

of a host of fragmentary pieces, some of them mentioned above, and in luminous declamations with his friends. All accounts agree that Diderot was seen at his best in conversation. "He who only knows Diderot in his writings," says Marmontel, "does not know him at all. When he grew animated in talk, and allowed his thoughts to flow in all their abundance, then he became truly ravishing. In his writings he had not the art of ensemble; the first operation which orders and places everything was too slow and too painful to him." Diderot himself was conscious of the want of literary merit in his pieces. In truth he set no high value on what he had done. It is doubtful whether he was ever alive to the waste that circumstance and temperament together made of an intelligence from which, if it had been free to work systematically, the world of thought had so much to hope. He was one of those simple, disinterested, and intellectually sterling workers to whom their own personality is as nothing in presence of the vast subjects that engage the thoughts of their lives. He wrote what he found to write, and left the piece, as Carlyle has said, "on the waste of accident, with an ostrich-like indifference." When he heard one day that a collected edition of his works was in the press at Amsterdam, he greeted the news with "peals of laughter," so well did he know, the haste and the little heed with which those works had been dashed off.

Diderot died in the month of July 1784, six years after Voltaire and Rousseau, one year after his old colleague D'Alembert, and five years before D'Holbach, his host and intimate for a lifetime. Notwithstanding Diderot's peals of laughter at the thought, there is now just completed—nearly a hundred years since his death—an elaborate and exhaustive collection of his writings in twenty stout volumes, edited by MM. Assézat and Tourneux. (J. M.)

DIDO, or ELISA, the reputed founder of Carthage, was the daughter of Mutgo, Belus, or Agenor, king of Tyre. She may have been an historical character, but the stories told of her by Justin and Virgil differ essentially. She was worshipped at Carthage, and as a deity may be identified with *Juno Coelestis*, the Roman form of the Phœnician Astarte.

DIDOT, the name of a family of learned French printers and publishers.

FRANÇOIS DIDOT (1689–1757), founder of the family, was born at Paris. He began business as a bookseller and printer in 1713, and among his undertakings was a collection of the travels of his friend the Abbé Prévost, in 20 volumes (1747). It was remarkable for its typographical perfection, and was adorned with many engravings and maps.

FRANÇOIS AMBROISE DIDOT (1730–1804), son of François, made important improvements in type-founding, and was the first to attempt printing on vellum paper. Among the works which he published was the famous collection of French classics prepared by order of Louis XVI for the education of the Dauphin, and the folio edition of *L'Art de vérifier les dates*.

PIERRE FRANÇOIS DIDOT (1732–1795), brother of the preceding, devoted much attention to the art of type-founding and to paper-making. Among the works which issued from his press was an edition in folio of the *Imitatio Christi* (1788).

HENRI DIDOT (1765–1852), son of Pierre François, is celebrated for his "microscopic" editions of various standard works, for which he engraved the type when nearly seventy years of age. He was also the engraver of the *assignats* issued by the Constituent and Legislative assemblies and the Convention.

DIDOT SAINT-LÉGER, second son of Pierre François, was the inventor of the paper-making machine known in England as the Didot machine.

PIERRE DIDOT (1760–1853), eldest son of François Ambroise, is celebrated as the publisher of the beautiful "Louvre" editions of Virgil, Horace, and Racine. The Racine, in 3 volumes folio, was pronounced in 1801 to be "the most perfect typographical production of all ages."

FIRMIN DIDOT (1764–1836), second son of François Ambroise, sustained the reputation of the family both as printer and type-founder. He invented or revived the process of stereotyping, coined its name, and first made use of the process in his edition of Callet's *Tables of Logarithms* (1795), in which he secured an accuracy till then unattainable. He published stereotyped editions of French, English, and Italian classics at a very low price. He was the author of two tragedies—*La Reine de Portugal* and *La Mort d'Annibal*; and he wrote metrical translations from Virgil, Tyrtæus, and Theocritus.

AMBROISE FIRMIN DIDOT (1790–1876), was the eldest son of the preceding. After receiving a classical education, he spent three years in Greece and in the East; and on the retirement of his father in 1827 he undertook, in conjunction with his brother Hyacinthe, the direction of the publishing business. Their greatest undertaking was a new edition of the *Thesaurus Græcæ Linguae* of Henry Stephens, under the editorial care of the brothers Dindorf and M. Hase (9 vols. 1855–59). Among the numerous important works published by the brothers, the 200 volumes forming the *Bibliothèque des auteurs grecs*, *Bibliothèque latine*, and *Bibliothèque française* deserve special mention. Ambroise Firmin Didot was the first to propose (1823) a subscription in favour of the Greeks, then in insurrection against Turkish tyranny. Besides a translation of Thucydides (1833), he wrote the articles "Estienne" in the *Nouvelle Biographie Générale*, and "Typographie" in the *Ency. Mod.*, as well as *Observations sur l'orthographe française* (1867), &c. In 1875 he published a very learned and elaborate monograph on Aldus Manutius. His collection of MSS., the richest in France, was said to be worth, at the time of his death not less than 2,000,000 francs.

