

A rare variety of cloisonné enamelling is known to French antiquaries as enamel "de plique à jour." The peculiarity of this style consisted in setting transparent enamels without any background, so that light could be freely transmitted through the glass, the enamels being fixed by having their edges fused to the windows in which they were framed. Specimens of this work are extremely rare. A fine example, in the shape of a small covered cup, may be seen in the South Kensington Museum, having been purchased for the sum of £400.

Very similar in effect to the cloisonné enamels, but much less rare and valuable, are those inlaid works which were executed by the *champ-levé* process. Copper was usually employed in place of the precious metals; and the partitions between one colour and another were formed by ridges of the base and not by separate fillets of metal. A plate of copper, about  $\frac{1}{4}$  inch thick, and having the surface polished, formed the ground-work of the enamel. By means of a graver, the parts to be enamelled were chased out, so as to leave slender ribs standing up as boundary-walls to the cavities. Enamel in the state of either powder or paste was then introduced into these casements, and the work was fired. Finally, the surface was polished, and the metallic outlines generally gilt. In some examples, the figures are represented in enamel on a metal background; while in others the figures stand out in engraved metal upon an enamelled background; and in others again the entire field is enamelled.

Champ-levé enamelling was applied to a vast variety of purposes, and specimens of the work are to be found in almost every museum. The late Celtic or Romano-British enamels, referred to above, belong to this class. One of the most interesting *champ-levé* enamels of early date is the elegant bronze vase which was found in 1835 in a tumulus at Bartlow, in the parish of Ashdown, Essex. The sepulchral mound formed one of a group of four conical barrows, which have been referred by their contents to the late Roman period. The vase is a globular vessel with rectangular handle, ornamented with bands of running leaves and flowers executed in blue, green, and red enamels. Faraday showed that the blue colour was due to cobalt, and the red to copper, the green also being probably a copper-colour. This singularly interesting specimen suffered from a fire at Easton Hall in 1847, and its remains are now in the British Museum. (See coloured figure in *Archæologia*, vol. xxvi.) Another famous example of this kind of enamelling is seen in Westminster Abbey, in the tomb of William de Valence, earl of Pembroke, who died in 1296. It is highly probable that the enamels on this monument were executed at Limoges in France, a city which during the Middle Ages was the chief centre of the enamelling industry. So numerous were the enamels of the early Limoges school that it is impossible within the limits of this article to refer to special examples. They date back certainly as early as the latter part of the 12th century; for a letter which is referred to the year 1170 alludes to an enamelled book-cover *de opere Lemovicino*. The *champ-levé* process was extensively applied by the Limoges enamellers to the decoration of altar-furniture, especially reliquaries or shrines, pyxes for preserving the host, priket candlesticks, ciboria, crosiers, and other ecclesiastical appointments. During the 14th century Limoges lost its reputation; but it revived at a later period in an entirely new style of enamelling. The inlaid process, in fact, gave way to that of painted enamels, and the graver was displaced by the pencil. But before noticing the process of superficial enamelling, it is desirable to refer to another style, which took its birth in Italy at the beginning of the 14th century.

In the Italian process, the enamels were always more or less translucent, and completely covered the metal ground, the design being defined by sculpturing beneath the transparent medium. The enamels were of various colours, and differences of shade were obtained by the varying thickness of the glass in different parts of the design. Gold or silver was the metal generally employed. The subject was chased in very low relief, and covered with powdered enamels. Great care was required during firing, to prevent the several colours running together in a confused mass. As examples of translucent enamels, reference may be made to the silver horn, known as the "Bruce horn," the property of the marquis of Aylesbury, and to the crosier of William of Wykeham at New College, Oxford.

Soon after the introduction of transparent enamelling in Italy, the art became popular in France, and this probably led the way to the invention of *enamel-painting*. The artists of Limoges acquired great celebrity in this work. The early painted enamels from the Limousin workshops were executed in opaque white upon a brown ground, the white being overlaid where necessary by transparent coloured enamels. The lights were picked out in gold, while the brilliant effect of gems was obtained by the use of *paillettes*, or coloured foils. Nardon Pénicaut is the best known artist in this style, and an excellent example of his work, dated 1503, is preserved in the Hôtel de Cluny in Paris.

