

the question to the Frankfort diet, which decided in favour of the duke. Matters were now approaching a crisis. Prussia had long looked with jealousy upon the power of Austria, and considered a war with that country for the supremacy of Germany as sooner or later a necessity. The German people had for some time felt that there was not room for two great powers,—each too great to submit to the other,—one or other must give way before the country could obtain its proper place and influence in Europe. While both powers were professing the utmost desire for peace, each was actively preparing for war. Prussia entered into an alliance with Victor Emmanuel (27th March 1866), the latter undertaking to declare war against Austria as soon as Prussia commenced hostilities, while the former engaged to secure Venetia for her Italian ally. In the beginning of May orders were issued by the emperor of Austria for putting the whole army upon a war footing, and for concentrating a portion of it upon the Bohemian and Silesian frontiers; and about the same time the Prussian cabinet issued orders to fill up to the war strength the different branches of the service. On 7th June the Prussian troops entered Holstein, and compelled the Austrians to retire, which they did without bloodshed.

Austria was in an unprepared state when the war actually broke out, but the Prussian forces, on the other hand, were thoroughly equipped. The Austrian army in the north amounted to 247,000 men, besides the Saxon army at Dresden of 24,000, in all 271,000. The Prussian force consisted of three armies: the first, under the command of Prince Frederick Charles, consisted of 93,000 men, and was destined for Saxony and Bohemia; the second, under the crown prince, numbered 115,000 men, and was to operate in Silesia; while the third, or army of the Elbe, under General Herwarth, consisting of 46,000 men, was to march on the right flank of the first army, making in all 254,000 men, besides reserve corps of 24,300 men stationed at Berlin. General Benedek was appointed commander-in-chief of the Austrian army, and his forces were distributed along the frontier that separates Moravia from Saxony and Silesia. On the 16th of June the Prussians entered Saxony, and marched upon Dresden, the Saxon army retiring to join the Austrians. On the 18th the Austrians entered Silesia, and the same day the Prussians took possession of Dresden. The three Prussian armies now advanced into Bohemia, and endeavoured to concentrate in the direction of Gitschin. On June 26th an engagement took place between some companies of the first army and a body of Austrians at Podol, in which the latter were defeated, while, at Hühnerwasser, the advanced guard of the Elbe army attacked some Austrian troops and drove them back towards Münchengrätz. Here, on the 28th, a severe struggle took place between the Prussians and the Austrians, supported by the Saxons, but the latter were ultimately driven back in the direction of Gitschin. In the meantime the second army, under the crown prince, had to march through the long and narrow passes of the mountains lying between Silesia and Bohemia. On the 27th one of the corps of this army, under General Steinmetz, engaged an Austrian force under General Ramming, and after a severe contest began to give way, but the crown prince coming up, the Austrians were driven back. The same day another corps of this army took possession of Trautenau, but were attacked by the Austrians under General Gablenz, and sustained a repulse. Both sides having received reinforcements, the action was renewed next day at Soor, when victory ultimately declared for the Prussians. At Skalitz, on the 28th, the Prussians, under Steinmetz, were attacked by the Austrians under Archduke Leopold, but the latter were defeated, and the town taken by storm. It is said that on this occasion the archduke

had disobeyed positive orders, which were on no account to make an attack. On the 29th, two divisions of the first army, under Generals Tümpling and Werder, defeated the Austrians under Count Clam Gallas, at Gitschin, and took the town. The count, who occupied a strong position here, had orders not to attack the enemy, but these he had disobeyed, and the consequence was that Benedek, who had taken up a strong position at Dubenetz to oppose the army of the crown prince, found himself at once in a most dangerous situation, and was obliged to retreat towards Königgrätz. On the same day bodies of Austrians were defeated at Königshof and Schweinschädel. In these various engagements the Austrians lost in all from 30,000 to 40,000 men. Both sides now concentrated their forces in the direction of Königgrätz, and prepared for a general engagement. On June 30 the king of Prussia joined the army, and the battle of Königgrätz, or Sadowa, was fought on the 3d of July. The Austrians numbered about 220,000, and the Prussians probably about 240,000. The battle was long and well contested, both sides fighting with the greatest determination and bravery; but at length the Austrians were broken, and obliged to retire. The Prussians lost 359 officers and 8794 men, while the Austrians and Saxons lost in all about 44,200 men, of whom 19,800 were prisoners. This terminated what has been sometimes called the *Seven Days' War*. The Austrians retreated to Zwittau and afterwards to Olmütz. A portion of the Prussians went in pursuit, but the king, with an army of upwards of 100,000 men, marched on towards Vienna, and reached Nikolsburg, July 18. After the battle of Königgrätz, the emperor, seeing the disastrous state of his affairs, resolved to cede Venetia to the Emperor Napoleon, so as to be able to bring his army in Italy against the Prussians, and he also expressed his willingness to accept the mediation of the latter to bring about a peace. The Archduke Albert, who had the command of the army in Italy, with which he had inflicted a severe defeat on the Italians at Custozza, was recalled to take the chief command in place of Benedek. An armistice, however, was agreed upon through the mediation of France (22d July). The preliminaries of peace were signed at Nikolsburg (26th July), and negotiations were afterwards carried on at Prague, where a treaty was signed (23d August). By this treaty Austria gave up to the kingdom of Italy Venetia and the fortresses of the quadrilateral, namely, Peschiera, Mantua, Verona, and Legnano; recognised the dissolution of the late German Confederation, and consented to a new formation of Germany, in which she should have no part; gave up all claim to the duchies of Holstein and Schleswig; and agreed to pay a war indemnity of 40,000,000 thalers, less 20,000,000 allowed her on account of the duchies.