DIDRON, ADOLPHE NAPOLEON (1806–1867), French archaeologist, was born at Hautvillers, in the department of Marne, March 13, 1806. At first a student of law, he began in 1830, by the advice of Victor Hugo, to apply himself to the study of the Christian archaeology of the Middle Ages. After visiting and examining the principal churches, first of Normandy, then of Central and Southern France, he was on his return appointed by M. Guizot secretary to the Historical Committee of Arts and Monuments (1835); and in the following years he delivered several courses of lectures on Christian iconography at the Bibliothèque Royale. In 1839 he visited Greece for the purpose of examining the art of the Eastern Church, both in its buildings and its manuscripts. In 1844 he originated the *Annales Archéologiques*, a periodical devoted to his favourite subject, which he edited until his death. In 1845 he established at Paris a special archaeological library, and at the same time a manufactory of painted glass. In the same year he was admitted to the Legion of Honour. His most important work is the *Iconographie Chrétienne*, of which, however, the first portion only, *Histoire de Dieu* (1843), was published. It was translated into English by E. J. Millington. Among his other works may be mentioned the *Manuel d'Iconographie Chrétienne grecque et latine* (1845), the *Iconographie des chapiteaux du palais ducal de Venise* (1857), and the *Manuel des objets de bronze et d'orfèvrerie* (1859). He died November 13, 1867.

DIDYMUS of Alexandria, an ecclesiastical writer, born in 309 or 314. Although he became blind at the age of four, before he had learned to read, he succeeded in mastering the whole circle of the sciences then known; and on enter-

ing the service of the church he was placed at the head of the Alexandrian theological school. He died in 394 or 399. Most of his theological works are lost. We possess, however, a Latin translation by Jerome, who was one of his pupils, of his Treatise on the Holy Ghost (*Liber de Spiritu Sancto*), and a similar translation by Epiphanius of his Brief Comments on the Canonical Epistles (*Breves Enarrationes in Epistolas Canonicas*). A Treatise against the Manichæans (*Liber adversus Manichæos*) is extant in the original Greek, and was first published at Bologna in 1769.

DIE (*Dea Vocontiorum*), the capital of an arrondissement in the department of Drôme, in France, is situated on the right bank of the Drôme, at the foot of Mont Glandaz, in a wide and fertile plain. The manufactures are woollen cloth, paper, leather, and silk; there is some trade in mules, cattle, and wood; and the neighbourhood produces excellent fruit, and the white wine called "Clairette de Die." The town was formerly the seat of a bishop, and, previous to the revocation of the Edict of Nantes in 1685, of a Calvinistic university. The most interesting structures of Die are the old cathedral, with granite columns from an ancient temple of Cybele, and a porch of the 11th century; the episcopal palace, the walls, flanked by towers, and the ruins of a castle—all of considerable age; the triumphal arch on the road towards Gap, known as the Porte St Marcel, portions of an aqueduct, and other Roman remains. In the vicinity are several mineral springs. The population in 1872 was 3876.

DIE SINKING. The preparation of dies for stamping coins and medals is a work requiring considerable skill and care. The steel selected should be of moderately fine grain and uniform texture, and, when polished, should show no spots or patches under a magnifying glass. Two short lengths having been cut from bars of this, and forged into rough dies, are next made as soft as possible by careful annealing,—being put in an iron pot of animal charcoal, heated to a cherry red, and allowed to cool gradually. After being faced up flatly and smoothly in a lathe, they pass into the hands of the engraver, who traces upon them their appropriate images, obverse and reverse, and works these out, with steel tools, in intaglio. (The inscription is generally stamped with punches and hammer.) The new matrices, or maternal dies, when, after repeated impressions on clay, &c., and alteration, they are found correct, are ready for hardening—a process simple enough as regards plain steel, but here very critical, seeing that a delicate engraving has to be kept intact. Each matrix is first protected with a mask, composed of fixed oil thickened with animal charcoal, or of lampblack and linseed oil. They are then placed face downwards in a crucible, and burned in animal charcoal. After being heated to a cherry red they are taken out with a pair of tongs, plunged in a large body of water, moved about rapidly till all noise ceases, and left in the water till quite cool. If the matrix pipes or sings, there is probably a crack in it. The hardened die is next polished and tempered,—the former by holding it against a running iron disc coated with flour-emery and oil; the latter by putting it in water, which is gradually raised to the boiling point, then allowing it to cool slowly, or by placing it on a heated bar of iron till it acquires a rich straw colour. To increase its strength an iron ring may be shrunk upon it like a mechanical jacket. The matrix, treated as here described, might now be used to multiply coins or medals, but it is preferred to use it for first producing punches, or steel impressions in relief. With this view a steel block is procured, softened by annealing, and turned in the lathe, being made flat at the bottom and obtusely conical at the top. The block is put in the bed of a die-stamping press, and the matrix brought