About the beginning of the 16th century a much more finished style of painting was introduced at Limoges; and under the auspices of Francis I. the art attained to a considerable development. Léonard Limousin, who is known to have painted from 1532 to 1574, became the great master of this style. While some of the works were executed in brilliant colours, most of them were in monochrome. The background was generally dark, either black or deep purple, and the design was painted *en grisaille*, relieved in the case of figure-subjects by delicate carnations. The effect was occasionally heightened by appropriate touches of gold, and in many of the coloured enamels brilliancy was obtained by the use of silver foil, or *pailillon*, placed beneath a transparent enamel. Portraits were frequently painted on copper plaques; and the art was also applied to the decoration of ewers, vases, plateaux, candlesticks, salt-cellars, and a variety of elegant objects for domestic as well as ecclesiastical use. Among the artists of this school may be mentioned Pierre Raymond, Jean Pénicaut, Pierre and Jean Courtois, Martin Didier, Jean Court dit Vigier, P. Courteys, and the master known only by his initials C. N.

Towards the latter end of the 16th and in the beginning of the 17th century it was the fashion for the Limoges enamellers to paint in a minute style, which is seen in the works of the brothers Laudin and of the family of Nouaillers. The art at length degenerated into a system of tawdry colouring, and in the reign of Louis XIV. it fell into a state of decay, from which an attempt to revive it was made by Louis XVI., but without success.

Probably the decline of the Limoges school was connected with the rise of a new branch of enamelling, which has been distinguished as the *miniature style*. This is the style which has continued in vogue up to the present day. Its invention is ascribed to Jean Toutin, a goldsmith of Châteaudun, but it was greatly improved by Jean Petitot of Geneva, who carried it to a high state of perfection, and painted for Charles I. in England and for Louis XIV. in France. These enamels are executed generally on plates of copper or of gold, but silver is sometimes employed. In consequence of the risk involved in the successive firings, the plates were formerly confined to a small size, about 5 or 6 inches square. Horace Hone, an English enameller

of the last century, was the first who attempted large pieces, but he was excelled by Henry Bone, R.A. Bone had been a china painter in the Plymouth and Bristol works; and on his removal to London he applied his knowledge of vitrified pigments to enamel painting. Excelling all his predecessors in the magnitude of his plates, he ventured on subjects so large that in 1810 he painted a noble plaque measuring 18 inches by 16 inches. This master-piece was a copy of Titian's famous Bacchus and Ariadne, in the National Gallery, and was purchased by Mr Bowles of Wanstead for 2200 guineas. Bone's chief works were a series of portraits of celebrities of the Elizabethan period, which were sold by auction on the artist's death in 1834. (See BONE, vol. iv. p. 32.) Enamelling was also prosecuted by his son, H. P. Bone, who executed a very large Madonna and Child, and by his grandsons, W. Bone and C. R. Bone, both of whom are recently deceased. The art of enamel painting was also carried on by A. Essex, but of late years it has not been extensively cultivated in this country. In connection with remarkable enamels it should be mentioned that a painting of the Holy Family, after Parmigiano, was executed by C. Muss on a plaque measuring as much as 20 inches by 15 inches. This noble work was purchased by George IV. for 1500 guineas.

In order to prepare a plate for the artist, a thin piece of gold or of copper is carefully annealed, and then coated with a dead white enamel. The enamel is imported in cakes from Venice, and is made from a mixture of silica, borax, and stannic oxide. After the plate has been fired, a second coating of enamel is applied, and the plate returned to the oven. It is afterwards coated for the third time, but now with a more easily fusible glass, which is known in the workshop as "flux." This is also imported from Venice, in the form of tubes and beads, and is employed to produce a brilliant lustre on the surface. The ground having been thus prepared is carefully ground smooth, and is then ready for the artist. The colours which he employs consist of various metallic oxides mixed with the flux; but it is obvious that the enameller's palette must be limited, since he is able to employ only such substances as are permanent at the temperature to which the plate will be subjected in the muffle. Blue colours are produced by means of oxide of cobalt; violet by oxide of manganese; green by cupric oxide or by chromic oxide; red either by cuprous oxide, which is difficult to work in the oven, or by the preparation of gold known as purple of Cassius, which also produces a fine purple; yellow by oxide of silver, oxide of lead, or an alkaline antimoniate; brown by ferric oxide; and black by ferrous oxide, or by means of cobalt and manganese, which have intense tinctorial power, and produce dense colours. Special recipes will be found in technical treatises, and need not be inserted here.