Having thus obtained peace, the emperor now turned his attention to home affairs. Hungary was still in a very troubled and dissatisfied state. We have seen that she declined to send representatives to the Reichsrath, insisting on her right to self-government, and refusing to have anything else. The plan of opposition she adopted was that of passive resistance, by the non-payment of taxes. At length, at the opening of the Hungarian diet at Pesth by the emperor in person, on December 14, 1865, he recognised the necessity of self-government for Hungary so far as it did not affect the unity of the empire and the position of Austria as a great European power. He also recognised the Pragmatic Sanction as the basis on which a settlement of their difficulties was to be sought. At the opening of the diet on 19th November 1866, an imperial rescript, signed by the emperor, was read, in which he promised, by the appointment of a responsible ministry and the restoration of municipal self-government, to do justice to the constitutional demands of the Hungarians. In the end of

1866, Baron Beust, who had previously been prime minister of Saxony, and was not only a foreigner but a Protestant, was made foreign minister. He subsequently became prime minister and chancellor of the empire. In the spring of 1867 the emperor summoned the Reichsrath to assemble at Vienna to deliberate upon various important measures,—the proposed amendments in the Hungarian constitution, the question of ministerial responsibility, the sending of delegates to assemblies, the extension of the constitutional self-government of the different provinces, the reorganisation of the army, the improvement of the administration of justice, and the promotion of the economical interests of the country. It was opened by the emperor in person on May 22, and in his speech on the occasion he earnestly recommended to their attention these subjects. "To-day," he said, "we are about to establish a work of peace and of concord. Let us throw a veil of forgetfulness over the immediate past, which has inflicted deep wounds upon the empire. Let us lay to heart the lessons which it leaves behind, but let us derive with unshaken courage new strength, and the resolve to secure to the empire peace and power." On 8th June the emperor and empress were crowned king and queen of Hungary at Pesth amid great public rejoicings, on which occasion full pardon was given for all past political offences, and full liberty to all offenders residing in foreign countries to return. Many important and liberal measures were discussed and carried in the Reichsrath; in particular, marriage was made a civil contract, and the perfect equality of believers of different creeds was recognised. On 25th May 1868, the civil marriage bill received imperial assent, and on 30th July 1870 the concordat with Rome was declared to be suspended in consequence of the promulgation of the doctrine of Papal infallibility. This last measure introduced a very beneficial change in the relations between Austria and the kingdom of Italy, and has brought about more sympathy and cordiality between these two states than formerly existed.

For some years the Government had much difficulty in settling the law of elections so as to secure the due repre-

sentation of the different races and classes of the people in the Reichsrath. On 6th March 1873 a reform bill was passed by the lower house, taking the election of members of the Reichsrath out of the hands of the provincial diets and transferring it to the body of the electors in the several provinces, thus substituting direct for indirect election. In April it passed the upper house and received the imperial assent. This measure was hailed with great satisfaction, and has established the government upon a much broader and more secure basis. The session of the new Reichsrath was opened by the emperor in person on November 5. In the same year a great exhibition of the industries of all nations was held at Vienna. It was opened on May 1 by the emperor, and attracted to the capital, among others, the prince of Wales, the czar of Russia, the emperor and empress of Germany, the king of Italy, and the shah of Persia. On 2d December the twenty-fifth anniversary of the emperor's accession to the throne was celebrated amid great rejoicings in Vienna, having been celebrated three days before in Pesth. The emperor and empress were present on both occasions, and everywhere met with an enthusiastic reception. In the spring of 1874 a bill for the abolition of the concordat was introduced by the Government, and measures for restricting the powers of the clergy passed both houses. In his speech at the opening of the Reichsrath on 5th November of that year, the emperor said that by the system of direct popular elections the empire had obtained real independence, and exhorted the members to work with united energy at the solution of the greatest of their tasks, the uniting of the people of Austria, so that she might become a powerful state, strong in ideas of justice and liberty.

See Dr F. Kohlrausch, *Die Deutsche Geschichte*, 1866; Ungewitter, *Die Oesterreichische Monarchie*, 1856; *Geschichte der Oesterreichischen Kaiserstaates*, 1859; Stein, *Handbuch der Geographie*, 1870; Grant Duff, *Studies in European Politics*, 1866, and *Elgin Speeches*, 1871; Sir A. Malet, *The Overthrow of the Germanic Confederation*, 1870; *The Campaign of 1866 in Germany*, translated by Colonel Von Wright, 1872; Steinhauser, *Geographie von Oesterreich-Ungarn*, 1872; *The Armed Strength of Austria*, by Captain W. S. Cooke, 1874. (D. K.)