down on it with force by means of the central screw. Thus a copy is produced in relief on the conical surface. Further strokes may be required to perfect it, and the punch is therefore first re-annealed (its surface having been hardened by compression), then replaced in the press; the matrix, detached from the screw, is fitted on to it, and pressed in contact by the descent of a block of steel attached to the screw. Thus, after repeated blows and frequent annealing, the impression is completed, and after being retouched by the engraver is hardened and tempered like the matrix. The matrix is now laid aside, and the punch used to produce any number of steel dies by an operation substantially similar to that by which the punch itself was obtained. These are, of course, *fac-similes* of the matrix, and when completed are used for purposes of coinage. Besides coining and medalling, dies are required for a variety of purposes, such as the manufacture of buttons, steel seals, screws, and ornamental articles of metal, calico printing, &c.

DIEBITSCH-SABALKANSKI, HANS KARL FRIEDRICH ANTON (1785–1831), Count von Diebitsch and Narden, Russian field-marshal, was born in Silesia, May 13, 1785. He entered the Prussian army at the age of twelve; but four years later, by the desire of his father, a Prussian officer who had passed into the service of Russia, he also did the same. He served in the campaign of 1805, and was wounded at Austerlitz, fought at Eylau and Friedland, and after Friedland was promoted captain. During the next five years of peace he devoted himself to the study of military science, engaging once more in active service in the campaign of 1812. He distinguished himself by the recapture of Polozk; and by his defence of an important post he saved Wittgenstein's corps in retreat. He was now raised to the rank of major-general. In conjunction with General Yorck he took possession of Berlin. After the battle of Lützen he was sent into Silesia and took part in negotiating the secret treaty of Reichenbach. Having distinguished himself at the battles of Dresden and Leipsic, he was promoted lieutenant-general. In 1814 Diebitsch strongly urged the march of the allies on Paris; and after their entry, the emperor Alexander conferred on him the order of St Alexander Newski. In 1815 he married, attended the Congress of Vienna, and was afterwards made adjutant-general to the emperor. As chief of the imperial staff he accompanied the emperor to Taganrog and was present at his death. He obtained the confidence of the emperor Nicholas, and was created baron and afterwards count. In the Turkish war of 1828–1829 Diebitsch had the chief command; he took Varna, crossed the Balkan, and concluded peace at Adrianople. His passage of the Balkan is commemorated by his surname Sabalkanski; it procured him the rank of field-marshal. On the outbreak of the insurrection in Poland, in 1830, he was appointed to the chief command. His good genius, however, now failed him. After the battle of Ostrolenka he transferred his head-quarters to Kleckzewo, near Pultusk, where he died of cholera, June 10, 1831.

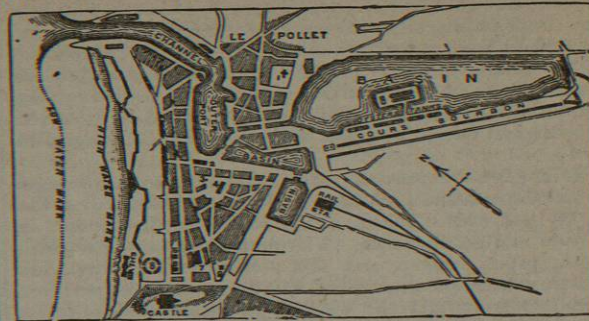
DIEPENBECK, ABRAHAM VAN (1599–1675), was born at Herzogenbusch, and studied painting at Antwerp, where he became one of Rubens's "hundred pupils." Rubens complains in his letters that, being overwhelmed with applications for apprentices' indentures, he refused to accept as disciples even the children of some of his best friends. Diepenbeck was one of those who was fortunate enough to obtain admission to Rubens's workshop. But he was not one of the cleverest of Rubens's followers, and he succeeded, at the best, in imitating the style and aping the peculiarities of his master. We see this in his earliest pictures—a portrait dated 1629 in the Munich Pinakothek, and a Distribution of Alms of the same period in the same

