the army may be dated, it will be well to review the general condition of the army in the preceding century, injured as it was by the distrust of parliament and departmental weakness and corruption which went far to neutralize the good work of the duke of Cumberland as commander-in-chief and of Pitt as war administrator. Regiments were raised almost as in the days of the Edwards. The crown contracted with a distinguished soldier, or gentleman of high position, who undertook to raise the men, receiving a certain sum as bounty-money for each recruit. In some cases, in lieu of money, the contractor received the nomination of all or some of the officers, and recouped himself by selling the commissions. This system—termed "raising men for rank"—was retained for many years, and originally helped to create the "purchase system" of promotion. For the maintenance of the regiment the colonel received an annual sum sufficient to cover the pay of the men, and the expenses of clothing and of recruiting. The colonel was given a "beating order," without which no enlistment was legal, and was responsible for maintaining his regiment at full strength. "Muster masters" were appointed to muster the regiments, and to see that the men for whom pay was drawn were really effective. Sometimes, when casualties were numerous, the allowance was insufficient to meet the cost of recruiting, and special grants were made. In war time the ranks were also filled by released debtors, pardoned criminals, and impressed paupers and vagrants. Where the men were raised by voluntary enlistment, the period of service was a matter of contract between the colonel and the soldier, and the engagement was usually for life; but exceptional levies were enlisted for the duration of war, or for periods of three or five years. As for the officers, the low rate of pay and the purchase system combined to exclude all but men of independent incomes. Appointments (except when in the gift of the colonel) were made by the king at home, and by the commander-in-chief abroad; even in Ireland the power of appointment rested with the local commander of the forces until the Union. The soldier was clothed by his colonel, the charge being defrayed from the "stock fund." The army lived in barracks, camps or billets. The barrack accommodation in Great Britain at the beginning of the 18th century only sufficed for five thousand men; and though it had gradually risen to twenty thousand in 1792, a large part of the army was constantly in camps and billets—the latter causing endless complaints and difficulties.

66. The first efforts of the army in the long war with France did not tend to raise its reputation amongst the armies of Europe. The campaigns of allied armies under the duke of York in the Netherlands, in which British contingents figured largely, were uniformly unsuccessful (1793–94 and 1799), though in this respect they resembled those of almost all soldiers who commanded against the "New French" army. The policy of the younger Pitt sent thousands of the best soldiers to unprofitable employment, and indeed to death, in the West Indies. At home the administration was corrupt and ineffective, and the people generally shared the contemptuous feeling towards the regular army which was then prevalent in Europe. But a better era began with the appointment of Frederick Augustus, duke of York, as commander-in-chief of the army. He did much to improve its organization, discipline and training, and was ably seconded by commanders of distinguished ability. Under Abercromby in Egypt, under Stuart at Maida, and under Lake, Wellesley and others in India, the British armies again attached victory to their standards, and made themselves feared and respected. Later, Napoleon's threat of invading England excited her martial spirit to the highest pitch to which it had ever attained. Finally, her military glory was raised by the series of successful campaigns in the Peninsula, until it culminated in the great victory of Waterloo; and the army emerged from the war with the most solidly founded reputation of any in Europe.

The events of this period belong to the history of Europe, *and fall outside the province of an article dealing only with the army. The great augmentations required during the war were* effected partly by raising additional regiments, but principally by increasing the number of battalions, some regiments being given as many as four. On the conclusion of peace these battalions were reduced, but the regiments were retained, and the army was permanently increased from about twenty thousand, the usual peace establishment before the war, to an average of eighty thousand. The duke of York, on first appointment to the command, had introduced a uniform drill throughout the army, which was further modified according to Sir David Dundas's system in 1800; and, under the direction of Sir John Moore and others, a high perfection of drill was attained. At

the beginning of the war, the infantry, like that of the continental powers, was formed in three ranks; but a two-rank formation had been introduced in America and in India and gradually became general, and in 1809 was finally approved. In the Peninsula the army was permanently organized in divisions, usually consisting of two brigades of three or four battalions each, and one or two batteries of artillery. The duke of Wellington had also brought the commissariat and the army transport to a high pitch of perfection, but in the long peace which followed these establishments were reduced or broken up.

67. The period which elapsed between Waterloo and the Crimean War is marked by a number of Indian and colonial wars, but by no organic changes in the army, with perhaps the single exception of the Limited Service Act of 1847, by which enlistment for ten or twelve years, with power to re-engage to complete twenty-one, was substituted for the life enlistments hitherto in force. The army went to sleep on the laurels and recollections of the Peninsula. The duke of Wellington, for many years commander-in-chief, was too anxious to hide it away in the colonies in order to save it from further reductions or utter extinction, to attempt any great administrative reforms. The force which was sent to the Crimea in 1854 was an agglomeration of battalions, individually of the finest quality, but unused to work together, without trained staff, administrative departments or army organization of any kind. The lesson of the winter before Sevastopol was dearly bought, but was not thrown away. From that time successive war ministers and commanders-in-chief have laboured perseveringly at the difficult task of army organization and administration. Foremost in the work was Sidney Herbert (Lord Herbert of Lea), the soldier's friend, who fell a sacrifice to his labours (1861), but not before he had done much for the army. The whole system of administration was revised. In 1854 it was inconceivably complicated and cumbersome. The "secretary of state for war and colonies," sitting at the Colonial Office, had a general but vague control, practically limited to times of war. The "secretary at war" was the parliamentary representative of the army, and exercised a certain financial control, not extending, however, to the ordnance corps. The commander-in-chief was responsible to the sovereign alone in all matters connected with the discipline, command or patronage of the army, but to the secretary at war in financial matters. The master-general and board of ordnance were responsible for the supply of material on requisition, but were otherwise independent, and had the artillery and engineers under them. The commissariat department had its headquarters at the treasury, and until 1852 the militia were under the home secretary. A number of minor subdepartments, more or less independent, also existed, causing endless confusion, correspondence and frequent collision. In 1854 the business of the colonies was separated from that of war, and the then secretary of state, the duke of Newcastle, assumed control over all the other administrative officers. In the following year the secretary of state was appointed secretary at war also, and the duties of the two offices amalgamated. The same year the commissariat office was transferred to the war department, and the Board of Ordnance abolished, its functions being divided between the commander-in-chief and the secretary of state. The minor departments were gradually absorbed, and the whole administration divided under two great chiefs, sitting at the war office and Horse Guards respectively. In 1870 these two were welded into one, and the war office now existing was constituted.

Corresponding improvements were effected in every branch. The system of clothing the soldiers was altered, the contracts being taken from the colonels of regiments, who received a money allowance instead, and the clothing supplied from government manufactories. The pay, food and general condition of the soldier were improved; reading and recreation rooms, libraries, gymnasia and facilities for games of all kinds being provided. Barracks (*q.v.*) were built on improved principles, and a large permanent camp was formed at Aldershot, where considerable forces were collected and manœuvred together. Various educational establishments were opened, a staff college was established for the instruction of officers wishing to qualify for the staff, and regimental schools were improved.

68. The Indian Mutiny of 1857, followed by the transference of the government of India, led to important changes. The East India Company's white troops were amalgamated with the Queen's army, and the whole reorganized (see *Indian Army* below).

The fact that such difficulties as those of 1854 and 1857, not to speak of the disorders of 1848, had been surmounted by the weak army which remained over from the reductions of forty years, coupled with the instantaneous and effective rejoinder to the threats of the French colonels in 1859—the creation of the Volunteer Force—certainly lulled the nation and its representatives into a false sense of security. Thus the two obvious lessons of the German successes of 1866 and 1870—the power of a national army for offensive invasion, and the rapidity with which such an army when thoroughly organized could be moved—created the greatest sensation in England. The year 1870 is, therefore, of prime importance in the history of the regular forces of the crown. The strength of the home forces at different times between 1815 and 1870 is given as follows (Biddulph, *Lord Cardwell at the War Office*):—

| | Regulars. | Auxiliaries. | Field Guns. |
|---|---|---|---|
| 1820 | 64,426 | 60,740 | 22 |
| 1830 | 50,876 | 34,614 | 30 |
| 1840 | 53,379 | 20,791 | 30 |
| 1850 | 68,538 | 29,868 | 70 |
| 1860 | 100,701 | 229,501 | 180 |
| 1870 | 89,051 (later 109,000) | 281,692 | 180 |

69. The period of reform commences therefore with 1870, and is connected indissolubly with the name of Edward, Lord Cardwell, secretary of state for war 1869–1874. In the matter of organization the result of his labours was seen in the perfectly arranged expedition to Ashanti (1874); as for recruiting, the introduction of short service and reserve enlistment together with many rearrangements of pay, &c., proved so far popular that the number of men annually enlisted was more than trebled (11,742 in 1869; 39,971 in 1885; 40,729 in 1898), and so far efficient that "Lord Cardwell's . . . system, with but small modification, gave us during the Boer War 80,000 reservists, of whom 96 or 97 % were found efficient, and has enabled us to keep an army of 150,000 regulars in the field for 15 months" (Rt. Hon. St John Brodrick, House of Commons, 8th of March 1901). The localization of the army, subsequently completed by the territorial system of 1882, was commenced under Cardwell's régime, and a measure which encountered much powerful opposition at the time, the abolition of the purchase of commissions, was also effected by him (1871). The machinery of administration was improved, and autumn manœuvres were practised on a scale hitherto unknown in England. In 1871 certain powers over the militia, formerly held by lords-lieutenant, were transferred to the crown, and the auxiliary forces were placed directly under the generals commanding districts. In 1881 came an important change in the infantry of the line, which was entirely remodelled in two-battalion regiments bearing territorial titles. This measure (the "linked battalion" system) aroused great opposition; it was dictated chiefly by the necessity of maintaining the Indian and colonial garrisons at full strength, and was begun during Lord Cardwell's tenure of office, the principle being that each regiment should have one battalion at home and one abroad, the latter being fed by the former, which in its turn drew upon the reserve to complete it for war. The working of the system is to be considered as belonging to present practice rather than to history, and the reader is therefore referred to the article UNITED KINGDOM. On these general lines the army progressed up to 1899, when the Boer War called into the field on a distant theatre of war all the resources of the regular army, and in addition drew largely upon the existing auxiliary forces, and even upon wholly untrained civilians, for the numbers required to make war in an area which

comprised nearly all Africa south of the Zambezi. As the result of this war (see TRANSVAAL) successive schemes of reform were undertaken by the various war ministers, leading up to Mr Haldane's "territorial" scheme (1908), which put the organization of the forces in the United Kingdom (*q.v.*) on a new basis.