The powdered colours of the enameller are mixed with oil of lavender or spike and spirit of turpentine, as a vehicle, and are applied to the enamel-ground by means of a camel's-hair pencil. After each layer has been spread over the surface, the plate must be fired, and highly-finished work may have to pass through the oven a score of times. Once vitrified, the colours are permanent; hence the artist has no opportunity of correcting faults, except by the tedious process of grinding away a portion of the plate. Since the tints may be greatly modified by too high a temperature, the greatest care is needed in managing the furnace. In return for the great labour and risk involved in enamelling, the artist secures permanence for his work, the painting being always as fresh as when first executed; it is indeed a painting in glass.

In the middle of the last century the art of enamelling was largely applied to the decoration of snuff-boxes, patch-boxes, tea-canisters, candlesticks, needle-cases, labels for wine-bottles, and a variety of other small articles. The manufacture was established by Mr S. T. Janssen at York House, Battersea, near London, about the year 1750. The objects were usually made of copper; and having been coated with an opaque white enamel, were decorated with Watteau subjects and floral and other designs, painted in enamel colours. A peculiar rose-tint was a favourite colour at Battersea. Advantage was also taken of the process of transferring engravings from copper-plates to glazed surfaces—a process which was introduced about the year 1750 by Sadler and Green of Liverpool, and was

largely employed for the decoration of pottery and porcelain. It is known that a manufacture of small enamelled objects, similar to those made at Battersea, but usually decorated in coarser style, was carried on by George Brett at Bilston in South Staffordshire. Splendid snuff-boxes and other ornamental articles in enamelled work were also turned out by artists in France and Germany.

Of late years the art of enamelling has been extensively applied to the coating of iron vessels for domestic purposes, with the view of keeping a clean surface and preventing the rusting of the metal. As far back as 1799, a process for this kind of enamelling was introduced by Dr Hickling; and within the last thirty years a large number of patents have been granted for similar purposes. One of the most extensively used processes is that of Charles Henry Paris, which was introduced into England in 1850, and is now largely worked at Birmingham. The metal articles are first cleaned with dilute sulphuric acid, and powdered glaze is then sifted upon the clean surface. Adhesion of the powder is secured by applying to the iron a coating of gum-water. The object is then dried in an oven, whence it is transferred to the enamelling-furnace, where it is heated until the fused glaze flows evenly over the surface. After removal from the oven, the objects are allowed to cool with extreme slowness. It is often found necessary to apply a second coating of enamel. Paris's composition consists of 130 parts of cullet or broken glass, 20½ parts of carbonate of sodium, and 12 parts of boracic acid. This forms the fundamental glaze, upon which variously coloured enamels may be employed. If enamelled vessels are to be used for culinary purposes, great care must be taken that the glass contains no lead, the presence of which would be highly dangerous. Acids often find their way through the pores of an enamel to the subjacent metal, and, spreading out between the iron and the glaze, cause the enamel to peel off. Exposure to sudden changes of temperature also tends to injure the enamel.

Enamelling of a similar character is now largely used for street plates, name-plates at railway stations, advertising tablets, and other objects where permanent lettering is required. The insides of baths, cisterns, and boilers are also protected by enamelling; and it has been proposed to prevent the fouling of ships' bottoms by a coating of enamel. In 1871 a patent was granted to Mr Neilson of Glasgow for enamelling large metal objects, to which the process had not been previously applied, and also for improvements in the mechanical appliances needed for the transference of large objects in and out of the enamelling oven.

For the history of enamelling see M. Labarte's *Recherches sur la Peinture en Email* (Paris, 1856). This is incorporated in the author's *Histoire des Arts industriels au Moyen Age* [vol. iii. 2d. ed. Paris, 1875]. See also, the Marquis de Laborde's *Notice des Émaux exposés dans les galeries du Musée du Louvre* (Paris, 1852). English readers will find an admirable sketch of the history in Mr Frauke's *Observations on Glass and Enamel*, extracted from the *Art Treasures of the U. K.* For details of old processes the works of Neri and Benvenuto Cellini may be consulted. Valuable papers will be found in the *Archæolog. Journ.* (vol. ii. p. 154), by Albert Way; *Journ. Arch. Assoc.* (vol. iii. p. 280), by W. H. Rogers; and *Art Journal* for 1851, by A. Essex. The following works are also deserving of notice—M. Reboulleau's *Nouveau Manuel complet de la peinture en verre sur porcelaine et sur email* (new ed., by M. Magnier, Paris, 1866), and M. Claudius Popelin's *L'Email des Peintres* (Paris, 1866). (F. W. R.)\*