collection. Yet even at this time there were moments when Diepenbeck probably fancied that he might take another path. A solitary copperplate executed with his own hand in 1630 represents a peasant sitting under a tree holding the bridle of an ass, and this is a minute and finished specimen of the engraver's art which shows that the master might at one time have hoped to rival the animal draughtsmen who flourished in the schools of Holland. However, large commissions now poured in upon him; he was asked for altar-pieces, subject-pieces, and pagan allegories. He was tempted to try the profession of a glass-painter, and at last he gave up every other occupation for the lucrative business of a draughtsman and designer for engravings. Most of Diepenbeck's important canvases are in Continental galleries. The best are the Marriage of St Catherine at Berlin, and Mary with Angels Wailing over the Dead Body of Christ in the Belvedere at Vienna, the first a very fair specimen of the artist's skill, the second a picture of more energy and feeling than might be expected from one who knew more of the outer form than of the spirit of Rubens. Then we have a fine Entombment at Branswick, and St Francis Adoring the Sacrament at the museum of Brussels, Clelia and her Nymphs Flying from the Presence and Pursuit of Porsenna in two examples at Berlin and Paris, and Neptune and Amphitrite at Dresden. In all these compositions the drawing and execution are after the fashion of Rubens, though inferior to Rubens in harmony of tone and force of contrasted light and shade. Occasionally a tendency may be observed to imitate the style of Vandyck, for whom, in respect of pictures, Diepenbeck in his lifetime was frequently taken. But Diepenbeck spent much less of his leisure on canvases than on glass-painting. Though he failed to master the secrets of gorgeous tinting, which were lost, apparently for ever in the 16th century, he was constantly employed during the best years of his life in that branch of his profession. In 1635 he finished forty scenes from the life of St Francis of Paula in the church of the Minimes at Antwerp. In 1644 he received payment for four windows in St Jacques of Antwerp, two of which are still preserved, and represent the Virgins to whom Christ appears after the Resurrection. The windows ascribed to him at St Gudule of Brussels are now proved to have been executed from the cartoons of Theodore van Thulden. On the occasion of his matriculation at Antwerp in 1638-9, Diepenbeck was registered in the guild of St Luke as a glass-painter. He resigned his membership in the Artist Club of the Violette in 1542, apparently because he felt hurt by a valuation then made of drawings furnished for copper-plates to the engraver Pieter de Jode. The earliest record of his residence at Antwerp is that of his election to the brotherhood (Sodalität) "of the Bachelors" in 1634. It is probable that before this time he had visited Rome and London, as noted in the work of Houbraken. In 1636 he was made a burgher of Antwerp. He married twice, in 1637 and 1652. His death took place in December 1675, and his funeral was celebrated at St Jacques of Antwerp on the 31st day of that month.

Consult, besides earlier authorities, the Antwerp *Liggereen*.

DIEPPE, a seaport town of France, at the head of an arrondissement in the department of Seine-Inférieure, 38 miles north of Rouen and 125 north-west of Paris by rail, in 49° 55' 35" N. lat. and 1° 5' 9" E. long. It lies at the mouth of the River Arques, in a hollow of the coast,—the main part of the town being on the west side of the river, and the suburb of Pollet on the east. Its principal street stretches for about a mile along the shore, and terminates in the west at the foot of the chalk cliff, which is surmounted by a castle of the 15th century, now employed as barracks.

The whole town has a modern aspect; its streets are wide and regular, and its houses mostly built of brick. The principal building is the church of St Jacques, which was



Plan of Dieppe.

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| 1. Church of Pollet. | 6. Theatre. |
| 2. Bourse. | 7. Church of St Remi. |
| 3. Statue of Duquesne. | 8. Bazaar. |
| 4. Church of St Jacques. | 9. Protestant Church. |
| 5. Hôtel de Ville. | |

founded in the 13th century, but consists in good measure of considerably later workmanship, and has in some portions been restored in the present century; the main entrance (of the 14th century) and the Ango chapel are worthy of special remark. It is sufficient to mention the church of St Remi (1522-1640), the town-house, the hospital, the theatre, and the communal college which preserves some fragments of Ango's mansion. As the chief town of an arrondissement, and an important seaport, Dieppe is the seat of a large number of public offices. Its harbour, which has been greatly improved during the present century, is protected by two piers, admits vessels of 500 tons burden, and has a large floating dock. There is regular steamboat communication with England, the passage to Newhaven being accomplished in about six hours. The general trade of the town, both export and import, is extensive; and it carries on ship-building, rope-spinning, cooperage, watchmaking, and a remarkable manufacture of articles in ivory and bone, which dates from the 15th century. The tobacco factories alone employ upwards of 1000 work people. Oysters in large numbers are fattened in the *retenue des chasses*; and the fishermen of Pollet are among the main providers of the Parisian markets. Ever since the time of the duchess of Berry (whose favourite residence, the *maison Quenouille*, is still pointed out) the town has been a fashionable watering-place; and in 1857 a large bathing establishment was erected after the model of the Crystal Palace. The so-called Jardin Anglais, the Cours Bourbon, and the cliffs are the principal promenades; and the castle of Arques, the Manoir d'Ango, the abbey of St Victor, and the ancient camp, locally known as *la cité des Limes*, are the most interesting objects of interest in the neighbourhood. Population in 1851, 16,216; and in 1872, 19,757.