Innovations had not been unknown in the period immediately preceding the war; as a single example we may take the development of the mounted infantry (*q.v.*) It was natural that the war itself, and especially a war of so peculiar a character, should intensify the spirit of innovation. The corresponding period in the German army lasted from 1871 to 1888, and such a period of unsettlement is indeed the common, practically the universal, result of a war on a large scale. Much that was of value in the Prussian methods, faithfully and even slavishly copied by Great Britain as by others after 1870, was temporarily forgotten, but the pendulum swung back again, and the Russo-Japanese War led to the disappearance, so far as Europe was concerned, of many products of the period of doubt and controversy which followed the struggle in South Africa. Side by side with continuous discussions of the greater questions of military policy, amongst these being many well-reasoned proposals for universal service, the technical and administrative efficiency of the service has undergone great improvement, and this appears to be of more real and permanent value than the greater part of the solutions given for the larger problems. The changes in the organization of the artillery afford the best evidence of this spirit of practical and technical reform. In the first place the old "royal regiment" was divided into two branches. The officers for the field and horse artillery stand now on one seniority list for promotion, the garrison, heavy and mountain batteries on another. In each branch important changes of organization have been also made. In the field branch, both for Royal Field and Royal Horse Artillery, the battery is no longer the one unit for all purposes. A lieutenant-colonel's command, the "brigade," has been created. It consists of a group, in the horse artillery of two, in the field artillery of three batteries. For the practical training of the horse and field artillery a large area of ground on the wild open country of Dartmoor, near Okehampton, has for some years been utilized. A similar school has been started at Glen Imaal in Ireland, and a new training ground has been opened on Salisbury Plain. Similarly, with the Royal Garrison Artillery a more perfect system has been devised for the regulation and practice of the fire of each fortress, in accordance with the varying circumstances of its position, &c. A practice school for the garrison artillery has been established at Lydd, but the various coast fortresses themselves carry out regular practice with service ammunition.

### INDIAN ARMY

70. Historically, the Indian army grew up in three distinct divisions, the Bengal, Madras and Bombay armies. This separation was the natural result of the original foundation of separate settlements and factories in India; and each retains to the present day much of its old identity.

*Bengal.*—The English traders in Bengal were long restricted by the native princes to a military establishment of an ensign and 30 men; and this force may be taken as the germ of the Indian army. In 1681 Bengal received the first reinforcement from Madras, and two years later a company was sent from Madras, raising the little Bengal army to a strength of 250 Europeans. In 1695 native soldiers were first enlisted. In 1701–1702 the garrison of Calcutta consisted of 120 soldiers and seamen gunners. In 1756 occurred the defence of Calcutta against Suraj-ud-Dowlah, and the terrible tragedy of the Black Hole. The work of reconquest and punishment was carried out by an expedition from Madras, and in the little force with which Clive gained the great victory of Plassey the Bengal army was represented by a few hundred men only (the British 39th, now Dorsetshire regiment, which was also present, was the first King's regiment sent to India, and bears the motto *Primus in Indis*); but from this date the military power of the Company rapidly increased. A company of artillery had been organized in 1748; and in 1757, shortly before Plassey, the 1st regiment of Bengal native infantry was raised. Next, in 1759 the native infantry was augmented, in 1760 dragoons were raised, and in 1763 the total forces amounted to 1500 Europeans and 12 battalions of native infantry (11,500 men). In 1765 the European infantry was divided into 3 regiments, and the whole force was organized in 3 brigades, each consisting of 1 company of artillery, 1 regiment European infantry, 1 troop of native cavalry, and 7 battalions of sepoys. In 1766, on the reduction of some money allowances, a number of officers of the Bengal army agreed to resign their commissions simultaneously. This dangerous combination was promptly put down by Clive, to whom the Bengal army may be said to owe its existence.

The constant wars and extensions of dominion of the next thirty years led to further augmentations; the number of brigades and of European regiments was increased to 6; and in 1794 the Bengal army numbered about 3500 Europeans and 24,000 natives.

71. *Madras.*—The first armed force in the Madras presidency was the little garrison of Armegon on the Coromandel coast, consisting of 28 soldiers. In 1644 Fort St George was built and garrisoned, and in 1653 Madras became a presidency. In 1745 the garrison of Fort St George consisted of 200 Europeans, while a similar number, with the addition of 200 "Topasses" (descendants of the Portuguese), garrisoned Fort St David. In 1748 the various independent companies on the Coromandel coast and other places were consolidated into the Madras European regiment. From this time the military history of the Madras army was full of incident, and it bore the principal part in Clive's victories of Arcot, Kavaripak and Plassey. In 1754 the 39th regiment of the Royal army was sent to Madras. In 1758 three others followed. In 1772 the Madras army numbered 3000 European infantry and 16,000 natives, and in 1784 the number of native troops had risen to 34,000.

72. *Bombay.*—The island of Bombay formed part of the marriage portion received by Charles II. with the infanta of Portugal, and in 1662 the Bombay regiment of Europeans was raised to defend it. In 1668 the island was granted to the Company, and the regiment at the same time transferred to them. In 1708 Bombay became a presidency, but it did not play so important a part as the others in the early extension of British power, and its forces were not so rapidly developed. It is said, however, to have been the first to discipline native troops, and Bombay sepoys were sent to Madras in 1747, and took part in the battle of Plassey in 1757. In 1772 the Bombay army consisted of 2500 Europeans and 3500 sepoys, but in 1794, in consequence of the struggles with the Mahratta power, the native troops had been increased to 24,000.

73. *Consolidation of the Army.*—In 1796 a general reorganization took place. Hitherto the officers in each presidency had been borne on general "lists," according to branches of the service. These lists were now broken up and cadres of regiments formed. The colonels and lieutenant-colonels remained on separate lists, and an establishment of general officers was created, while the divisional commands were distributed between the royal and Company's officers. Further augmentations took place, consequent on the great extension of British supremacy. In 1798 the native infantry in India numbered 122 battalions. In 1808 the total force in India amounted to 24,500 Europeans and 154,500 natives.

The first half of the 19th century was filled with wars and annexations and the army was steadily increased. Horse artillery was formed, and the artillery in general greatly augmented. "Irregular cavalry" was raised in Bengal and Bombay, and recruited from a better class of troopers, who received high pay and found their own horses and equipment. "Local forces" were raised in various parts from time to time, the most important being the Punjab irregular force (raised after the annexation of the Punjab in 1849), consisting of 3 field batteries, 5 regiments of cavalry, and 5 of infantry, and the Nagpur and Oudh irregular forces. Another kind of force, which had been gradually formed, was that called "contingents"—troops raised by the protected native states. The strongest of these was that of Hyderabad, originally known as the nizam's army. Changes were also made in the organization of the army. Sanitary improvements were effected, manufacturing establishments instituted or increased, and the administration generally improved.

74. *The Army before the Mutiny.*—The officering and recruiting of the three armies were in all essentials similar. The officers were mainly supplied by the Company's military college at Addiscombe in Surrey (established in 1809), and by direct appointments. The Bengal army was recruited from Hindustan, the infantry being mostly drawn from Oudh and the great Gangetic plains. The soldiers were chiefly high-caste Hindus, a sixth being Mahommedans. The cavalry was composed mainly of Mahommedans, recruited from Rohilkhand and the Gangetic Doab. The only other elements in the army were four Gurkha regiments, enlisted from Nepal, and the local Punjab irregular force. The Madras army was chiefly recruited from that presidency, or the native states connected with it, and consisted of Mahommedans, Brahmans, and of the Mahratta, Tamil and Telugu peoples. The Bombay army was recruited from its own presidency, with some Hindustanis, but chiefly formed of Mahrattas and Mahommedans; the Bombay light cavalry mainly from Hindustan proper.

Including the local and irregular troops (about 100,000 strong), the total strength amounted to 38,000 Europeans of all arms, with 276 field guns, and 348,000 native troops, with 248 field guns,—truly a magnificent establishment, and, outwardly, worthy of the great empire which England had created for herself in the East, but inwardly unsound, and on the very verge of the great mutiny of 1857.

In 1856 the establishment in the several presidencies was as follows:—

| | Bengal. | Madras. | Bombay. | Total. |
|---|---|---|---|---|
| British Cavalry Regiments . | 2 | 1 | 1 | 4 |
| British Infantry Battalions . | 15 | 3 | 4 | 22 |
| Company's European Battalions | 3 | 3 | 3 | 9 |
| European and Native Artillery Battalions . . . . | 12 | 7 | 5 | 24 |
| Native Infantry Battalions . | 74 | 52 | 29 | 155 |
| Native Cavalry Regiments . | 28 | 8 | 3 | 39 |

An account of the events of 1857–58 will be found under INDIAN MUTINY. After the catastrophe the reorganization of the military forces on different lines was of course unavoidable. Fortunately, the armies of Madras and Bombay had been almost wholly untouched by the spirit of disaffection, and in the darkest days the Sikhs, though formerly enemies of the British, had not only remained faithful to them, but had rendered them powerful assistance.

75. *The Reorganization.*—By the autumn of 1858 the mutiny was virtually crushed, and the task of reorganization commenced. On the 1st of September 1858 the East India Company ceased to rule, and Her Majesty's government took up the reins of power. On the important question of the army, the opinions and advice of the most distinguished soldiers and civilians were invited. Masses of reports and evidence were collected in India, and by a royal commission in England. On the report of this commission the new system was based. The local European army was abolished, and its *personnel* amalgamated with the royal army. The artillery became wholly British, with the exception of a few native mountain batteries. The total strength of the British troops, all of the royal army, was largely increased, while that of the native troops was largely diminished. Three distinct native armies—those of Bengal, Madras and Bombay—were still maintained. The reduced Indian armies consisted of cavalry and infantry only, with a very few artillery, distributed as follows:—

| | Battalions Infantry. | Regiments Cavalry. |
|---|---|---|
| Bengal . . . . | 49 | 19 |
| Madras . . . . | 40 | 4 |
| Bombay . . . . | 30 | 7 |
| Punjab Force . . . | 12 | 6 |
| Total . . . | 131 | 36 |

There were also three sapper battalions, one to each army.

The Punjab force, which had 5 batteries of native artillery attached to it, continued under the Punjab government. In addition, the Hyderabad contingent of 4 cavalry, 6 infantry regiments and 4 batteries, and a local force in central India of 2 regiments cavalry and 6 infantry, were retained under the government of India. After all the arrangements had been completed the army of India consisted of 62,000 British and 125,000 native troops.

76. *The Modern Army.*—The college at Addiscombe was closed in 1860, and the direct appointment of British officers to the Indian local forces ceased in 1861. In that year a staff corps was formed by royal warrant in each presidency "to supply a body of officers for service in India, by whom various offices and appointments hitherto held by officers borne on the strength of the several corps in the Indian forces shall in future be held." Special rules were laid down. The corps was at first recruited partly from officers of the Company's service and partly from the royal army, holding staff appointments (the new regimental employment being considered as staff duty) and all kinds of political and civil posts; for the system established later see INDIA: *Army*. The native artillery and sappers and miners were to be officered from the Royal Artillery and Royal Engineers. The only English warrant and non-commissioned officers now to be employed in the native army were to be those of the Royal Engineers with the sappers and miners.