**ENCAUSTIC PAINTING.** The name *encaustic* is applied to paintings executed with vehicles in which wax is the chief ingredient. The term was appropriately applied to the ancient methods of painting in wax, because these required heat to effect them. Wax, however, may now be used as a vehicle for painting without heat being requisite; nevertheless the ancient term *encaustic* has

been retained, and is indiscriminately applied to all methods of painting in wax. The durability of wax, and its power of resisting the effects of the atmosphere, were well known to the Greeks, who used it for the protection of their sculptures. As a vehicle for painting it was commonly employed by them and by the Romans and Egyptians; but in recent times it has met with only a limited application. Of modern encaustic paintings those by Schnorr in the Residenz at Munich are the most important. At present there is no general agreement as to which is the best method of using wax for mural painting. Modern paintings in wax, in their chromatic range and in their general effect, occupy a middle place between those executed in oil and in fresco. Wax painting is not so easy as oil, but presents fewer technical difficulties than fresco.

Ancient authors often make mention of *encaustic*, which, if it had been described by the word *inurere*, to burn in, one might have supposed to have been a species of enamel painting. But the expressions "incausto pingere," "pictura encaustica," "ceris pingere," "pictura inurere," used by Pliny and other ancient writers, make it clear that some other species of painting is meant. Pliny distinguishes three species of encaustic painting. In the first they used a stylus, and painted either on ivory or on polished wood, previously saturated with some certain colour; the point of the stylus or stigma served for this operation, and its broad or blade end cleared off the small filaments which arose from the outlines made by the stylus in the wax preparation. In the second method it appears that the wax colours, being prepared beforehand, and formed into small cylinders for use, were smoothly spread by the spatula after the outlines were determined, and thus the picture was proceeded with and finished. By the side of the painter stood a brazier, which was used to heat the spatula and probably the prepared colours. This is the method which was probably used by the painters who decorated the houses of Herculaneum and of Pompeii, as artists practising this method of painting are depicted in the decorations. This method has recently been revived in Italy. The third method was by painting by a brush dipped into wax liquefied by heat; the colours so applied attained considerable hardness, and could not be damaged either by the heat of the sun or by the effects of sea-water. It was thus that ships were decorated; and this kind of encaustic was therefore styled "ship painting."

About the year 1749 Count Caylus, and M. Bachelier, a painter, made some experiments in encaustic painting, and the count undertook to explain an obscure passage in Pliny, supposed to be the following (xxxv. 39):—"Ceris pingere ac picturam inurere quis primus excogitaverit non constat. Quidam Aristidis inventum putant, postea consummatum a Praxitele; sed aliquanto vetustiores encausticæ picture extitere, ut Polygnoti et Nicanoris et Arcesilai Pariorum. Lysippus quoque Æginæ picture suæ inscripsit *ἐνέκαυρον*, quod profecto non fecisset nisi encaustica inventa." There are other passages in Pliny bearing upon this subject, in one of which (xxi. 49) he gives an account of the preparation of "Punica cera." The nature of this Punica wax, which was the essential ingredient of the ancient painting in encaustic, has not been definitely ascertained. The Chevalier Lorgna, who investigated the subject in a small but valuable tract, asserts that the *nitron* which Pliny mentions is not the nitre of the moderns, but the *natron* of the ancients, viz., the native salt which is found crystallized in Egypt and other hot countries in sands surrounding lakes of salt water. This substance the Carthaginians, according to Pliny, used in preparing their wax, and hence the name Punica seems to be derived. Lorgna made a number of experiments with this salt, using from three to twenty parts of white melted wax with one of natron. He held

the mixture in an iron vessel over a slow fire, stirring it gently with a wooden spatula, till the mass assumed the consistency of butter and the colour of milk. He then removed it from the fire, and put it in the shade in the open air to harden. The wax being cooled liquefied in water, and a milky emulsion resulted from it like that which could be made with the best Venetian soap.