It may be safely asserted, on the authority of its name, that Dieppe owed its origin to a band of Norman adventurers, who found its "diep" or inlet suitable for their ships. Its first castle was probably built in 1188 by Henry II. of England, and it was counted a place of some importance when Philip Augustus attacked it in 1195. By Richard I. of England it was bestowed, in 1197, on the archbishop of Rouen in return for certain territory in the neighbourhood of the episcopal city. In 1339 it was plundered by the English, but it soon recovered from the blow, and in spite of the opposition of the Lords of Hanot, managed to surround itself with fortifications. Its commercial activity was already great, and it is believed its seamen visited the coast of Guinea in 1339, and founded there a Petit Dieppe in 1365. A siege undertaken in 1442 by Talbot in person was raised by the Dauphin, afterwards Louis XI., and the day of the deliverance continued for centuries to be celebrated by a great procession and miracle plays. In the beginning of the 16th century we find Parmentier, a native of the

town, taking vessels to Brazil and Sumatra; and a little later, its merchant prince, Ango, was able to blockade the Portuguese fleet in the Tagus. Its inhabitants in great numbers embraced the Reformed religion; and they were among the first to acknowledge Henry IV., who fought one of his great battles at the neighbouring village of Arques. Few of the cities of France suffered more from the revocation of the Edict of Nantes in 1685; and this blow was followed in 1694 by a terrible bombardment on the part of the English and Dutch. The town was rebuilt after the peace of Ryswick, but the decrease of its population and the deterioration of its port prevented the restoration of its commercial prosperity. Within the present century, however, especially since communication by rail was effected with Paris, it has made rapid advances. During the Franco-German war the town was occupied by the Germans from December 1870 till July 1871.

See Pierre Pillon, *Recueil général des édits, &c., donnés en faveur des habitants de Dieppe*, Dieppe, 1700; Vitet, *Histoire de Dieppe*, 1844; Cochet, *Les églises de l'arrondissement de Dieppe*, 1846-1850, and *Galerie Dieppoise*, 1862; Jules Hardy, *Les Dieppois en Guinée en 1864, 1864*; Asseline, *Les Antiquités et Chroniques de la ville de Dieppe*, a 17th century account, which comes down only to 1694, and was first published in 1874 by Hardy, Guerillon, and Sauvage.

DIES, CHRISTOPH ALBERT (1755-1822), was born at Hanover, and learned the rudiments of art in his native place. For one year he studied in the academy of Düsseldorf, and then he started at the age of twenty with thirty ducats in his pocket for Rome. There he established his domicile, and lived a frugal life till 1796. Copying pictures, chiefly by Salvator Rosa, for a livelihood, his taste led him to draw and paint from nature in Tivoli, Albano, and other picturesque places in the vicinity of Rome. Naples, the birthplace of his favourite master, he visited more than once for the same reasons. In this way he became a bold executant in water colours and in oil, though he failed to acquire any originality of his own. Lord Bristol, who encouraged him as a copyist, predicted that he would be a second Salvator Rosa. But Dies was not of the wood which makes original artists. Besides other disqualifications, he had necessities which forced him to give up the great career of an independent painter. David, then composing his *Horatii* at Rome, wished to take him to Paris. But Dies had reasons for not accepting the offer. He was courting a young Roman whom he subsequently married. Meanwhile he had made the acquaintance of Volpato, for whom he executed numerous drawings, and this no doubt suggested the plan, which he afterwards carried out, of publishing, in partnership with Méchan, Reinhardt, and Frauenholz, the series of plates known as the *Collection de vues pittoresques de l'Italie*, published in 72 sheets at Nuremberg in 1799. With so many irons in the fire Dies naturally lost the power of concentration. Other causes combined to affect his talent. In 1787 he swallowed by mistake three-quarters of an ounce of sugar of lead. His recovery from this poison was slow and incomplete. His return to Germany was hastened by it. He had hoped that the air of his native country would improve his health. He settled at Vienna, and lived there in the old way on the produce of his brush as a landscape painter, and on that of his pencil or graver as a draughtsman and etcher. But instead of getting better as he had hoped, his condition became worse, and he even lost the use of one of his hands. In this condition he turned from painting to music, and spent his leisure hours in the pleasures of authorship. He did not long survive, dying at Vienna in 1822, after long years of chronic suffering. From two pictures now in the Belvedere gallery, and from numerous engraved drawings from the neighbourhood of Tivoli, we gather that Dies was never destined to rise above a respectable mediocrity. He followed Salvator Rosa's example in imitating the manner of Claude Lorraine. But Salvator adapted the style of Claude, whilst Dies did no more than copy it.

DIEST, a town and fortress of Belgium, in the province of Brabant, and the arrondissement of Löwen, is situated

on the Demer, 28 miles E. by N. of Brussels. The manufactured are hats, leather, stockings, beer, and spirits. It was taken from the French by Marlborough in 1705, and recaptured the same year. The fortifications, which replace the old ramparts and walls, were commenced in 1837, and finished in 1853. The population in 1866 was 7561.

DIET (German, *Reichstag*). The origin of the German Diet is to be sought in the national assembly, which was a common institution of the Teutonic race. From the earliest recorded times we find all leading questions first discussed by the chiefs and then referred to the assembly of the clan or tribe, in which every freeman had a voice.