A radical change in the regimental organization of all the native armies was effected in 1863. The Punjab Frontier Force was from the first organized on the irregular system, which was there seen at its best, as also were the new regiments raised during the Mutiny. This system was now applied to the whole army, each regiment and battalion having seven British officers attached to it for command and administrative duties, the immediate command of troops and companies being left to the native officers. Thus was the system reverted to, which was initiated by Clive, of a few British officers only being attached to each corps for the higher regimental duties of command and control. Time had shown that this was more effective than the regular system instituted in 1796 of British officers commanding troops and companies.

A new spirit was breathed into the army. The supremacy of the commandant was the main principle. He was less hampered by the unbending regulations enjoined upon the old regular regiments, had greater powers of reward and punishment, was in a position to assume larger responsibility and greater freedom of action, and was supported in the full exercise of his authority. The system made the officers.

Up to 1881 the native army underwent little change, but in that year 18 regiments of infantry and 4 of cavalry were broken up, almost the same total number of men being maintained in fewer and stronger regiments. The only reduction made in the British troops was in the Royal Artillery, which was diminished by 11 batteries. The events of 1885, however, on the Russo-Afghan frontier, led to augmentations. The 11 batteries Royal Artillery were brought back from England; each of the 9 British cavalry regiments in India received a fourth squadron; each of the British infantry battalions was increased by 100 men, and 3 battalions were added. The native cavalry had a fourth squadron added to each regiment; three of the four regiments broken up in 1881 were re-raised, while the native infantry was increased in regimental strength, and 9 new battalions raised composed of Gurkhas, Sikhs and Punjabis. The addition in all amounted to 10,600 British and 21,200 native troops. In 1890 the strength of the army of India was 73,000 British and, including irregulars, 147,500 native troops. For the Indian volunteers, see VOLUNTEERS.

Many important changes took place between 1885 and 1904. Seven Madras infantry regiments were converted into regiments for service in Burma, composed of Gurkhas and hardy races from northern India; six Bengal and Bombay regiments were similarly converted into regiments of Punjabis, Pathans and Gurkhas; the native mountain batteries have been increased to ten; a system of linked battalions has been introduced with the formation of regimental centres for mobilization; and reserves for infantry and mountain artillery have been formed. The number of British officers with each regiment has been increased to nine, and the two wing commands in battalions have been converted into 4 double-company commands of 250 men each, under a British commander, who is responsible to the commandant for their training and efficiency, the command of the companies being left to the native officers. This system, which is analogous to the squadron command in the cavalry, admits of closer individual attention to training, and distributes among the senior British regimental officers effective responsibility of a personal kind.

An addition (at the imperial expense) of five battalions of Sikhs, Punjabi Mahommedans, Jats and hillmen in northern India was made in 1900, as the result of India being called upon to furnish garrisons for Mauritius and other stations overseas.

The unification of the triplicate army departments in the different presidential armies was completed in 1891, all being brought directly under the supreme government; and the three separate staff corps of Bengal, Madras and Bombay were fused into one in 1891 as the Indian Staff Corps. The term "Indian Staff Corps" was in turn replaced by that of "Indian Army" in 1903. These measures prepared the way for the new system of army organization which, by authority of parliament, abolished divided control and placed the whole army of India under the governor-general and the commander-in-chief in India.

### CANADIAN FORCES

77. In the earliest European settlements in Canada, the necessity of protection against Indians caused the formation of a militia, and in 1665 companies were raised in every parish. The military history of the Canadian forces under French rule is full of incident, and they served not only against Indian raiders but also against the troops of Great Britain and of her North American colonies. Six militia battalions took part in the defence of Quebec in 1759, and even the transfer of Canada from the French to the British crown did not cause the disbandment of the existing forces. The French Canadians distinguished themselves not less than the British settlers in the War of American Independence, and in particular in the defence of Quebec against Montgomery and Arnold. In 1787 an ordinance was made whereby three battalions of the militia were permanently embodied, each contingent serving for two years, at the end of which time a fresh contingent relieved it, and after this a succession of laws and regulations were made with a view to complete organization of the force. The brunt of the fighting on the American frontier in the war of 1812 was borne very largely by the permanent force of three battalions and the fresh units called out, all these being militia corps. Up to 1828 a distinction had been made between the British and the French regiments: this was then abolished. The militia was again employed on active service during the disturbances of 1837, and the "Active Militia" in 1863 had grown to a strength of 25,000 men. The Fenian troubles of 1864 and 1866 caused the embodiment of the Canadian forces once more. In 1867 took place the unification of Canada, after which the whole force was completely organized on the basis of a militia act (1868). A department of Militia and Defence with a responsible minister was established, and the strength of the active militia of all arms was fixed at 40,000 rank and file. Two years later the militia furnished 6000 men to deal with the Fenian Raid of 1870, and took part in Colonel (Lord) Wolseley's Red River expedition. In 1871 a permanent force, serving the double purpose of a regular nucleus and an instructional cadre, was organized in two troops of cavalry, two batteries of artillery and one regiment of infantry, and in 1876 the Royal Military College of Canada was founded at Kingston. In 1885 the Riel rebellion was dealt with, and the important action of Batoche won, by the militia, without assistance from regular

troops. In the same year Canada contributed a force of *voyageurs* to the Nile expedition of Lord Wolseley; the experience of these men was admittedly of great assistance in navigating the Rapids. The militia sent contingents of all arms to serve in the South African War, 1899–1902, including "Strathcona's Horse," a special corps, recruited almost entirely from the Active Militia and the North-west Mounted Police. The latter, a permanent constabulary of mounted riflemen, was formed in 1873.

After the South African War an extensive scheme of reorganization was taken in hand, the command being exercised for two years (1902–1904) by Major-General Lord Dundonald, and subsequently by a militia council (Militia Act 1904), similar in constitution to the home Army Council. For details of the present military strength of Canada, see the article CANADA.

### AUSTRIAN ARMY

78. The *Landsknecht* infantry constituted the mainstay of the imperial armies in the 16th century. Maximilian I. and Charles V. are recorded to have marched and carried the "long pike" in their ranks. Maximilian also formed a corps of *Kyrisser*, who were the origin of the modern cuirassiers. It was not, however, until much later that the Austrian army came into existence as a permanent force. Rudolph II. formed a small standing force about 1600, but relied upon the "enlistment" system, like other sovereigns of the time, for the bulk of his armies. The Thirty Years' War produced the permanence of service which led in all the states of Europe to the rise of standing armies. In the Empire it was Wallenstein who first raised a distinctly imperial army of soldiers owing no duty but to the sovereign; and it was the suspicion that he intended to use this army, which was raised largely at his own expense, to further his own ends, that led to his assassination. From that time the regiments belonged no longer to their colonels, but to the emperor; and the oldest regiments in the present Austrian army date from the Thirty Years' War, at the close of which Austria had 19 infantry, 6 cuirassier and 1 dragoon regiments. The almost continuous wars of Austria against France and the Turks (from 1495 to 1895 Austrian troops took part in 7000 actions of all sorts) led to a continuous increase in her establishments. The wars of the time of Montecucculi and of Eugene were followed by that of the Polish Succession, the two Turkish wars, and the three great struggles against Frederick the Great. Thus in 1763 the army had been almost continuously on active service for more than 100 years, in the course of which its organization had been modified in accordance with the lessons of each war. This, in conjunction with the fact that Austria took part in other Turkish campaigns subsequently, rendered this army the most formidable opponent of the forces of the French Revolution (1792). But the superior leading, organization and numbers of the emperor's forces were totally inadequate to the magnitude of the task of suppressing the Revolutionary forces, and though such victories as Neerwinden were sufficient proof of the efficiency and valour of the Austrians, they made no headway. In later campaigns, in which the enemy had acquired war experience, and the best of their officers had come to the front, the tide turned against the Imperialists even on the field of battle. The archduke Charles's victories of 1796 were more than counterbalanced by Bonaparte's Italian campaign, and the temporary success of 1799 ended at Marengo and Hohenlinden.

79. The Austrians, during the short peace which preceded the war of 1805, suffered, in consequence of all this, from a feeling of distrust, not merely in their leaders, but also in the whole system upon which the army was raised, organized and trained. This was substantially the same as that of the Seven Years' War time. Enlistment being voluntary and for long service, the numbers necessary to cope with the output of the French conscription could not be raised, and the inner history of the Austrian headquarters in the Ulm campaign shows that the dissensions and mutual distrust of the general officers had gone far towards the disintegration of an army which at that time had the most *esprit de corps* and the highest military qualities of any army in Europe. But the disasters of 1805 swept away good and bad alike in the abolition of the old system. Already the archduke Charles had designed a "nation in arms" after the French model, and on this basis the reconstruction was begun. The conscription was put in force and the necessary numbers thus obtained; the administration was at the same time reformed and the organization and supply services brought into line with modern requirements. The war of 1809 surprised Austria in the midst of her reorganization, yet the new army fought with the greatest spirit. The invasion of Bavaria was by no means so leisurely as it had been in 1805, and the archduke Charles obtained one signal victory over Napoleon in person. Aspern and Wagram were most desperately contested, and though the archduke ceased to take part in the administration after 1809 the work went on steadily until, in 1813, the Austrian armies worthily represented the combination of discipline with the "nation in arms" principle. Their intervention in the War of Liberation was decisive, and Austria, in spite of her territorial losses of the past years, put into the field well-drilled armies far exceeding in numbers those which had appeared in the wars of the Revolution. After the fall of Napoleon, Austria's hold on Italy necessitated the maintenance of a large army of occupation. This army, and in particular its cavalry, was admittedly the best in Europe, and, having to be ready to march at a few days' notice, it was saved from the deadening influence of undisturbed peace which affected every other service in Europe from 1815 to 1850.

80. The Austrian system has conserved much of the peculiar tone of the army of 1848, of which English readers may obtain a good idea from George Meredith's *Vittoria*. It was, however, a natural result of this that the army lost to some considerable extent the spirit of the "nation in arms" of 1809 and 1813. It was employed in dynastic wars, and the conscription was of course modified by substitution; thus, when the war of 1859 resulted unfavourably to the Austrians, the army began to lose confidence, precisely as had been the case in 1805. Once more, in 1866, an army animated by the purely professional spirit, which was itself weakened by distrust, met a "nation in arms," and in this case a nation well trained in peace and armed with a breechloader. Bad staff work, and tactics which can only be described as those of pique, precipitated the disaster, and in seven weeks the victorious Prussians were almost at the gates of Vienna.

The result of the war, and of the constitutional changes about this time, was the re-adoption of the principles of 1806–1813, the abolition of conscription and long service in favour of universal service for a short term, and a thorough reform in the methods of command and staff work. It has been said of the Prussian army that "discipline is—the officers." This is more true of the "K.K." army[1] than of any other in Europe; the great bond of union between the heterogeneous levies of recruits of many races is the spirit of the corps of officers, which retains the personal and professional characteristics of the old army of Italy.