Experiments, it is said, were made with this wax in painting in encaustic in the apartments of the Count Giovanni Battista Gasola by the Italian painter Antonio Paccheri, who dissolved the Punica wax when it was not so much hardened as to require to be "igni resoluta," as expressed by Pliny, with pure water slightly infused with gum-arabic, instead of sarcocolla, mentioned by Pliny. He afterwards mixed the colours with this wax so liquefied as he would have done with oil, and proceeded to paint in the same manner; nor were the colours seen to run or alter in the least; and the mixture was so flexible that the pencil ran smoother than it would have done with oil. The painting being dry, he treated it with caustic, and rubbed it with linen cloths, by which the colours acquired peculiar vivacity and brightness.

About the year 1755 further experiments were made by Count Caylus and several French artists. One method was to melt wax with oil of turpentine as a vehicle for the colours. It is well known that wax may be dissolved in spirit and used as a medium, but it dries too quickly to allow of perfect blending, and would by the evaporation of the spirit be prejudicial to the artist's health. Another method suggested about this time, and one which seems to tally very well with Pliny's description, is the following. Melt the wax with strong solution of salt of tartar, and let the colours be ground up in it. Place the picture when finished before the fire till by degrees the wax melts, swells, and is bloated up upon the picture; the picture is then gradually removed from the fire, and the colours, without being injuriously affected by the operation of the fire, become unalterable, spirits of wine having been burnt upon them without doing the least harm. Count Caylus's method was different, and much simpler:—(1) the cloth or wood designed for the picture is waxed over, by rubbing it simply with a piece of beeswax; (2) the colours are mixed up with pure water; but as these colours will not adhere to the wax, the whole ground must be rubbed over with chalk or whiting before the colour is applied; and (3) when the picture is dry it is put near the fire, whereby the wax is melted and absorbs the colours. It must be allowed that nothing could well be simpler than this process, and it was thought that this kind of painting would be capable of withstanding the weather and of lasting longer than oil painting. This kind of painting has not the gloss of oil painting, so that the picture may be seen in any light, a quality of the very first importance in all methods of mural painting. The colours too, when so secured, are firm, and will bear washing, and have a property which is perhaps more important still, viz., that exposure to smoke and foul vapours merely leaves a deposit on the surface without injuring the work. The "encausto pingendi" of the ancients could not have been enamelling, as the word "inurere," taken in its rigorous sense, might at first lead one to suppose, nor could it have been painting produced in the same manner as encaustic tiles or encaustic tesserae; but that it must have been something akin to the count's process would appear from the words of Pliny already quoted, "Ceris pingere ac picturam inurere."

Werner of Neustadt found the following process very effectual in making wax soluble in water. For each pound of white wax he took twenty-four ounces of potash, which he dissolved in two pints of water, warming it gently. In this ley he boiled the wax, cut into little bits, for half an

hour, after which he removed it from the fire and allowed it to cool. The wax floated on the surface of the liquor in the form of a white saponaceous matter; and this being triturated with water produced a sort of emulsion, which he called wax milk, or encaustic wax. This preparation may be mixed with all kinds of colours, and consequently can be applied in a single operation.

Mrs Hooker of Rottingdean made, at the end of the last century, many experiments to establish a method of painting in wax, and received a gold palette from the Society of Arts for her investigations in this branch of art. Her account is printed in the tenth volume of the Society's Transactions (1792), under the name of Miss Emma Jane Greenland. The following is an abstract of her processes:—

Put into a glazed earthen vessel four ounces and a half of gum arabic, and eight ounces or half a pint wine measure of cold spring water; when the gum is dissolved, stir in, over a low fire, seven ounces of gum mastic, continually stirring and beating hard with a spoon, in order to dissolve the gum mastic. When sufficiently boiled the mixture will no longer appear transparent, but will become opaque and stiff like a paste. As soon as this is the case, and the gum water and mastic are quite boiling, without taking them off the fire, add five ounces of white wax, broken into small pieces; stir and beat till the wax is perfectly melted and boils; then take the composition off the fire, as boiling it longer than necessary would harden the wax, and prevent it afterwards from mixing well with water. When the composition is taken off the fire, it should be beaten well whilst hot (but not boiling) in the glazed earthen vessel; mix with it by degrees a pint or sixteen ounces more of cold spring water, then strain the composition, and bottle it. The composition if properly made should be like cream, and the colours when mixed with it as smooth as with oil. Mix with the composition on a china palette any powder colours which may be required to the consistency of oil colours; then paint with pure water. In painting with this composition the colours blend without difficulty when wet, and even when dry the tints may be easily united by means of a brush and a very small quantity of water. The painting being finished, heat some white wax in a glazed earthen vessel over a slow fire till melted, but not boiling; then with a hard brush cover the painting with the wax; when cold take a moderately hot iron, such as is used for ironing linen, and which will not "hiss" when put to the usual test, and draw it lightly over the wax. The painting will appear as if under a cloud, till the wax and the substance the picture is painted upon are perfectly cold; but if then it should not appear sufficiently clear, the wax may be melted by holding a hot iron at a proper distance from it, especially before such portions of the picture as do not appear sufficiently transparent or brilliant; for the oftener heat is applied to the picture the greater will be the transparency and the brilliancy of the colouring; but the contrary effect would be the result were the heat applied too suddenly, in too great a degree, or for too long a time. When the picture is cold, rub it with a fine linen cloth. Plaster surfaces require no other preparation than a coating of the composition.