AUTOCHTHONES, in *Greek Mythology*, the first human beings who appeared in the world, and who, as their name implies, were believed to have sprung from the earth itself. Instead of one pair as the first parents of the whole race, each district of Greece had its own autochthones, who, according to the prominent physical features of the neighbourhood, were supposed to have been produced from trees, rocks, or marshy places, the most peculiar, and apparently the most widely-spread belief being that which traced the origin of mankind to the otherwise unproductive rocks. Whether the first appearance of mankind was regarded as having been simultaneous in the various districts or not, at what time or times such appearance was made with reference, for example, to the origin of the gods who also had sprung from the earth (Pindar, *Nem.* vi. 1; Hesiod, *Works and Days*, 108), and whether the first men possessed the full human form, are questions which there is no material to answer satisfactorily. On the last point it is to be observed that Erysichthon at Athens was said to have had legs in the form of serpents, and that this is taken to denote his origination from a marshy place. Similarly the earth-born giants, who made war against the gods, had legs in the form of serpents. In Thebes, the race of Sparti were believed to have sprung from a field sown with dragons' teeth. The Phrygian Corybantes had been forced out of the hill-side like trees by Rhea, the great mother, and hence were called *δενδροφυεῖς*. But whatever the primitive form of men was believed to have been, it is clear

from Æschylus (*Prometheus*, 447, *fol.*) that they were supposed to have at first lived like animals in caves and woods, till by the help of the gods and heroes they were raised to a stage of civilisation. The practice of describing legendary heroes and men of ancient lineage as "earth-born," *γηγενεῖς*, strengthened greatly the doctrine of autochthony, and nowhere so much as in Attica.

AUTO-DA-FE (*Act of Faith*), a public solemnity of the Inquisition in Spain and Portugal, at which the sentences of the court were read; those who were declared innocent were formally absolved, and the condemned were handed over to the secular power for punishment. The day chosen was usually some Sunday between Trinity and Advent. The first auto-da-fe was held by Torquemada at Seville in 1481; the last was probably that mentioned by Llorente, the historian of the Inquisition, as having been solemnised in Mexico in 1815. See INQUISITION.

AUTOGRAPH (*ἄντρος* and *γράφειν*), that which is written with a person's own hand, an original manuscript as opposed to an *apograph* or copy, is used to designate either a whole document (e.g., a letter) or a signature only. The latter is perhaps the more common use of the term. The interest attaching to the possession of autographs of distinguished men, which has created a new branch of industry, is partly historical, partly psychological. The signatures or original manuscripts are interesting and valuable elements in the representation of the life of any individual; and it has been thought that from the

autograph some conclusions might be drawn as to the mental characteristics of the writer. It is doubtless true that temperament will in some degree affect handwriting, but the conditions to be taken into account are so numerous and variable that the attempt to infer the one from the other seems practically hopeless. Poe, in his ingenious "Chapter on Autography" (*Works*, Ed. Ingram, vol. iv.), speaks very strongly on this subject. He thinks that none but the unreflecting can deny "that a strong analogy does generally and naturally exist between every man's chirography and character," and to support his statement compares the signatures and mental characteristics of a large number of contemporary American writers. In many cases, however, he is obliged to confess that no inference whatever can be drawn, in some others the analogy is extremely forced, and in others, again, the knowledge of the writer's character has evidently furnished the key for the interpretation of the handwriting. The value placed by an amateur on any autograph will, of course, vary with the celebrity of its author and the scarcity of genuine specimens. The taste for collecting autographs is not confined to modern times; many large collections, e.g., those of Loménie de Brienne, of Lacroix du Maine, and others, were formed in the 16th century, and during the same period we know that albums used to be carried about for the purpose of obtaining the signatures of famous personages. One of these albums preserved in the British Museum is of date 1578. There are at present many valuable public and private collections, while state papers and archives, of course, contain a rich harvest of royal and noble signatures. Fac-similes of original manuscripts appear first to have been printed in Forbes's *Full View of the Public Transactions in the Reign of Queen Elizabeth*, 1740-41; and soon after, several were given in Fenn's *Original Letters from the Archives of the Paston Family*, 1787.

The following are, perhaps, the most useful works on the subject:—J. G. Nichol's *Autographs of Royal, Noble, Learned, and Remarkable Personages conspicuous in English History, from the Reign of Richard II. to that of Charles II.*, Lond. 1829; *Autographic Mirror*, 1864, sqq.; Netherclift, *Handbook of Autographs*; Phillips and Netherclift, *Autographic Album*; Simms, *Autographic Souvenir*; Netherclift and Simms, *Autographic Miscellany*; *Isographie des Hommes Célèbres*, 4 vols. 1829-43; *Iconographie des Contemporains*, 2 vols. 1823-32; Feuillet de Conches, *Causeries d'un Curieux*, 2 vols. 1862-64; Lesouire, *Les Autographes*, 1865; Günther und Schulz, *Handbuch für Autographensammler*, 1856; *Sammlung historisch berühmter Autographen*, 1846; *Autographen Album zur 200 jähr. Gedächtnissfeier des Westphälischen Friedens-schlusses*, 1848.