### FRENCH ARMY

81. The French army (see for further details FRANCE: *Law and Institutions*) dates from the middle of the 15th century, at which time Charles VII. formed, from mercenaries who had served him in the Hundred Years' War, the *compagnies d'ordonnance*, and thus laid the foundation of a national standing army. But the armies that followed the kings in their wars still consisted mainly of mercenaries, hired for the occasion; and the work of Charles and his successors was completely undone in the confusion of the religious wars. Louvois, was minister of Louis XIV., was the true creator of the French royal army. The organization of the first standing army is here given in some detail, as it served as a model for all armies for more than a century, and is also followed to some extent in our own times. Before the advent of Louvois, the forces were royal only in name. The army was a fortuitous concourse of regiments of horse and foot, each of which was the property of its colonel. The companies similarly

[1] The phrase "K. und K." (*Kaiserlich und Königlich*) is applied to all services common to the Austrian and Hungarian armies. "K.-K." (*Kaiserlich-Königlich*) refers strictly only to the troops of Austria, the Hungarian army being known as the "K.Ung." (Royal Hungarian) service.

belonged to their captains, and, the state being then in no condition to buy out these vested interests, superior control was almost illusory. Indeed, all the well-known devices for eluding such control, for instance, showing imaginary men on the pay lists, can be traced to the French army of the 16th century. A further difficulty lay in the existence of the offices called Colonel-General, Marshal-General and Grand Master of Artillery, between whom no common administration was possible. The grand master survived until 1743, but Louvois managed to suppress the other offices, and even to put one of his own subordinates into the office of grand master. Thus was assured direct royal control, exercised through the war minister. Louvois was unable indeed to overthrow the proprietary system, but he made stringent regulations against abuses, and confined it to the colonels (*mestre de camp* in the cavalry) and the captains. Henceforward the colonel was a wealthy noble, with few duties beyond that of spending money freely and of exercising his court influence on behalf of his regiment. The real work of the service was done by the lieutenant-colonels and lieutenants, and the king and the minister recognized this on all occasions. Thus Vauban was given, as a reward for good service, a company in the "Picardie" regiment without purchase. Promotions from the ranks were very rare but not unknown, and all promotions were awarded according to merit except those to captain or colonel. One of the captains in a regiment was styled major, and acted as adjutant. This post was of course filled by selection and not by purchase. The grades of general officers were newly fixed by Louvois—the *brigadier*, *maréchal de camp*, lieutenant-general and marshal of France. The general principle was to give command, but not promotion, according to merit. The rank and file were recruited by voluntary enlistment for four years' service. The infantry company was maintained in peace at an effective of 60, except in the guards and the numerous foreign corps, in which the company was always at the war strength of 100 to 200 men. This arm was composed, in 1678, of the *Gardes françaises*, the Swiss guards, the old (*vieux* and *petits vieux*) regiments of the line, of which the senior, "Picardie," claimed to be the oldest regiment in Europe, and the regiments raised under the new system. The *régiment du roi*, which was deliberately made the model of all others and was commanded by the celebrated Martinet, was the senior of these latter. The whole infantry arm in 1678 numbered 320,000 field and garrison troops. The cavalry consisted of the *Maison du Roi* (which Louvois converted from a "show" corps to one of the highest discipline and valour), divided into the *Gardes du Corps* and the *Mousquetaires*, the *Gendarmerie* (descended from the old feudal cavalry and the *ordonnance* companies) and the line cavalry, the whole being about 55,000 strong. There were also 10,000 dragoons. In addition to the regular army, the king could call out, in case of need, the ancient *arrière-ban* or levy, as was in fact done in 1674. On that occasion, however, it behaved badly, and it was not again employed. In 1688 Louvois organized a militia raised by ballot. This numbered 25,000 men and proved to be better, at any rate, than the *arrière-ban*. Many infantry regiments of the line were, as has been said, foreign, and in 1678 the foreigners numbered 30,000, the greater part of these being Swiss.

82. The artillery had been an industrial concern rather than an arm of the service. In sieges a sum of money was paid for each piece put in battery, and the grand master was not subordinated to the war office. A nominee of Louvois, as has been said, filled the post at this time, and eventually Louvois formed companies of artillerymen, and finally the regiment of "Fusiliers" which Vauban described as the "finest regiment in the world." The engineer service, as organized by Vauban, was composed of engineers "in ordinary," and of line officers especially employed in war. Louvois further introduced the system of magazines. To ensure the regular working of supply and transport, he instituted direct control by the central executive, and stored great quantities of food in the fortresses, thereby securing for the French armies a precision and certainty in military operations which had hitherto been wanting. The higher administration of the army, under the minister of war, fell into two branches, that of the commissaries and that of the inspecting officers. The duties of the former resembled those of a modern "routine" staff—issue of equipment, checking of returns, &c. The latter exercised functions analogous to those of a general staff, supervising the training and general efficiency of the troops. Louvois also created an excellent hospital service, mobile and stationary, founded the Hôtel des Invalides in Paris for the maintenance of old soldiers, established cadet schools for the training of young officers, and stimulated bravery and good conduct by reviving and creating military orders of merit.

83. The last half of the 17th century is a brilliant period in the annals of the French armies. Thoroughly organized, animated by the presence of the king, and led by such generals as Condé, Turenne, Luxembourg, Catinat and Vendôme, they made head against coalitions which embraced nearly all the powers of Europe, and made France the first military nation of Europe. The reverses of the later part of Louis XIV.'s reign were not of course without result upon the tone of the French army, and the campaigns of Marlborough and Eugene for a time diminished the repute in which the troops of Louis were held by other powers. Nevertheless the War of the Spanish Succession closed with French victories, and generals of the calibre of Villars and Berwick were not to be found in the service of every prince. The war of the Polish Succession in Germany and Italy reflected no discredit upon the French arms; and the German general staff, in its history of the wars of Frederick the Great, states that "in 1740 the French army was still regarded as the first in Europe." Since the death of Louvois very little had changed. The army was still governed as it had been by the great war minister, and something had been done to reduce evils against which even he had been powerless. A royal regiment of artillery had come into existence, and the engineers were justly regarded as the most skilful in Europe. Certain alterations had been made in the organization of both the guard and the line, and the total strength of the French in peace was somewhat less than 200,000. Relatively to the numbers maintained in other states, it was thus as powerful as before. Indeed, only one feature of importance differentiated the French army from its contemporaries—the proportion of officers to men, which was one to eleven. In view of this, the spirit of the army was necessarily that of its officers, and these were by no means the equals of their predecessors of the time of Turenne or Luxembourg. Louvois' principle of employing professional soldiers for command and wealthy men for colonelcies and captaincies was not deliberately adopted, but inevitably grew out of the circumstances of the time. The system answered fairly whilst continual wars gave the professional soldiers opportunities for distinction and advancement. But in a long peace the captains of eighteen and colonels of twenty-three blocked all promotion, and there was no work save that of routine to be done. Under these conditions the best soldiers sought service in other countries, the remainder lived only for pleasure, whilst the titular chiefs of regiments and companies rarely appeared on parade. Madame de Genlis relates how, when young courtiers departed to join their regiments for a few weeks' duty, the ladies of the court decked them with favours, as if proceeding on a distant and perilous expedition.

On the other hand, the fact that the French armies required large drafts of militia to bring up their regular forces to war strength gave them a vitality which was unusual in armies of the time. Even in the time of Louis XIV. the military spirit of the country had arisen at the threat of invasion, and the French armies of 1709 fought far more desperately, as the casualty lists of the allies at Malplaquet showed, than those of 1703 or 1704. In the time of the Revolution the national spirit of the French army formed a rallying-point for the forces of order, whereas Prussia, whose army was completely independent of the people, lost all power of defending herself after a defeat in the field. It is difficult to summarize the conduct of the royal armies in the wars of 1740–63. With a few exceptions the superior leaders proved themselves incompetent, and in three great battles, at least, the troops suffered ignominious defeat (Dettingen 1743, Rossbach 1757, Minden 1759). On the other hand,

Marshal Saxe and others of the younger generals were excellent commanders, and Fontenoy was a victory of the first magnitude. The administration, however, was corrupt and inefficient, and the general reputation of the French armies fell so low that Frederick the Great once refused an important command to one of his generals on the ground that his experience had been gained only against French troops.

Under Louis XVI. things improved somewhat; the American War and the successes of Lafayette and Rochambeau revived a more warlike spirit. Instruction was more carefully attended to, and a good system of drill and tactics was elaborated at the camp of St Omer. Attempts were made to reform the administration. Artillery and engineer schools had come into existence, and the intellectual activity of the best officers was remarkable (see Max Jähns, *Gesch. der Kriegswissenschaften*, vol. iii. passim). But the Revolution soon broke over France, and the history of the royal army was henceforward carried on by that revolutionary army, which, under a new flag, was destined to raise the military fame of France to its greatest height.

84. If Louis was the creator of the royal army, Carnot was so of the revolutionary army. At the outbreak of the Revolution the royal army consisted of 224 infantry battalions, 7 regiments of artillery, and 62 regiments of cavalry, numbering about 173,000 in all, but capable of augmentation on war strength to 210,000. To this might be added about 60,000 militia (see Chuquet, *Première invasion prussienne*).