The earliest Diets of the German or Holy Roman Empire were assemblies in which the monarch deliberated with his subjects on the common interests of the empire. Originally all members were bound by their feudal tenure to be present, and if absent they not only forfeited their vote but were liable to fine. Thus the Diet was a feudal, not a representative, Parliament. As by degrees the feudatories of the emperor turned into independent sovereigns, the Diet became nothing more than a congress of princes. The emperor, instead of presiding in person, was represented by a delegate called principal commissarius, and the princes sent envoys, the right of suffrage being no longer personal, but attached to certain territories or districts.

At first the emperor was, in theory at least, elected by universal suffrage; a candidate was chosen by the chief men, and their nominee approved by the people. Thus we read that at the election of Conrad II. 50,000, and at that of Lothaire II. 60,000 persons were present. In time this custom of nominating the emperor grew into an established right, which, under the name of *praetaxation*, was arrogated by the chief princes of the empire. Thus the chief function of the Diet, the choice of an emperor, became the prerogative of a few of its most powerful members, who claimed the right not only of election but of deposition. Thus in 1298 Adolphus of Nassau was deposed, and Albert of Austria chosen in his stead. The right of the electors and the forms and rules of election were defined and settled by the famous instrument of Charles IV. known as the Golden Bull, 1356.

The Diet consisted of three bodies, who met and voted in separate colleges,—(1) the electoral college, (2) the princes of the empire spiritual and temporal, (3) the free imperial cities.

1. In a law of Otho IV. (1208), we find the right of electing an emperor vested in the electoral college of seven. These consisted of three spiritual princes—the archbishops of Mentz, Treves, and Cologne,—and four secular electors—the duke of Saxony, the count palatine of the Rhine, the king of Bohemia, and the margrave of Brandenburg. The former sat as recognized heads of the German church. The latter would naturally have been the dukes of Saxony, Franconia, Swabia, and Bavaria; but when Bavaria was united with the county palatine its right was transferred to Bohemia; that of Swabia was, on the accession of Frederick (who by his election was incapacitated from voting), delegated to Brandenburg, and by it retained; and probably that of Franconia was for similar reason forfeited (see Dunham, *Germanic Empire*, i. 216).

2. The princes of the empire had in all other respects, save that of electing an emperor, the same rights as the dukes or electors. They consisted of the archbishop of Salzburg, 20 bishops, 4 abbots, and 2 prebendaries, and of 44 temporal princes, though this number was afterwards largely augmented. Of these several, such as the archduke of Austria, and the dukes of Brunswick and Burgundy, were in rank and power more than equals of the electors.

3. The free imperial cities formed a college divided into two benches,—the Swabian, with 37 cities, and the Rhenish, with 14. They first appear at the Diet under Henry VII., but their position was not recognized till the peace of Westphalia. The power exercised by this municipal constituent of the Diet was small and strictly limited. Only what had been agreed upon by the electors and princes could be submitted to the college of cities for their sanction. The lower nobility, the knights of the empire, and the commons were unrepresented.

Each college voted separately; when the three colleges agreed, the decree or *recess* of the Diet, as it was called, was submitted to the emperor for his ratification; but the emperor had no power to modify it, and no resolution which affected the general interests of the empire could be passed without the approbation of the Diet.

Besides extraordinary meetings, the Diet was regularly convened twice a year. At the spring session the general business of the empire was discussed, laws were passed, alliances concluded, rebels proscribed, and grants of fiefs confirmed. The autumn session was occupied with finance and attended only by dukes, counts, and officers of administration. From 1663 the Diet met at Regensburg.

From the end of the Thirty Years' War the power of the Diet steadily declined. The Peace of Westphalia, while confirming the rights of the Diet as against the emperor, at the same time, by recognizing the territorial independence of the German princes, so limited the province of the federative assembly that, to quote the words of Frederick the Great, the Diet became "a mere shadow, a congress of publicists more busied with forms than things, like dogs who bay the moon."

The most important Diets were the following—

- 1106. Mainz. Henry IV. deposed on motion of his son.
- 1142. Frankfort. Conrad surrendered Saxony to Henry the Lion.
- 1356. Nuremberg. The Golden Bull.
- 1486. Worms. Private defiance forbidden, and Imperial Chamber established.
- 1521. Worms. Edict against Luther.
- 1526. Spire. Choice of religion allowed to the several states.
- 1529. Spire. Edict of Worms re-enacted.
- 1530. Augsburg. The confession of Augsburg presented.
- 1806. Regensburg. Napoleon's envoy announces the dissolution of the empire. Francis II. resigns imperial crown.
- 1848. Frankfort. First Diet of Germanic confederation.

DIETETICS. The application of science to the regulation of the continuous demands of the body for nutriment aims mainly at three objects—Health, Pleasure, and Economy. They are rarely inconsistent with one another, but yet require separate consideration, as under varying circumstances each may claim the most prominent place in our thoughts.

Influence of Diet upon Health.