**AUTOLYCUS** of PITANE, in Æolis, was one of the earliest Greek writers on mathematics and astronomy. As he is said to have given instruction to Arcesilaus, he probably flourished about the middle of the 4th century B.C. His extant works consist of two treatises; the one, *περὶ κινουμένων σφαιρῶν*, contains some simple propositions on the motion of the sphere, the other, *περὶ ἐπιτολῶν καὶ δόσεων*, in two books, discusses the rising and setting of the fixed stars. Neither treatise is of much scientific value. There are several Latin versions of Autolycus and a French translation by Forcadel, 1572.

**AUTOMATON** (from *αὐτός*, *sen*, and *μαω*, to seize), a self-moving machine, or one in which the principle of motion is contained within the mechanism itself. According to this description, clocks, watches, and all machines of a similar kind, are automata, but the word is generally applied to contrivances which simulate for a time the motions of animal life. If the human figure and actions be represented, the automaton has sometimes been called specially an *andrioides*. We have very early notices of the construction of automata, e.g., the tripods of Vulcan, and the moving figures of Dædalus. 400 years B.C., Archytas of Tarentum is said to have made a wooden pigeon that could fly; and during the Middle Ages numerous instances of

the construction of automata are recorded. Regiomontanus is said to have made an iron fly, which would flutter round the room and return to his hand, and also an eagle, which flew before the Emperor Maximilian when he was entering Nuremberg. Roger Bacon is said to have forged a brazen head which spoke, and Albertus Magnus to have had an andrioides, which acted as doorkeeper, and was broken to pieces by Aquinas. Of these, as of some later instances, e.g., the figure constructed by Descartes and the automata exhibited by Dr Camus, not much is accurately known. But in the 18th century, Vaucanson, the celebrated mechanic, exhibited three admirable figures,—the flute-player, the tambourine-player, and the duck, which was capable of eating, drinking, and imitating exactly the natural voice of that fowl. The means by which these results had been produced were clearly seen, and a great impulse was given to the construction of similar figures. Knauss exhibited at Vienna an automaton which wrote; a father and son named Droz constructed several ingenious mechanical figures which wrote and played music; Kaufmann and Maelzel made automatic trumpeters who could play several marches. The Swiss have always been celebrated for their mechanical ingenuity, and they construct most of the curious toys, such as flying and singing birds, which are frequently met with in industrial exhibitions. The greatest difficulty has generally been experienced in devising any mechanism which shall successfully simulate the human voice. No attempt has been thoroughly successful, though many have been made. The figure exhibited by Fabermann of Vienna is, perhaps, as yet the best. No notice of automata can be complete without at least a reference to Kempelen's famous chess player, which for many years astonished and puzzled Europe. This figure, however, was no true automaton, although the mechanical contrivances for concealing the real performer and giving effect to his desired movements were exceedingly ingenious.

**AUTUN**, the capital of an arrondissement of the same name in the department of Saône and Loire, in France, is picturesquely situated on the declivity of a hill, at the foot of which flows the Arroux. It is one of the most ancient towns of France; and when Cæsar invaded Gaul it was the most important of the Ædui. Its name was then Bibracte, but being afterwards much improved and embellished by Augustus it took that of Augustodunum. In the later days of the Roman empire it was a flourishing city, and consequently attracted the barbarian bands. It was successively plundered and burned by the Vandals in 406, the Burgundians in 414, the Huns in 451, the Franks in 534, the Saracens in 739, and the Normans in 895. It was burned by the English in 1379, and besieged in 1591 by D'Aumont. Yet in spite of all these disastrous events, its former greatness is attested by many Roman and other remains, among which are large masses of its ancient walls, two gates in admirable preservation, called the *Porte d'Arroux* and the *Porte Saint-André*, the walls of the so-called temple of Janus, and a pyramid in the neighbouring village of Couard, in which some recognise a monument to Divitiacus. The cathedral is a structure of the 11th and 12th centuries, and is surmounted by a remarkable spire of the 15th. Autun is the seat of a bishopric, and has a college, a diocesan seminary, a museum, which is very rich in medals and other minor antiquities, a library, a theatre, &c., with tribunals of primary jurisdiction and commerce. It has manufactures of cotton goods, hosiery, carpets, leather, and paper, with a considerable trade in timber, hemp, and cattle. Population in 1872, 11,684.