The first step of the Constituent Assembly was the abrogation of an edict of 1781 whereby men of non-noble birth had been denied commissioned rank (1790). Thus, when many of the officers emigrated along with their fellows of the *noblesse*, trained non-commissioned officers, who would already have been officers save for this edict, were available to fill their places. The general scheme of reform (see CONSCRIPTION) was less satisfactory, but the formation of a National Guard, comprising in theory the whole military population, was a step of the highest importance. At this time the titles of regiments were abandoned in favour of numbers, and the costly and dangerous *Maison du Roi* abolished. But voluntary enlistment soon failed; the old corps, which kept up their discipline, were depleted, and the men went to the volunteers, where work was less exacting and promotion more rapid. "*Aussi fut-on*," says a French writer, "*réduit bientôt à forcer l'engagement volontaire et à imposer le choix du corps.*" The "first invasion" (July 1792) put an end to half-measures, and the country was declared "in danger." Even these measures, however, were purely designed to meet the emergency, and, after Valmy, enthusiasm waned to such a degree that, of a paper strength of 800,000 men (December 1792), only 112,000 of the line and 290,000 volunteers were actually present. The disasters of the following spring once more called for extreme energy, and 300,000 national guards were sent to the line, a step which was followed by a compulsory *levée en masse*; one million men were thus assembled to deal with the manifold dangers of civil and foreign war. France was saved by mere numbers and the driving energy of the Terrorists, not by discipline and organization. The latter was chaotic, and almost every element of success was wanting to the tumultuary levies of the year 1793 save a ferocious energy born of liberty and the guillotine. But under the Terrorist régime the army became the rallying-point of the nation, and when Lazare Carnot (*q.v.*) became minister of war a better organization and discipline began to appear. The amalgamation of the old army and the volunteers, which had been commenced but imperfectly carried out, was effected on a different and more thorough principle. The infantry was organized in demi-brigades of three battalions (usually one of the old army to two of volunteers). A permanent organization in divisions of all arms was introduced, and the ablest officers selected for the commands. Arsenals and manufactories of warlike stores were created, schools of instruction were re-established; the republican forces were transformed from hordes to armies, well disciplined, organized and equipped. Later measures followed the same lines, and the artillery and engineers, which in 1790 were admittedly the best in Europe and which owing to the *roturier* element in their officer cadres had not been disorganized by the emigration, steadily improved. The infantry, and in a less degree the cavalry, became good and trustworthy soldiers, and the glorious campaigns of 1794, 1795 and 1796, which were the direct result of Carnot's administration, bore witness to the potentialities of the essentially modern system. But, great as was the triumph of 1796-97, the exhaustion of years of continuous warfare had made itself felt: the armies were reduced to mere skeletons, and no sufficient means existed of replenishing them, till in 1798 the *conscription* was introduced. From that time the whole male population of France was practically at her ruler's disposal; and Napoleon had full scope for his genius in organizing these masses. His principal improvements were effected in the interval between the peace of Amiens and the war with the third coalition, while threatening the invasion of England. His armies were collected in large camps on the coasts of the Channel, and there received that organization which, with minor variations, they retained during all his campaigns, and which has since been copied by all European nations. The divisions had already given place to the army corps, and Napoleon completed the work of his predecessors. He withdrew the whole of the cavalry and a portion of the artillery from the divisions, and thus formed "corps troops" and cavalry and artillery reserves for the whole army. The grade of marshal of France was revived at Napoleon's coronation. At the same time, the operation of Jourdan's law, acquiesced in during times of national danger and even during peace, soon found opposition when the conscripts realized that long foreign wars were to be their lot. It was not the actual losses of the field armies, great as these undoubtedly were, which led Napoleon in the full tide of his career to adopt the fatal practice of "anticipating" the conscription, but the steady increase in the number of *réfractaires*, men who refused to come up for service. To hunt these men down, no less than forty thousand picked soldiers were engaged within the borders of France, and the actual French element in the armies of Napoleon grew less and less with every extension of the empire. Thus, in the Grand Army of 1809, about one-third of the corps of all arms were purely German, and in 1812 the army which invaded Russia, 467,000 strong, included 280,000 foreigners. In other words, the million of men produced by the original conscription of 1793 had dwindled to about half that number (counting the various subsidiary armies in Spain, &c.), and one hundred thousand of the best and sturdiest Frenchmen were engaged in a sort of civil war in France itself. The conscription was "anticipated" even in 1806, the conscripts for 1807 being called up before their time. As the later wars of the Empire closed one by one the foreign sources of recruiting, the conscription became more terrible every year, with the result that more *réfractaires* and more trusted soldiers to hunt them down were kept in non-effective employment. Finally the capacity for resistance was exhausted, and the army, from the marshals downward, showed that it had had enough.

85. One of the first acts of the Restoration was to abolish the conscription, but it had again to be resorted to within three years. In 1818 the annual contingent was fixed at 40,000, and the period of service at six years; in 1824 the contingent was increased to 60,000, and in 1832 to 80,000. Of this, however, a part only, according to the requirements of the service, were enrolled; the remainder were sent home on leave or furlough. Up to 1855 certain exemptions were authorized, and substitution or exchange of lots amongst young men who had drawn was permitted, but the individual drawn was obliged either to serve personally or find a substitute. The long series of Algerian wars produced further changes, and in 1855 the law of "dotation" or exemption by payment was passed, and put an end to personal substitution. The state now undertook to provide substitutes for all who paid a fixed sum, and did so by high bounties to volunteers or to soldiers for re-engaging. Although the price of exemption was fixed as high as £92, on an average 23,000 were claimed annually, and in 1859 as many as 42,000 were granted. Thus gradually the conscription became

rather subsidiary to voluntary enlistment, and in 1866, out of a total establishment of 400,000, only 120,000 were conscripts. Changes had also taken place in the constitution of the army. On the Restoration its numbers were reduced to 150,000, the old regiments broken up and recast, and a royal guard created in place of the old imperial one. When the revolution of July 1830 had driven Charles X. from his throne, the royal guard, which had made itself peculiarly obnoxious, was dissolved; and during Louis Philippe's reign the army was augmented to about 240,000 with the colours. Under the Provisional Government of 1848 it was further increased, and in 1854, when France allied herself with England against Russia, the army was raised to 500,000 men. The imperial guard was re-created, and every effort made to revive the old Napoleonic traditions in the army. In 1859 Napoleon III. took the field as the champion and ally of Italy, and the victories of Montebello, Magenta and Solferino raised the reputation of the army to the highest pitch, and for a time made France the arbiter of Europe. But the campaign of 1866 suddenly made the world aware that a rival military power had arisen, which was prepared to dispute that supremacy.

Marshal Niel (*q.v.*), the then war minister, saw clearly that the organization which had with difficulty maintained 150,000 men in Italy, was no match for that which had within a month thrown 250,000 into the very heart of Austria, while waging a successful war on the Main against Bavaria and her allies. In 1867, therefore, he brought forward a measure for the reorganization of the army. This was to have been a true "nation in arms" based on universal service, and Niel calculated upon producing a first-line army 800,000 strong—half with the colours, half in reserve—with a separate army of the second line. But many years must elapse before the full effect of this principle of recruiting can be produced, as the army is incomplete in some degree until the oldest reservist is a man who has been through the line training. Niel himself died within a year, and 1870 witnessed the complete ruin of the French army. The law of 1868 remained therefore no more than an expression of principle.

86. At the outbreak of the Franco-German War (*q.v.*) the French field troops consisted of 368 battalions, 252 squadrons, and 984 guns. The strength of the entire army on peace footing was 393,000 men; on war footing, 567,000. Disasters followed one another in rapid succession, and the bulk of this war-trained long-service army was captive in Germany within three months of the opening battle. But the spirit of the nation rose to the occasion as it had done in 1793. The next year's contingent of recruits was called out and hastily trained. Fourth battalions were formed from the depot cadres, and organized into *régiments de marche*. The *gardes mobiles* (Niel's creation) were mobilized, and by successive decrees and under various names nearly all the manhood of the country called to arms.

The regular troops raised as *régiments de marche*, &c., amounted to 213,000 infantry, 12,000 cavalry and 10,000 artillery. The *garde mobile* exceeded 300,000, and the mobilized national guard exceeded 1,100,000—of whom about 180,000 were actually in the field and 250,000 in Paris; the remainder preparing themselves in camps or depots for active work. Altogether the new formations amounted to nearly 1,700,000. Though, in the face of the now war-experienced well-led and disciplined Germans, their efforts failed, this cannot detract from the admiration which must be felt by every soldier for the patriotism of the people and the creative energy of their leaders, of whom Gambetta and Freycinet were the chief. After the war every Frenchman set himself to solve the army problem not less seriously than had every Prussian after Jena, and the reformed French army (see FRANCE) was the product of the period of national reconstruction. The adoption of the "universal service" principle of active army, reserves and second-line troops, the essential feature of which is the *line* training of every man, was almost as a matter of course the basis of the reorganization, for the want of a trained reserve was the most obvious cause of the disasters of "the terrible year."

### GERMAN ARMY

87. The German army, strictly speaking, dates only from 1871, or at earliest 1866. Before the unification of the German empire or confederation, the several states possessed distinct armies, federal armies when required being formed from the contingents which the members of the union, like those of an ordinary alliance, engaged to furnish. The armies of the Holy Roman Empire were similarly formed from "single," "double," or "treble" contingents under the supreme command of specially appointed field marshals of the Empire. In the troubles of 1848 there was witnessed the curious spectacle of half of a victorious army being unable to pursue the enemy; this, being composed of "Prussian" as distinct from "federal contingent" troops, had to stop at the frontier of another state. The events of 1866 and 1870 put an end to all this, and to a very great extent to the separate armies of the old confederation, all being now remodelled on Prussian lines. The Prussian army therefore is at once the most important and historically the most interesting of the forces of the German empire. Its *début* (about 1630) was not satisfactory, and in the Thirty Years' War troops of Sweden, of the Emperor, of the League, &c., plundered Brandenburg unharmed. The elector, when appealed to for protection, could but answer, "Que faire? Ils ont des canons." The humiliations of this time, were, however, avenged by the troops of the next ruler of Brandenburg, called the Great Elector. The supposed invincibility of the Swedes did not prevent him from inflicting upon them a severe defeat at Fehrbellin, and thereafter the Prussian contingents which took part in the many European wars of the time acquitted themselves creditably. One of their generals was the famous Leopold of Anhalt-Dessau, and the reckless gallantry of this leader was conspicuous on many fields, from Blenheim to Malplaquet. But Leopold's greatest work was done in the years of peace (1715–40), during which Prussia was preparing the army with which Frederick the Great won his battles. He had introduced (about 1700) iron ramrods into the infantry service, and for over twenty years the Prussian infantry was drilled to a perfection which gave it a superiority of five to three over the best-drilled troops of the Austrian service, and still greater predominance over the French, which was then accounted the best in Europe. Frederick William I., king of Prussia, directed and supervised the creation of the new Prussian army, and Leopold was his principal assistant. In organization and methods of recruiting, as well as in tactical efficiency, the army of 1740 was equally pre-eminent. Then came the wars of Frederick the Great. It is not too much to say that the infantry won his earlier battles; the cavalry had been neglected both by Frederick William and by Leopold, and Frederick wrote that "it was not worth the devil's while to fetch it away." But the predominance of the infantry was so far indisputable that Frederick was able to devote himself to the reorganization of the mounted arm, with results which appeared in the splendid victories of Hohenfriedberg, Rossbach, Leuthen and Zorndorf. But long before the close of the Seven Years' War the incomparable infantry of the old army had disappeared, to be replaced by foreigners, deserters and vagabonds of all kinds, not to mention the unwilling Saxon and other recruits forced into the king's service. The army of 200,000 men which Frederick bequeathed to his successor was indeed superb, and deserved to be the model of Europe. But with Frederick's death the genius which had animated it, and which alone gave value to such heterogeneous materials, was gone. The long peace had the customary effect of sapping the efficiency of the long-service troops. They still retained their imposing appearance and precision of movement, and overweening self-confidence. But in 1806, after two crushing defeats and a series of humiliating surrenders, Prussia found herself at the feet of the conqueror, shorn of half her territory, obliged to receive French troops in all her towns and fortresses, and only existing on sufferance. But in these very disasters were laid the seeds of her future greatness. By the treaty of Tilsit the Prussian army was limited to 43,000 men. This limitation suggested

to Scharnhorst "universal service" on the *Krümper*[1] system already described (see § 36 above).