The influence of diet upon the health of a man begins at the earliest stage of his life, and indeed is then greater than at any other period. It is varied by the several phases of internal growth and of external relations, and in old age is still important in prolonging existence, and rendering it agreeable and useful.

Diet in Infancy.—No food has as yet been found so suitable for the young of all animals as their mother's milk. And this has not been from want of seeking. Dr Brouzet (*Sur l'Éducation médicale des Enfants*, i. p. 165) has such a bad opinion of human mothers, that he expresses a wish for the state to interfere and prevent them from suckling their children, lest they should communicate immorality and disease! A still more determined pessimist was the famous chemist Van Helmont, who thought life had been reduced to its present shortness by our inborn propensities, and proposed to substitute bread boiled in beer and honey for milk, which latter he calls

"brute's food." Baron Liebig has followed the lead with a "Food for infants," in the prescription for which half ounces and quarter grains figure freely, and which has to be prepared on a slow fire, and after a few minutes boiled well. And after all not nearly such a close imitation of human milk is made as by the addition to fresh cow's milk of half its bulk of soft water, in each pint of which has been mixed a heaped up teaspoonful of powdered "sugar of milk" and a pinch of phosphate of lime. Indeed, in default of these cheap-chemicals, the milk and water alone, when fresh and pure, are safer than an artificial compound which requires cooking. And experience shows that the best mode of administering food to the young is also that which is most widely adopted throughout warm-blooded nature, namely, in a fresh, tepid, liquid state, frequently, and in small quantities at a time.

Empirical observation is fully supported in these deductions by physiological and chemical science. Milk contains of—

Water	88 per cent.
Oleaginous matter (cream or butter).....	3 "
Nitrogenous matter (cheese and albumen).....	4 "
Hydrocarbon (sugar).....	4½ "
Saline matter (phosphate of lime, chloride of sodium, iron, &c.)	½ "

These are at once the constituents and the proportions of the constituents of food suited to a weakly rapidly-growing animal. The large quantity of water makes it pass easily through the soft absorbent walls of the digestive canal, and the complete suspension in an alkaline fluid of the finely divided fat and nitrogenous matter introduce more of them than could be effected were they in a solid form. The fat is the germ of new cellular growth, and the nitrogenous matter is by the new cells formed into flesh, which is doubling its bulk monthly. The phosphate of lime is required for the hardening bones, the chloride of sodium and the iron for the daily increasing amount of blood in circulation. Milk may be said to be still alive as it leaves the breast fresh and warm, and quickly becomes living blood in the infant's veins. A very slight chemical change is requisite. Its frequent administration is demanded by the rapid absorption, and the absence of regular meals prevents the overloading of the delicate young stomach with more than it can hold at once.

The wholesomest nutriment for the first six months is milk alone. A vigorous baby can indeed bear with impunity much rough usage, and often appears none the worse for a certain quantity of farinaceous food; but the majority do not get habituated to it, without an exhibition of dislike which indicates rebellion of the bowels.

To give judicious diet its fair chance the frame must be well protected from the cold; and just in proportion as the normal temperature of the body is maintained so does growth prosper, as is satisfactorily proved by experiments on the young of the lower animals.

It is only when the teeth are on their way to the front, as shown by dribbling, that the parotid glands secrete an active saliva capable of digesting bread stuffs. Till then anything but milk must be given tentatively, and considered in the light of a means of education for its future mode of nutrition. Among the varieties of such means, the most generally applicable are broth and beef tea, at first pure, and then thickened with tapioca and arrowroot. Chicken soup, made with a little cream and sugar, serves as a change. Baked flour, biscuit powder, tops and bottoms, should all have their turn; change is necessary in the imperfect dietary which art supplies, and for change the stomach should be prepared by habit.

The consequences of premature weaning are insidious. The external aspect of the child is that of health, its muscles

are strong, but the bones do not harden in proportion, and if it tries to walk its limbs give way, and it is said to be suffering from rickets or "rickets."

These consequences follow in other animals as surely as in the human race; and in them it was possible to make the experiment crucial. A gentleman named Guérin set himself to find if he could produce rickets at will. He took a number of puppies in equally good condition, and having let them suckle for a time, he suddenly weaned half of them and fed them on raw meat, a fare which at first thought would seem the most suitable for carnivorous animals. Nevertheless, after a short time, those which continued to take the mother's milk had grown strong and hearty, whilst those which had been treated with a more substantial dietary pined, and frequently threw up their victuals, then their limbs bent, and at the end of about four months they showed all the symptoms of confirmed rickets. From these experiments we must conclude that the rickets depended mainly on the derangements of nutrition brought on by improper diet. A diet which is taken at a wrong season may fairly be called improper. For carnivora, it is flesh before the age of suckling has passed; for herbivora (and an experiment bearing on the point has been made on pigs), it is vegetable feeding begun when they ought to be at the teat.¹