**AUVERGNE**, a district, and formerly a province, of France, corresponding to the departments of Cantal and Fuy-de-Dôme, with the arrondissement of Brioude in Haute-Loire. It is divided into Lower and Upper by the River

Rue; the distinction between the two portions being well marked by their physical features. Upper Auvergne is rugged and mountainous, and is covered with evidences of volcanic activity, while Lower Auvergne consists largely of fertile and well-watered expanses. In climate, too, there is a marked difference; the former suffering from violent extremes, and the latter enjoying a mild and equable temperature. The whole district is largely agricultural, and special attention is paid to the rearing of cattle, horses, and mules. The mountains are rich in minerals, such as iron, lead, copper, and coal; and numerous medicinal springs are scattered along their slopes. The inhabitants, who to a certain extent are the descendants of the ancient *Avverni*, are a strong, ungainly race, habituated to toilsome labour. For a long time they have been accustomed to leave their homes for the purpose of seeking their fortunes abroad, returning after they have acquired a competency. Spain was at one period a favourite resort, but the current of emigration is now principally towards Paris or the Belgian towns. In Paris alone it has been calculated that the *Auvergnats* number 50,000. They speak a distinct dialect, and are also recognised by their pronunciation. A closer resemblance to Latin, and the presence of many sounds, such as ts, tz, dj, which are foreign to ordinary French, are among the most striking features of the *patois*; the vocabulary also contains words introduced by the English at the time of their occupation of the country in the 14th century. Of the existing literature a considerable proportion is spurious. Auvergne was early raised to the rank of a countship, and passed into the hands of various families, the most important of which is known as La Tour d'Auvergne. It was finally united to the crown by Louis XIII.

Of the numerous books which have been written on this interesting province, the following may be mentioned:—Aigueperse, *Petit Dict. des personnages d'Auvergne*, 1850; Michel, *L'ancienne Auvergne*, 3 vols. fol.; Imberdis, *L'Auvergne historique*, and *Hist. des guerres relig. en Auvergne pendant les XVI<sup>e</sup> et XVII<sup>e</sup> siècles*; Allard, *Les eaux thermo-minérales d'Auvergne*.

**AUXENTIUS** of CAPPADOCIA was an Arian theologian of some eminence. When Constantine deposed the orthodox bishops who resisted, Auxentius was installed into the seat of Dionysius, bishop of Milan, and came to be regarded as the great opponent of the Nicene doctrine in the West. So prominent did he become, that he was specially mentioned by name in the condemnatory decree of the synod which Damasus, bishop of Rome, convened in defence of the Nicene doctrine. When the orthodox emperor Valentinian ascended the throne, Auxentius was left undisturbed in his diocese, but his theological doctrines were publicly attacked by Hilarius of Poitiers. The chief source of information about him is the *Liber contra Auxentium* in the Benedictine edition of the works of Hilarius.

**AUXERRE** (the ancient *Autissiodurum*), a town of France, in the department of Yonne, situated on the banks of the Yonne, in a wine-producing district, and built in an antique fashion. Its cathedral is one of the finest Gothic buildings in the country, and its episcopal palace, now used as a prefecture, will bear comparison with any. It has several normal schools, a college founded by the famous Jacques Amyot (who was a native of the town, and died there in 1593), a society of agriculture, botanic garden, museum, theatre, an extensive and valuable library, &c. The Yonne is navigable from a little above the town. Besides trade in wine and in firewood, there are manufactures of cloths, druggets, serges, cotton and woollen stockings, and some considerable tanneries. Population, 15,497.

**AUXONNE** (formerly *Assonium*, i.e., *ad Sonam*, from its position on the Saône), a city of France, in the arrondissement of Dijon and department of Côte d'Or. It is

strongly fortified, and possesses an old castle, an arsenal, and a school of artillery. Besides their manufactures of cloth and serges, the inhabitants carry on by the river considerable traffic with Lyons in wine, grain, and wood. Long. 5° 24' E., lat. 47° 13' N. Population, 5911.

**AVA**, the former capital of the Burman empire, lies in 21° 52' N. lat., and 96° 1' E. long. It is situated on the Irawadi, which is here 3282 feet broad, and which, making a bend out of its ordinary course, flows past the city on the north. On the east it has the river Myt-nge, a rapid stream 450 feet broad, which flows into the Irawadi close under its walls. From this river a canal has been dug, through which its waters flow on the south-east angle of the city, and are again brought into the same river. On the south flows the deep and rapid torrent of the Myt-tha, an offshoot of the Myt-nge, which, falling into the Irawadi, forms the defence both of the south and of the west face of the town. It is divided into the upper and lower, or the lesser and the larger town, both of which are fortified.