88. The bitter humiliation and suffering endured under the French yoke aroused a national spirit which was capable of any sacrifices. The civilian became eager to be trained to fight against the oppressor of his country; and when Prussia rose in 1813, the armies she poured into the field were no longer professional, but national armies, imperfectly trained and organized, but animated by a spirit which more than compensated for these defects. At the close of the war her rulers, with far-seeing sagacity, at once devoted themselves to organize on a permanent footing the system which had sprung up under the necessities and enthusiasm of the moment. Universal compulsory service, and a three years' term in the ranks, with further periods in the reserve and *Landwehr*, were then introduced; and though variations have subsequently been made in the distribution of time, the principles were substantially the same as those now in force. By the law of 1814 the periods of service were fixed at three years in the army, two in the reserve and fourteen in the *Landwehr*, and the annual contingent at 40,000 men. As the population increased, it was felt that the service was unequally distributed, pressing unnecessarily heavily on some, while others escaped altogether. Further, the experiences of Bronnzell and Olmütz in 1850, and of 1859, when Prussia armed in anticipation of a war with France, aroused great doubts as to the efficiency of the *Landwehr*, which then formed the bulk of Prussia's forces, and of whom many had been as long as ten years away from the colours. At this time the French remark that the Prussian army was "a sort of militia" was by no means untrue. Accordingly, by the law of 1860 the annual contingent was fixed at 63,000, the period in the reserve was increased from two to four years, and that in the *Landwehr* reduced from fourteen to five, The total armed force thus remained nearly the same (12 contingents of 63,000, in place of 19 of 40,000), but the army and its reserves were more than doubled (increased from 5 × 40,000 to 7 × 63,000) while the *Landwehr* was proportionately reduced.

This change was not effected without great opposition, and led to a prolonged struggle between the king, guided by Bismarck, and the parliament. It required the victories of 1866 and 1870, and the position thereby won for Prussia, to reconcile the nation to the new law. The military alliance (1866) of Prussia with the other German states gave place in 1871 to the union of all the armies into the German army as it is to-day. Some retained their old peculiarities of uniform, and even more than this was allowed to Bavaria and to Saxony, but the whole army, which has been increased year by year to its present strength, is modelled on the Prussian part of it. The Prussian army corps are the Guard, and the line numbered I. to XI., and XV. to XVIII.

89. The *Saxon Army* formerly played a prominent part in all the wars of northern Europe, chiefly in connexion with Poland. In the War of the Austrian Succession the Saxon army played a prominent part, but in the end it suffered a heavy defeat in the battle of Kesselsdorf (1745). In the Seven Years' War Saxony was overrun by the Prussians almost without resistance, and the military forces of the country under Field Marshal Rutowski were forced to surrender *en masse* at Pirna (1756); the men were compelled by Frederick the Great to join the Prussian army, and fought, though most unwillingly, through the remainder of the war as Prussian soldiers. A few outlying regiments which had not been involved in the catastrophe served with the Austrians, and on one occasion at least, at Kolin, inflicted a severe blow on the Prussians. At the outbreak of the wars of the French Revolution the Saxon army was over 30,000 strong. It took part in the campaign of Jena on the side of the Prussians, and during the Napoleonic domination in Germany Saxony furnished strong contingents to the armies of Napoleon, who in return recognized her elector as king, and largely increased his territories. The newly made king remained faithful to Napoleon even in his reverses; but the army was too German in feeling to fight willingly under the French flag. Their defection at Leipzig contributed not a little to the results of that bloody day. After the peace the king was shorn of a great part of his dominions, and the army was reconstituted on a smaller scale. In 1866 Saxony sided with Austria, and her army shared in the disasters of the brief campaign and the crowning defeat at Königgrätz. Under the crown prince's leadership, however, the Saxons distinguished themselves by their courage and steadiness wherever they were engaged. After the war Saxony became part of the North German Confederation, and in 1870–1871 her troops, under the command of the crown prince, formed the XII. corps of the great German army. They were assigned to the II. army of Prince Frederick Charles, and delivered the decisive attack on the French right at Gravelotte. Subsequently a IV. army was formed under the command of the crown prince, in which the XII. corps, now under Prince George of Saxony, served with unvarying credit in the campaign of Sedan and the siege of Paris. The Saxon army is now organized in every respect on Prussian lines, and forms two army corps (XII. at Dresden and XIX. at Leipzig) of the German army. The German emperor, in concert with the king of Saxony, names the officers for the higher commands. Saxony retains, however, her separate war ministry, budget, &c.; and appointments and promotion to all but the highest commands are made by the king. The colours of the older Saxon forces, and especially the green of the tunics, are retained in many of the uniforms of the present day.

90. The *Bavarian Army* has perhaps the most continuous record of good service in the field of any of the minor German armies. The oldest regiments date from the Thirty Years' War, in which the veteran army of the Catholic league, commanded by Count Tilly and formed on the nucleus of the Bavarian army, played a conspicuous part. Later in the war the Bavarian general, Count Mercy, proved himself a worthy opponent of Turenne and Condé. Henceforward the Bavarians were engaged in almost every war between France and Austria, taking part successively in the wars of the Grand Alliance, the Spanish Succession (in which they came into conflict with the English), and the Polish and Austrian Succession wars. In pursuance of the traditional anti-Austrian policy, the troops of Bavaria, led by a distinguished Bavarian, Marshal (Prince) Wrede, served in the campaigns of 1805 to 1813 side by side with the French, and Napoleon made the electorate into a kingdom. But in 1813 Bavaria joined the Alliance, and Wrede tried to intercept the French on their retreat from Leipzig. Napoleon, however, inflicted a severe defeat on his old general at Hanau, and opened his road to France. In 1866 the Bavarians took part against Prussia, but owing to their dilatoriness in taking the field, the Prussians were able to beat them in detail. In 1870, reorganized to some extent on Prussian lines, they joined their former enemy in the war against France, and bore their full share in the glories and losses of the campaign, the II. Bavarian corps having suffered more heavily than any but the III. Prussian corps. The I. Bavarian corps distinguished itself very greatly at Sedan and on the Loire. Bavaria still retains her separate war office and special organization, and the troops have been less affected by the Prussian influence than those of the other states. The Bavarian corps are numbered separately (I. Bav., Munich; II. Bav., Würzburg; III. Bav., Nuremberg), and the old light blue uniforms and other distinctive peculiarities of detail are still maintained.

91. *Württemberg* furnishes one army corps (XIII.; headquarters, Stuttgart), organized, clothed and equipped in all respects like the Prussian army. Like the Bavarians, the Württembergers fought against the Prussians in 1866, but in 1870 made common cause with them against the French, and by the convention entered into the following year placed their army permanently under the command of the Prussian king as emperor. The emperor nominates to the highest commands, but the king of Württemberg retains the nomination and appointment of officers in the lower grades.

92. The old *Hanoverian Army* disappeared, of course, with the annexation of Hanover to Prussia in 1866, but it is still represented officially by certain regiments of the X. army corps, and, in one case at least, battle honours won by the King's German Legion in the British service are borne on German colours of to-day. The *Hessian Army* is now represented by the XXV. (Grand-ducal Hessian) division, which forms part of the XVIII. army corps.

### Italian Army

93. The old conscription law of the kingdom of Sardinia is the basis of the military organization of Italy, as its constitution is of that of the modern Italian kingdom. The Piedmontese have long borne a high reputation for their military qualities, a

[1] From *Krümperpferde* (cast horses attached to batteries, &c., for odd jobs), applied to the recruits in jest.

reputation shared by the rulers of the house of Savoy (*q.v.*), many of whom showed special ability in preserving the independence of their small kingdom between two such powerful neighbours as France and Austria. During the wars of the French Revolution Piedmont was temporarily absorbed into the French republic and empire. The Italian troops who fought under Napoleon proved themselves, in many if not most cases, the best of the French allies, and Italy contributed large numbers of excellent general officers to the *Grande Armée*.

After 1815 various causes combined to place Piedmont (Sardinia) at the head of the national movement which agitated Italy during the ensuing thirty years, and bring her in direct antagonism to Austria. Charles Albert, her then ruler, had paid great attention to the army, and when Italy rose against Austria in 1848 he took the field with an excellent force of nearly 70,000 men. At the outset fortune favoured the arms of Italy; but the genius and energy of Radetzky, the veteran Austrian commander, turned the tide, and in the summer of 1849 after many battles the Piedmontese army was decisively defeated at Novara, and her king compelled to sue for peace. Charles Albert abdicated in favour of his son Victor Emanuel, a prince who had already distinguished himself by his personal gallantry in the field. Under his care the army soon recovered its efficiency, and the force which joined the allied armies in the Crimea attracted general admiration from the excellence of its organization, equipment and discipline. In 1859 Piedmont again took up arms against Austria for the liberation of Italy; but this time she had the powerful assistance of France, and played but a subordinate part herself. In this campaign the Sardinian army was composed of one cavalry and five infantry divisions, and numbered about 60,000 combatants. By the peace of Villafranca, Italy, with the exception of Venetia, was freed from the Austrians, and Lombardy was added to Piedmont. The revolutionary campaign of Garibaldi in the following year united the whole peninsula under the rule of Victor Emanuel, and in 1866, when Italy for the third time took up arms against Austria—this time as the ally of Prussia—her forces had risen to nearly 450,000, of whom about 270,000 actually took the field. But in quality these were far from being equal to the old Piedmontese army; and the northern army, under the personal command of the king, was decisively defeated at Custozza by the archduke Albert of Austria.

The existing organization of the Italian army is determined by the laws of 1873, which made universal liability to service the basis of recruiting. The territorial system has not, however, been adopted at the same time, the materials of which the Italian army is composed varying so much that it was decided to blend the different types of soldiers so far as possible by causing them to serve together. The colonial wars in which Italian troops have taken part have been marked with great disasters, but relieved by the gallantry of the officers and the rank and file.

### Russian Army

94. The history of the Russian army begins with the abolition of the Strelitz (*q.v.*) by Peter the Great in 1698, the nucleus of the new forces being four regiments of foot, two of which are well known to-day under their old titles of Preobrazhenski and Semenovski. Throughout the 18th century Russian military progress obeyed successive dynasties of western European models—first those of Prussia, then those of France. In the earlier part of the 19th century the army, used chiefly in wars against the revolutionary spirit, became, like others of that time, a dynastic force; subsequently the "nation in arms" principle reasserted itself, and on this basis has been carried out the reorganization of Russia's military power. The enormous development of this since 1874 is one of the most striking phenomena in recent military history. In 1892, in expectation of a general European war, whole armies were massed in the districts of Warsaw and Vilna, three-fifths of the entire forces being in position on the German and Austrian frontiers.