The time for weaning should be fixed partly by the child's age, partly by the growth of the teeth. The troubles to which children are subject at this crisis are usually gastric, such as are induced by summer weather; therefore at that season the weaning should be postponed, whereas in winter it should be hurried forward. The first group of teeth nine times out of ten consists of the lower central front teeth, which may appear any time during the sixth and seventh month. The mother may then begin to diminish the number of suckling times; and by a month she can have reduced them to twice a day, so as to be ready when the second group makes its way through the upper front gums to cut off the supply altogether. The third group, the lateral incisors and first grinders, usually after the first anniversary of birth give notice that solid food can be chewed. But it is prudent to let dairy milk form a considerable portion of the fare till the eye teeth are cut, which seldom happens till the eighteenth or twentieth month. At this period children are liable to diarrhoea, convulsions, irritation of the brain, rashes, and febrile catarrhs. In such cases it is often advisable to resume a complete milk diet, and sometimes a child's life has been saved by its reapplication to the breast. These means are most feasible when the patient is accustomed to milk; indeed, if not, the latter expedient is hardly possible.

Diet in Childhood and Youth.—At this stage of life the diet must obviously be the best, which is a transition from that of infancy to that of adult age. Growth is not completed, but yet entire surrender of every consideration to the claim of growth is not possible, nor indeed desirable. Moreover that abundance of adipose tissue, or reserve new growth, which a baby can bear, is an impediment to the due education of the muscles of the boy or girl. The supply of nutriment needs not to be so continuous as before, but at the same time should be more frequent than for the adult. Up to at least fourteen or fifteen years of age the rule should be four meals a day, varied indeed, but nearly equal in nutritive power and in quantity, that is to say, all moderate, all sufficient. The maturity the body then reaches involves a hardening and enlargement of the bones and cartilages, and a strengthening of the digestive organs, which in healthy young persons enables us to dispense with some of the

watchful care bestowed upon their diet. Three full meals a day are generally sufficient, and the requirements of mental training may be allowed to a certain extent to modify the attention to nutrition which has hitherto been paramount. But it must not be forgotten that the changes in figure and in internal organs are not completed till several years have passed, and that they involve increased growth and demand full supplies. As less bulky food is used, care should be taken that it is sufficiently nutritious, and habits should be acquired which conduce to making the most of it for the maintenance of strength.

The nutritiousness of food depends on *digestibility* and *concentration*. Food is digestible when it yields readily its constituents to the fluids destined for their reduction to absorbable chyme. It is more or less concentrated, according as a given weight contains more or less matter capable of supporting life. The degree in which they possess these qualifications united constitutes the absolute nutritive value of alimentary matters.

The degree of cohesion in the viands influences digestibility. Tough articles incapable of being completely ground up by the teeth, remain unused, while fluids and semifluids lead the van of digestibles. The tissues of young vegetables and young animals are for this reason more digestible than old specimens. It is desirable also that the *post mortem* rigidity, which lasts several days in most instances, should have merged into softness before the meat is cooked, or should have been anticipated by cooking before the flesh is cold. In warm climates and exceptionally warm weather the latter course is the preferable. The dietician, especially when the feeding of the young is in question, will prefer those methods of culinary preparation which most break up the natural cohesion of the viands. And it may be noticed that the force of cohesion acts in all directions, and that it is no advantage for an article to be laterally friable if it remains stringy in a longitudinal direction.

Fat interposed between the component parts of food diminishes its digestibility. It is the interstitial fat between the fasciculi of muscular fibre in beef which renders it to young persons and to dyspeptics less digestible than mutton.

A temperature above that of the body retards digestion. Meat, which is digested by the gastric juice in the stomach, has time to cool before it gets there; but farinaceous food, which depends for its conversion into chyme on the salivary glands, suffers a serious loss if by reason of being too hot it cannot avail itself of the saliva supplied by the mouth. It should also be borne in mind that a temperature much above that of the body cracks the enamel of the teeth.

Excessive concentration impairs digestibility. The principal medium by which nutriment is carried through the absorbent membrane of the digestive canal is water. There is no doubt it passes more rapidly by endosmosis than anything else. The removal, then, of water is an injury to viands, and drying, salting, over-frying, over-roasting, and even over-boiling renders them less soluble in the digestive juices, and so less nutritious. A familiar illustration of this may be taken from eggs. Let an egg be lightly boiled, poached in water, custarded, or raw, and the stomach even of an invalid can bear it; but let it be baked in a pudding which requires a hot oven, or boiled hard, or otherwise submitted to a high temperature for a prolonged period, and it becomes a tasteless, leathery substance, which can be of no more use in the stomach than so much skin or hair. It is obvious then that it is mainly in a commercial point of view that articles of diet can be called nutritious in proportion to their concentration. About this there can be no question; milk adulterated from the pump is worth so much less than pure milk, and a pound of beef steak sustains a man longer than a pint of veal broth.

¹ Troussseau, *Clinique Médicale*, vol. iii. p. 424, 3d edit.