The brick wall that surrounds the city is 15½ feet in height and 10 feet in thickness, on the inside of which is thrown up a bank of earth, forming an angle of 45 degrees. There is a ditch round the outer wall which is inconsiderable, and in the dry season fordable in every part. The lesser town is chiefly occupied by the royal palace, the hall of justice, the council chamber, the arsenal, and the habitations of a few courtiers of distinction. A strong well-built wall of more solid construction than the outer wall of the city, and about 20 feet high, encloses the square in which these buildings are situated, and on the outside is a teak-wood stockade of the same height. The ditch which surrounds the lesser town is, moreover, deeper and broader than that of the city, and when full is not to be forded. There are, however, three causeways across, which communicate with the adjacent country. The circumference of the city, excluding the suburbs, is about 5½ miles, but over this extensive area the houses are but thinly scattered; some quarters are, indeed, wholly destitute of habitations, and have the appearance merely of neglected commons. In general the dwellings of the inhabitants are of the most miserable sort, being mere huts thatched with grass. Wretched as are such habitations to European eyes, the poorer classes are perhaps as well lodged here as in any other parts of Asia. Their sleeping-places are elevated 2 or 3 feet from the ground. Some of the houses of the chiefs are constructed of planks, and tiled; but there are not, according to Mr Crawford, more than half-a-dozen edifices built of brick and mortar. Ava, like all the other Burmese towns, is adorned with numerous temples, of which the gilded spires, rising aloft, present on a distant view of the place a splendid and imposing appearance, which is far from being realised on a nearer inspection. The largest of these temples contains two distinct edifices, one in the ancient, the other in a modern form; the former containing an image of Gautama, not of marble, as Symes supposes, but of sandstone. It is in a sitting posture, and is 24 feet in height. The head is 3 feet in diameter. There is another very large temple, and a third named the "Beautiful." The one called Maong-Ratma is of great celebrity; it is the one in which the public officers of the government take, with the most solemn forms, the oath of allegiance. The temple called Maha-mrat-muni had an addition made to it some years ago, of which Mr Crawford mentions that the numerous and richly-gilded pillars and splendid ceiling exceeded anything that was to be seen without the palace. Ava contains eleven markets or bazars, composed of thatched huts and sheds, which, however, are well supplied with all that is necessary for the wants of the people. Besides native commodities, there are exposed in these markets the produce of China and Lao, with British cottons, woollens, glass, and earthenware. The Burman monasteries are mostly built of wood; and of those composed of more solid materials, a few ancient ones are nearly all that are to be seen. The only exception is a monastery, built some years ago by the queen, adjoining the palace—an unshapely fabric of immense size, but a very conspicuous object.

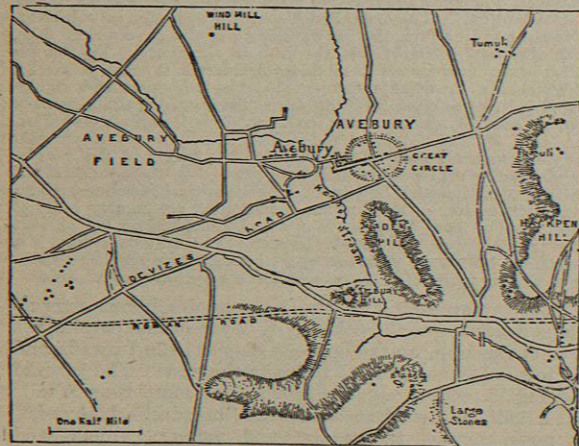
This former capital of the Burman dominions comprehends, according to the political divisions of that empire, the town of Sagaing, on the opposite shore of the Irawadi, and the town of Amarapura, 4 miles to the east. The town of Sagaing extends along the Irawadi for more than a mile and a half, but is of inconsiderable breadth. It consists of mean houses thinly scattered among gardens and orchards, the principal trees in the latter consisting of fine old tamarinds. Over the site of the town, and its environs are scattered innumerable temples, some of them

old and ruinous, others modern. On the river face it has a brick wall about 10 feet in height, with parapet and embrasures like that of Ava, and extending for above half a mile along the river. Amarapura is a large place, and was formerly the capital; but Ava, which was twice before the capital, was again made so in 1822. It continued to be so till 1853, when the present king, on his accession, transferred the capital to Mandalay. To each of the towns of Ava, Sagaing, and Amarapura, are attached districts, the two former of which extend 12 miles along the river, and are of equal breadth. The district of Amarapura is of equal size, so that Ava must be considered as not only the name of the former capital, but of a large district, which includes an area of 288 miles, containing, according to the most accurate estimate, 354,200 inhabitants; but the city of Ava is not supposed to contain more than 50,000 inhabitants, and, according to Mr Crawford, half that number would be nearer the truth. The place, taken altogether, affords few indications of industry or commercial enterprise.

AVALLON, a town of France, in the department of Yonne, finely situated on a granite rock, at the foot of which flows the river Voisin or Cousin. The church of St Lazare, which dates from the 12th century, is a good specimen of Burgundian Gothic. Manufactures of cloth, hats, hosiery, leather, and paper are carried on, and there is a considerable traffic in firewood, which is conveyed by the Voisin, the Yonne, and the Seine to Paris. The town was long an object of dispute between Burgundy and France, but was finally united to the crown on the death of Charles the Bold. It was pillaged by the Leaguers in 1594. Population, 6070. Long.  $3^{\circ} 56' E$ , lat.  $47^{\circ} 30' N$ .

AVATCHA, one of the numerous volcanoes of Kamshatka, in lat.  $53^{\circ} 17' N$ , and long.  $158^{\circ} 50' E$ . It rises to a height of nearly 9000 feet (Mr Kennan says 11,000), and has an extensive crater at the summit and another on its side. It was in active eruption in 1827, 1837, and 1855. About twenty miles to the south lies the village of Avatcha on a river of the same name; and in the immediate neighbourhood of the mountain is situated the little town of Petropavlovski, which contains memorials of Behring and La Perouse, and was the scene of a desperate conflict during the Crimean War between the Russians and an invading party of the allies.