The Russo-Japanese War of 1904–5 is generally held to have proved that the fighting power of the Russian has in no way diminished in intrinsic value from that of the days of Zorndorf, Borodino and Sevastopol. The proverbial stubbornness of the rank and file is the distinctive quality of the armies of the tsar, and in view of the general adoption of two-years' service in other countries it is a matter for grave consideration whether, against European forces and in defence of their own homes, the Russians would not prove more than formidable antagonists to the men of more highly individualized races who are their probable opponents. Equally remarkable is the new power of redistribution possessed by Russia. Formerly it was usual to count upon one campaign at least elapsing before Russia could intervene effectively in European wars; much, in fact the greater part, of her losses in the Crimean War was due to the enormous distances which had to be traversed on foot. Nowadays the original equal distribution of the army over the country has been modified in accordance with the political needs of each moment. In 1892 the centre of gravity was shifted to Poland and Kiev, in 1904 the performances of the trans-Siberian railway in transporting troops to the seat of war in Manchuria excited the admiration of military Europe. The attitude of the army in the troubles which followed upon the Japanese War belongs to the history of Russia, not to that of military organization, and it will be sufficient to say that the conduct of the "nation in arms" at times of political unrest may vary between the extremes of unquestioning obedience to authority and the most dangerous form of licence, examples of both being frequent in the history of nearly all national armies. A remarkable innovation in the modern history of this army is the conversion of the whole of the cavalry, except a few *élite* regiments, into dragoons of the old type. After the war of 1904-5, however, this policy was reversed and the cavalry reformed on the usual model. The Cossacks still retain to a large extent the peculiarities of the light troops of the 18th century.

### Spanish Army

95. The feudal sovereignties of medieval Spain differed but little, in their military organization, from other feudal states. As usual, mercenaries were the only forces on which reliance was placed for foreign wars. These troops called *almugávares* (Arabic = scouts) won a great reputation on Italian and Greek battlefields of the 13th century, and with many transformations in name and character appeared from time to time up to the Peninsular War. Castile, however, had a military system very different from the rest. The forces of the kingdom were composed of local contingents similar to the English *fyrd*, professional soldiers who were paid followers of the great lords, and the heavy cavalry of the military orders. The groups of cities called *Hermandades*, while they existed, also had permanent forces in their pay. At the union of Castile and Aragon the Castilian methods received a more general application. The new *Hermandad* was partly a light cavalry, partly a police, and was organized in the ratio of one soldier to every hundred families. In the conquest of Grenada (1482–92) *mesnadas* or contingents were furnished by the crown, the nobles and the cities, and permanently kept in the field. The *Hermandad* served throughout the war as a matter of course. From the veterans of this war was drawn the army which in the Italian wars won its reputation as the first army in Europe.

In 1596 the home defence of Spain was reorganized and the *ordenanza*, or militia, which was then formed of all men not belonging to the still extant feudal contingents, was generally analogous to the system of "assizes at arms" in England. This *ordenanza* served in the Peninsular War.

96. With the Italian wars of the early 16th century came the development of the regular army; a brief account of its place in the evolution of armies has been given above. Discipline, the feeling of comradeship and soldierly honour were the qualities which marked out the Spanish army as the model for others to follow, and for more than a century the Spanish army maintained its prestige as the first in Europe. The oldest regiments of the present Spanish army claiming descent from the *tercios* date from 1535. An officer whose regiment was reduced commonly took a pike in some other corps (*e.g.* Tilly), the *señor soldado* was counted as a gentleman, and his wife and family received state allowances. Nor was this army open only to Spaniards. Walloons, Italians, Burgundians and other nationalities ruled over by the Habsburgs all contributed their quotas. But the career of the old army came to an end at Rocroi (1643), and after this the forces of the monarchy began more and more to conform to the French model.

97. The military history of Spain from 1650 to 1700 is full of incident, and in the long war of the Spanish Succession both the army and the *ordenanza* found almost continuous employment. They were now organized, as were most other armies of Europe, on the lines of the French army, and in 1714 the old *tercios*, which had served in the Spanish Netherlands under Marlborough, were brought to Spain. The king's regiment "Zamora" of the present army descends from one of these which, as the *tercio* of Bovadilla, had been raised in 1580. The army underwent few changes of importance during the 18th century, and it is interesting to note that there were never less than three Irish regiments in the service. In 1808 the *Irlanda*, *Ultonia* (= Ulster) and *Hibernia* regiments had come to consist (as had similar corps in the French service before the Revolution) largely of native soldiers. At that time the Spanish army consisted of 119 Spanish and foreign (Swiss, Walloon and Irish) battalions, with 24 cavalry regiments and about 8000 artillery and engineers. There were further 51 battalions of militia, and the

total forces numbered actually 137,000. The part played by the Spanish standing army in the Peninsular War was certainly wholly insignificant relatively to these figures. It must be borne in mind, however, that only continued wars can give real value to long-service troops of the old style, and this advantage the Spanish regulars did not possess. Further, the general decadence of administration reacted in the usual way, the appointment of court favourites to high command was a flagrant evil, and all that can be urged is that the best elements of the army behaved as well as did the Prussians of 1806, that the higher leading and the administration of the army in the field were both sufficiently weak to have ruined most armies, and that the men were drawn from the same country and the same classes which furnished the *guerrilleros* whom it became fashionable to exalt at the expense of the soldiers. In the later campaigns of Wellington, Spanish divisions did good service, and the corps of La Romaña (a picked contingent of troops which had been sent before the war to Denmark at Napoleon's instance), though often defeated, always retained some cohesion and discipline. But the result of this war, the second French invasion, and the continued civil wars of the 19th century was the destruction of the old army, and the present army of Spain still bears traces of the confusion out of which it arose.

The most important changes were in 1870, when conscription was introduced, and in 1872, when universal service was proposed in its place. The military virtues of the rank and file and the devotion of the officers were conspicuously displayed in the Spanish-American War of 1898, and it cannot be claimed even for the Germans of 1870 that they fired so coolly and accurately as did the defenders of S. Juan and El Caney.

### Turkish Army

98. The writers who have left the most complete and trustworthy contemporary accounts of the Turkish army in the 14th and 15th centuries, when it reached the height of its most characteristic development, are Bertrandon de la Brocquière, equerry to Philip the Good, duke of Burgundy, and Francesco Filelfo of Tolentino. Bertrandon, a professional soldier, visited Palestine in 1432, and returned overland in 1433, traversing the Balkan Peninsula by the main trade-route from Constantinople to Belgrade. He wrote an account of his journey for Philip: see *Early Travels in Palestine*, translated and edited by T. Wright (London, 1848). Filelfo served as secretary to the Venetian *baylo* at Constantinople, and recorded his observations in a series of letters (see Filelfo). Both ascribe the military superiority of the Turks over the nations of western Europe to two facts—firstly to their possession of a well-organized standing army, an institution unknown elsewhere, and secondly to their far stricter discipline, itself a result of their military organization and of the moral training afforded by Islam.

The regular troops comprised the Janissaries (*q.v.*), a corps of infantry recruited from captured sons of Christians, and trained to form a privileged caste of scientific soldiers and religious fanatics; and the Spahis, a body of cavalry similarly recruited, and armed with scimitar, mace and bow. Celibacy was one of the rules of this standing army, which, in its semi-monastic ideals and constitution, resembled the knightly orders of the West in their prime. The Janissaries numbered about 12,000, the Spahis about 8000. A second army of some 40,000 men, mostly mounted and armed like the Spahis, was feudal in character, and consisted chiefly of the personal followers of the Moslem nobility; more than half its numbers were recruited in Europe. This force of 60,000 trained soldiers was accompanied by a horde of irregulars, levied chiefly among the barbarous mountaineers of the Balkans and Asia Minor, and very ill-armed and ill-disciplined. Their numbers may be estimated at 140,000, for Bertrandon gives 200,000 as the total of the Turkish forces. Many 15th and 16th century writers give a smaller total, but refer only to the standing and feudal armies. Others place the total higher. Laonicus Chalcocondylas in his *Turcica Historia* states that at the siege of Constantinople in 1453 the sultan commanded 400,000 troops, but most other eye-witnesses of the siege give a total varying from 150,000 to 300,000. Many Christian soldiers of fortune enlisted with the Turks as artillerists or engineers, and supplied them at Constantinople with the most powerful cannon of the age. Other Christians were compelled to serve as engineers or in the ranks. As late as 1683 a corps of Wallachians was forced to join the Turkish army before Vienna, and entrusted with the task of bridging the Danube. But in the 18th and early 19th centuries the introduction of Christians tended to weaken the *moral* of the army already sapped by defeat; it was found impossible to maintain the discipline of the Janissaries, whose privileges had become a source of danger; and the feudal nobility became more and more independent of the sultan's authority. These three causes contributed to make reorganization inevitable.

The destruction of the Janissaries in 1826 marked the close of the history of the old Turkish army; already the re-creation of the service on the accepted models of western Europe had been commenced. This was still incomplete when the new force was called upon to meet the Russians in 1828, and though the army displayed its accustomed bravery, its defective organization and other causes led to its defeat. Since then the army has been almost as constantly on active service as the British; the Crimean War, the Russo-Turkish War of 1877 and the Greco-Turkish War of 1897 witnessed the employment of a large proportion of the sultan's available forces, while innumerable local revolts in different parts of the empire called for great exertions, and often for fierce fighting on the part of the troops locally in garrison and those sent up from the nearest provinces.

### United States Army

99. The regular army of the United States has always been small. From the first it has been a voluntary force, and until 1898 its chief work in peace was to furnish numerous small posts on the frontier and amongst the Indians, and to act as a reserve to the civil power in the great cities. In war-time the regular army, if, as was usually the case, it was insufficient in numbers for the task of subduing the enemy, formed the nucleus of large armies raised "for the war." In 1790 the rank and file of the army, as fixed by act of Congress, amounted to 1216 men; and in 1814 an English expedition of only 3500 men was able to seize and burn Washington, the capital of a country which even then numbered eight millions of inhabitants. In 1861, at the beginning of the Civil War, the whole regular force amounted to about 15,300 men. In April of that year the president called out 75,000 volunteers for three months; and in May a further call for 42,000 was made. In July a call for 500,000 men was authorized by Congress, and as even this vast force proved insufficient it was found necessary to use a system of drafts. In October 1863 a levy of 300,000 men was ordered, and in February 1864 a further call of 500,000 was made. Finally, in the beginning of 1865 two further levies, amounting in all to 500,000 men, were ordered, but were only partially carried out in consequence of the cessation of hostilities. The total number of men called under arms by the government of the United States, between April 1861 and April 1865, amounted to 2,759,049, of whom 2,656,053 were actually embodied in the armies. If to these be added the 1,100,000 men embodied by the South during the same time, the total armed forces reach the enormous amount of nearly four millions, drawn from a population of only 32 millions—figures before which the celebrated uprising of the French nation in 1793, or the efforts of France and Germany in the Franco-German War, sink into insignificance. These 2,700,000 Federals were organized into volunteer regiments bearing state designations. The officers, except general and staff officers, were appointed by the governors of the respective states. The maximum authorized strength of the regular army never, during the war, exceeded 40,000 men; and the number in the field, especially towards the close of the war, was very much less. The states, in order to obtain men to fill their quotas, offered liberal bounties to induce men to enlist, and it therefore became very difficult to obtain recruits for the regular army, for which no bounties were given. The regular regiments accordingly dwindled away to skeletons. The number of officers present was also much reduced, since many of them, while retaining their regular commissions, held higher rank in the volunteer army. After the close of the Civil War the volunteers were mustered out; and by the act of Congress of the 28th of July 1866 the line of the army was made to consist of 10 regiments of cavalry of 12 troops each, 5 regiments of artillery of 12 batteries each and 45 regiments of infantry of 10 companies. The actual strength in August 1867 was 53,962. The act of the 3rd of March 1869 reduced the number of infantry regiments to 25 and the enlisted strength of the army to 35,036. The numbers were further reduced, without change in organization, to 32,788 in 1870 and to 25,000 in 1874. The latter number remained the maximum for twenty-four years.

In March 1898, in view of hostilities with Spain, the artillery was increased by 2 regiments, and, in April, 2 companies were added to each infantry regiment, giving it

3 battalions of 4 companies each. The strength of batteries, troops and companies was increased, the maximum enlisted strength reached during 1898 being over 63,000. A volunteer army was also organized. Of this army, 3 regiments of engineer troops, 3 of cavalry and 10 of infantry were United States volunteers, all the officers being commissioned by the president. The other organizations came from the states, the officers being appointed by the respective governors. As fast as they were organized and filled up, they were mustered into the service of the United States. The total number furnished for the war with Spain was 10,017 officers and 213,218 enlisted men. All general and staff officers were appointed by the president. Three hundred and eighty-seven officers of the regular army received volunteer commissions. After the conclusion of hostilities with Spain, the mustering out of the volunteers was begun, and by June 1899 all the volunteers, except those in the Philippines, were out of the service. The latter, as well as those serving elsewhere, having enlisted only for the war, were brought home and mustered out as soon as practicable.

The act of the 2nd of March 1899 added 2 batteries to each regiment of artillery. On the 2nd of February 1901 Congress passed an important bill providing for the reorganization and augmentation (max. 100,000) of the regular army, and other measures followed in the next years. (See UNITED STATES.)

### MINOR ARMIES

100. *Dutch and Belgian Armies.*—The military power of the "United Provinces" dates its rise from the middle of the 16th century, when, after a long and sanguinary struggle, they succeeded in emancipating themselves from the yoke of Spain; and in the following century it received considerable development in consequence of the wars they had to maintain against Louis XIV. In 1702 they had in their pay upwards of 100,000 men, including many English and Scottish regiments, besides 30,000 in the service of the Dutch East India Company. But the slaughter of Malplaquet deprived the republic of the flower of the army. Its part in the War of the Austrian Succession was far from being as creditable as its earlier deeds, a Prussian army overran Holland in 1787 almost without opposition, and at the beginning of the wars of the French Revolution the army had fallen to 36,000 men. In 1795 Holland was conquered by the French under Pichegru, and in the course of the changes which ensued the army was entirely reorganized, and under French direction bore its share in the great wars of the empire.

With the fall of Napoleon and the reconstitution of the Netherlands, the Dutch-Belgian army, formed of the troops of the now united countries, came into existence. The army fought at Waterloo, but was not destined to a long career, for the revolution of 1830 brought about the separation of Belgium. A Dutch garrison under Baron Chassé, a distinguished veteran of the Napoleonic wars, defended Antwerp against the French under Marshal Gérard, and the Netherlands have been engaged in many arduous colonial wars in the East Indies. The Belgian army similarly has contributed officers and non-commissioned officers to the service of the Congo Free State.

101. *Swiss Army.*—The inhabitants of Switzerland were always a hardy and independent race, but their high military reputation dates from the middle of the 15th century, when the comparatively ill-armed and untrained mountaineers signally defeated Charles the Bold of Burgundy and the flower of the chivalry of Europe in the battles of Granson, Morat and Nancy. The Swabian war, towards the end of that century, and the Milanese war, at the beginning of the following one, added to the fame of the Swiss infantry, and made it the model on which that arm was formed all over Europe. The wealthier countries vied with each other in hiring them as mercenaries, and the poor but warlike Swiss found the profession of arms a lucrative one.

A brief account of the Swiss mercenaries will be found earlier in this article. Their fall was due in the end to their own indiscipline in the first place, and the rise of the Spanish standing army and its musketeers in the second. Yet it does not seem that the military reputation of the Swiss was discredited, even by reverses such as Marignan. On the contrary, they continued all through the 17th and 18th centuries to furnish whole regiments for the service of other countries, notably of France, and individuals, like Jomini in a later age, followed the career of the soldier of fortune everywhere. The most notable incident in the later military history of the Swiss, the heroic faithfulness of Louis XVI.'s Swiss guard, is proverbial, and has been commemorated with just pride by their countrymen. The French Revolutionary armies overran Switzerland, as they did all the small neighbouring states, and during Napoleon's career she had to submit to his rule, and furnish her contingent to his armies. On the fall of Napoleon she regained her independence, and returned to her old trade of furnishing soldiers to the sovereigns and powers of Europe. Charles X. of France had at one time as many as 17,000 Swiss in his pay; Naples and Rome had each four regiments. The recruiting for these foreign services was openly acknowledged and encouraged by the government. The young Swiss engaged usually for a period of four or six years; they were formed in separate regiments, officered by countrymen of their own, and received a higher rate of pay than the national regiments; and at the close of their engagement returned with their earnings to settle down on their paternal holdings. A series of revolutions, however, expelled them from France and Italy, and recently the advance of liberal ideas, and the creation of great national armies based on the principle of personal service, has destroyed their occupation. Switzerland is now remarkable in a military sense as being the only country that maintains no standing army (see Militia).

102. The *Swedish Army* can look back with pride to the days of Gustavus Adolphus and of Charles XII. The contributions made by it to the military science of the 17th century have been noticed above. The triumphs of the small and highly disciplined army of Charles were often such as to recall the similar victories of the Greeks under Alexander. The then nebulous armies of Russia and Poland resembled indeed the forces of Darius in the 4th century B.C., but Peter the Great succeeded at last in producing a true army, and the resistance of the Swedes collapsed under the weight of the vastly superior numbers then brought against them.

The *Danish Army* has a long and meritorious record of good service dating from the Thirty Years' War.

103. The existing Army of *Portugal* dates from the Peninsular War, when a considerable force of Portuguese, at one time exceeding 60,000 men, was organized under Marshal Beresford. Trained and partly officered by English officers, it proved itself not unworthy of its allies, and bore its full share in the series of campaigns and battles by which the French were ultimately expelled from Spain. At the peace the army numbered about 50,000 infantry and 5000 cavalry, formed on the English model, and all in the highest state of efficiency. This force was reduced in 1821, under the new constitutional government, to about one-half.

104. The *Rumanian*, *Bulgarian* and *Servian* armies are the youngest in Europe. The conduct of the Rumanians before Plevna in 1877 earned for them the respect of soldiers of all countries. Servia and Bulgaria came to war in 1885, and the Bulgarian soldiers, under the most adverse conditions, achieved splendid victories under the leadership of their own officers. In the crisis following the Austrian annexation of Bosnia-Herzegovina (1908-9), it seemed likely that the Servian forces might play an unexpectedly active part in war even with a strong power.

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**ARNAL, ÉTIENNE** (1794–1872), French actor, was born at Meulan, Seine-et-Oise, on the 1st of February 1794. After serving in the army, and working in a button factory, he took to the stage. His first appearance (1815) was in tragedy, and for some time he was unsuccessful; it was not until 1827 that he showed his real ability in comedy parts, especially in plays by Félix August Duvert (1795–1876) and Augustin Théodore Lauzanne (1805–1877), whose *Cabinets particuliers* (1832), *Le Mari de la dame de chœurs* (1837), *Passé minuit, L'Homme blasé* (1843), *La Clef dans le dos* (1848), &c., contained parts written for him. He was twenty years at the Vaudeville, and completed at the various Parisian theatres a stage career of nearly half a century. Arnal was the author of *Epître à bouffé* (1840), which is reprinted in his volume of poetry, *Boutades en vers* (1861).

**ARNALDUS DE VILLA NOVA,** also called ARNALDUS DE VILLANUEVA, ARNALDUS VILLANOVANUS or ARNAUD DE VILLENEUVE (*c.* 1235–1313), alchemist, astrologer and physician, appears to have been of Spanish origin, and to have studied chemistry, medicine, physics, and also Arabian philosophy. After having lived at the court of Aragon, he went to Paris, where he gained a considerable reputation; but he incurred the enmity of the ecclesiastics and was forced to flee, finally finding an asylum in Sicily. About 1313 he was summoned to Avignon by Pope Clement V., who was ill, but he died on the voyage. Many alchemical writings, including *Thesaurus Thesaurorum* or *Rosarius Philosophorum*, *Novum Lumen*, *Flos Florum*, and *Speculum Alchimiae*, are ascribed to him, but they are of very doubtful authenticity. Collected editions of them were published at Lyons in 1504 and 1532 (with a biography by Symphorianus Campegius), at Basel in 1585, at Frankfort in 1603, and at Lyons in 1686. He is also the reputed author of various medical works, including *Breviarium Practicae*.

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**ARNAUD, HENRI** (1641–1721), pastor and general of the Vaudois or Waldensians of Piedmont, was born at Embrun. About 1650 his family returned to their native valley of Luserna, where Arnaud was educated at La Tour (the chief village), later visiting the college at Basel (1662 and 1668) and the Academy at Geneva (1666). He then returned home, and seems to have been pastor in several of the Vaudois valleys before attaining that position at La Tour (1685). He was thus the natural leader of his co-religionists after Victor Amadeus expelled them (1686) from their valleys, and most probably visited Holland, the ruler of which, William of Orange, certainly gave him help and money. Arnaud occupied himself with organizing his 3000 countrymen who had taken refuge in Switzerland, and who twice (1687–1688) attempted to regain their homes. The English revolution of 1688, and the election of William to the throne, encouraged the Vaudois to make yet another attempt. Furnished with detailed instructions from the veteran Josué Janavel (prevented by age from taking part in the expedition) Arnaud, with about 1000 followers, started (August 17, 1689) from near Nyon on the Lake of Geneva for the *glorieuse rentrée*. On the 27th of August, the valiant band, after many hardships and dangers,