AVEBURY, a village of England, in the county of Wilts, 6 miles W. of Marlborough. It occupies the site of



Plan of Avebury.

one of the most remarkable megalithic structures in England. This consisted of a large outer circle formed of

100 stones of from 15 to 17 feet in height, and about 40 feet in circumference, enclosing an area of about 1000 feet in diameter. This circle was surrounded by a broad ditch and lofty rampart. Within its area were two smaller circles, 350 and 325 feet in diameter respectively, each consisting of a double concentric row of stones,—a stone pillar or maenhir, 20 feet high, occupying the centre of the one, and a cromlech or dolmen that of the other. A long avenue of approach, now known as the Kennet Avenue, consisting of a double row of stones, branched off from this structure towards the S.E. for a distance of 1430 yards. Few traces of this immense erection now remain—the stones having been broken down and used in the construction of the houses of the village, and for other purposes. In the vicinity are two other monuments of great importance, which may be regarded as belonging to the same group, namely, the double oval of megaliths on Hakpen Hill—Haca's pen—and the artificial mound known as Silbury Hill. The Hakpen oval was, according to Stukeley, 138 feet by 155, and had an avenue 45 feet wide stretching in the direction of Silbury Hill. This hill is due south from Avebury, and the distance from the centre of the circle to the centre of the mound is very nearly one Roman mile. Much discussion has taken place about the age and object of these constructions, the most popular theory hitherto being that which ascribed them to the Druids, and thus got rid of historic difficulties by escaping into the region of the prehistoric. Recently, Mr Fergusson has strenuously maintained that the larger circle, or Avebury proper, and Silbury Hill, commemorate the last of the twelve Arthurian battles, which was fought (520 A.D.) at Badon Hill, a name which he identifies with Waden Hill.

AVEIRO, a town of Portugal, province of Beira, the seat of a bishopric and college. It has sardine, oyster, and herring fisheries, as well as a thriving trade in oil, salt, wine, and oranges. The haven is wide and deep. Population, 6456. Long.  $8^{\circ} 34' W$ , lat.  $40^{\circ} 40' N$ .

AVELLA, a town of Italy, in the province of Principato Ulteriore, in a fine situation, and commanding most extensive prospects. It is distant about 20 miles from Naples, and contains 3714 inhabitants. Near it are the remains of the ancient Abella.

AVELLINO, a fortified city of Italy, in the province of Principato Ulteriore, at the foot of Mount Vergine, and 28 miles E. of Naples. It is the see of a bishop, and has a cathedral, several parish churches, a royal college, &c., with manufactories of cloth, paper, macaroni, and sausages, and extensive dye-works. It has a considerable trade in corn, chestnuts, and hazel-nuts. The city has at various times suffered severely from earthquakes. Population, 20,492.

AVEMPACE. ABU BEKR MOHAMMED IBN JAHYA, surnamed Ibn Badja or Ibn Sayeg (i.e., son of the goldsmith), whose name has been corrupted by the Latins into Avempace, Avenpace, or Aben Pace, was the earliest and one of the most distinguished of the Arab philosophers in Spain. Almost nothing is known of the events in his life; he was born, probably at Saragossa, towards the close of the 11th century, and died at Fez in 1138 at a not very advanced age. Like most of the Arab philosophers, he was a physician by profession, and he is also said to have been a man of wide general culture. He was a skilled musician, mathematician, astronomer, and poet, and though he is now known only through his metaphysical speculations, these do not seem to have been his favourite studies. His writings, if we accept the report of Oeibia, were varied and numerous. Several treatises on logical subjects are mentioned by Casiri as still among the MSS. at the Escorial, and some smaller pieces are also found in other

libraries. The most important of his works is that noticed by Averroes, who promised a complete discussion of it, but unfortunately neither the treatise nor the exposition has come down to us. Our knowledge of it is almost entirely drawn from the notices given by Moses of Narbonne, a Jewish writer of the 14th century, in his commentary on the somewhat similar work of Ibn Tofail. The title of the work may be translated as the *Régime* or *Conduct of the Solitary*, understanding by that the organised system of rules, by obedience to which the individual may rise from the mere life of the senses to the perception of pure intelligible principles, and may participate in the divine thought which sustains the world. These rules for the individual are but the image or reflex of the political organisation of the perfect or ideal state; and the man who strives to lead this life is called the *solitary*, not because he withdraws from society, but because, while in it, he remains a stranger to its ways, and guides himself by reference to a higher state, an ideal society. Avempace does not develop at any length this curious Platonic idea of the perfect state. His object is to discover the highest end of human life, and with this view he classifies the various activities of the human soul, rejects such as are material or animal, and then analyses the various spiritual forms to which the activities may be directed. He points out the graduated scale of such forms, through which the soul may rise, and shows that none are final or complete in themselves, except the pure intelligible forms, the ideas of ideas. These the intellect can grasp, and in so doing it becomes what he calls *intellectus acquisitus*, and is in a measure divine. This self-consciousness of pure reason is the highest object of human activity, and is to be attained by the speculative method. The intellect has in itself power to know ultimate truth and intelligence, and does not require a mystical illumination as Algazali taught. Avempace's principles, it is clear, lead directly to the Averroistic doctrine of the unity of intellect, but the obscurity and incompleteness of the *Régime* do not permit us to judge how far he anticipated the later thinker. (See Munk, *Mélanges de Phil. Juive et Arabe*, pp. 383-410.)

AVENBRÜGGER, or AVENBRUGGER, LEOPOLD, a physician of Vienna, the discoverer of the important mode of investigating diseases of the chest and abdomen by *auscultation*. His method was to apply the ear to the chest, and to note the sounds it afforded on percussion by the hand, or what is called *immediate auscultation*. His Latin treatise, *Inventum novum ex Percussione Thoracis Humani Interni Pectoris Morbos detegendi*, published in 1761, excited little attention, until it was translated and illustrated by Corvisart, in 1808, when it soon led the way to Laennec's great improvement of aiding the ear by the stethoscope, or *mediate auscultation*. The great value of the method introduced by Avenbrugger, in the diagnosis of internal diseases, is now universally acknowledged. He was born at Grätz in 1722, and died in 1809.

AVENTINUS [JOHANN THURMAYR], author of the *Annals of Bavaria*, was born in the year 1466 at Abensberg. He studied first at Ingoldstadt, and afterwards in the university of Paris. In 1503 he privately taught rhetoric and poetry at Vienna, and in 1507 he publicly taught Greek at Cracow, in Poland. In 1509 he read lectures on some of Cicero's works at Ingoldstadt, and in 1512 was appointed preceptor to Prince Ludwig and Prince Ernst, sons of Albert the Wise, duke of Bavaria, and travelled with the latter of these princes. After spending several years in the collection of materials he undertook to write the *Annales Boiorum*, or *Annals of Bavaria*, being encouraged by the dukes of that territory, who settled a pension upon him, and gave him hopes that they would defray the expenses of publication. He finished, but did

not publish, his work in 1528, and in the following year he was imprisoned on suspicion of heresy. He was soon released from confinement, but the indignity he had suffered seriously affected him. He died in 1534 at Ratisbon. His history, which has gained for him considerable reputation as a writer, was published, but with some important omissions, in 1554, by Ziegler, professor of poetry in the university of Ingoldstadt. These passages, which were adverse to the Roman Catholics, were all restored in the edition published at Basle in 1580, by Nicholas Cisner. Besides his other writings, Gesner attributes to him a curious work, entitled *Numerandi per digitos manusque Veterum Consuetudines*.

AVENZOAR [ABU MERWAN ABDALMALEC IBN ZOHR], an eminent Arabian physician, who flourished about the end of the 11th or beginning of the 12th century, was born at Seville, where he exercised his profession with great reputation. His ancestors had been celebrated as physicians for several generations, and his son was afterwards held by the Arabians to be even more eminent in his profession than Avenzoar himself. He was contemporary with Averroes, who, according to Leo Africanus, heard his lectures and learned physic of him. This seems probable, because Averroes more than once gives Avenzoar very high and partly deserved praise, calling him admirable, glorious, the treasure of all knowledge, and the most supreme in physic from the time of Galen to his own. Avenzoar, notwithstanding, is by the generality of writers reckoned an empiric; but Dr Freind observes that this character suits him less than any other of the Arabian physicians. Avenzoar belonged, in many respects, to the *Dogmatists* or *Rational School*, rather than to the *Empirics*. He was a great admirer of Galen; and in his writings he protests emphatically against quackery and the superstitious remedies of the astrologers. He shows no inconsiderable knowledge of anatomy in his remarkable description of inflammation and abscess of the mediastinum in his own person, and its diagnosis from common pleuritis as well as from abscess and dropsy of the pericardium. In cases of obstruction or of palsy of the gullet, his three modes of treatment are ingenious. He proposes to support the strength by placing the patient in a tepid bath of nutritious liquids, that might enter by cutaneous imbibition, but does not recommend this. He speaks more favourably of the introduction of food into the stomach by a silver tube; and he strongly recommends the use of nutritive enemata. From his writings it would appear that the offices of physician, surgeon, and apothecary were already considered as distinct professions. He wrote a book entitled *The Method of Preparing Medicines and Diet*, which was translated into Hebrew in the year 1280, and thence into Latin by Paravicinus, whose version, first printed at Venice 1490, has passed through several editions.

AVERAGE, a term used in maritime commerce to signify damages or expenses resulting from the accidents of navigation. Average is either *general* or *particular*. General average arises when sacrifices have been made, or expenditures incurred, for the preservation of the ship, cargo, and freight, from some peril of the sea, or from its effects. It implies a subsequent contribution, from all the parties concerned, rateably to the values of their respective interests, to make good the loss thus occasioned. Particular average signifies the damage or partial loss happening to the ship, goods, or freight by some fortuitous or unavoidable accident. It is borne by the parties to whose property the misfortune happens, or by their insurers. The term average originally meant what is now distinguished as general average; and the expression "particular average," although not strictly accurate, came to be afterwards used for the convenience of distinguishing those damages or partial