It would be equally practicable to paint with wax alone, dissolved in gum water. Take three quarters of a pint of cold spring water, and four ounces and a half of gum arabic, put them into a glazed earthen vessel, and when the gum is dissolved, add eight ounces of white wax. Put the earthen vessel, with the gum water and wax, upon a slow fire, and stir them till the wax is dissolved, and when the mixture has boiled a few minutes, take it off the fire, and throw it into a basin, as by remaining in the hot earthen vessel the wax would become rather hard; beat the gum water and wax till quite cold. It is necessary to use some pure water in mixing this composition with the colours. If the ingredients should separate when bottled, they have only to be well shaken together. This composition may be kept for a long time, and be rendered fit for use by putting a little cold water upon it for a short time.

The following is a recent receipt. Place in a large pipkin, half full of hot turpentine, as much gum dammar as will dissolve (½ lb gum makes about 1½ pints varnish); melt from two to two and a half of the wax tablets sold by chemists in a pint of this varnish; when cold the composition should just be consistent enough to stand up on the palette. If too thin, heat it again, and add wax; if too thick add turpentine. This vehicle may be used with ordinary oil colours. Before commencing your work heat the wall, and rub in as much vehicle as it will absorb; after the work is finished it should be re-heated, to secure its adhesion to the wall.

See Lorgna, *Un discorso sulla cera punica*; Pittore Vincenzo Requeno, *Saggi sul Ristabilimento dell' antica Arte de' Greci e Romani*, Parma, 1787; *Phil. Tran.*, vol. xlix., part 2; Muntz on *Encaustic Painting*; Elmes's *Dictionary of the Fine Arts*; W. Cave Thomas, *Methods of Mural Decoration*, London, 1869. (W. C. T.)

ENCAUSTIC TILES. The term "encaustic" as applied to tiles is of modern though somewhat doubtful origin. The art bears no resemblance to the "encaustic painting" mentioned by Pliny and other ancient writers, although the expression (which signifies executed by fire) is perhaps as correctly applied to this manufacture as to the wax-incised pictures of the ancients. The term is, strictly speaking, applied to tiles which are decorated with patterns formed with different coloured clays, inlaid in the tile, and fired with it. This art appears to have had its origin in the latter part of the 12th century, but the culminating point of its excellence and popularity was attained during the 13th; and it was extensively used for the decoration of Gothic buildings in connection with each succeeding change in that style of architecture.

In mediæval times the manufacture appears to have been principally carried on in England and Normandy, but examples of ancient tile-pavements of this description are also to be found in Holland and other Continental countries. The greater number of ancient examples are in squares, varying from 4 to 9 inches, but some striking exceptions occur, from which it has been attempted to trace a connection between this art and that of Roman mosaics. Pavements presenting a kind of connecting link between the two have been discovered at Fountains Abbey, and in Prior Crauden's chapel, Ely, in which the tiles are of great variety of form and size; and, instead of the patterns being wholly inlaid in the tiles themselves, the design is, to a large extent, produced by the outlines of the individual pieces, which, in the latter example, are cut to the forms required to be represented, including the subject of the temptation of Adam and Eve, trees, lions, &c., the tesserae being also enriched with what may be more strictly called encaustic decoration.

Encaustic tiles were almost exclusively used for pavements, but an interesting instance of their employment for wall decoration occurs in the abbey church of Great Malvern, where these tiles have probably been originally used to form a reredos, and bear designs representing Gothic architecture in perspective, having introduced into them the sacred monogram "I.H.S.," the crowned monogram of "Maria," the symbols of the Passion, the Royal Arms, and other devices. This example is also interesting as bearing the date of its manufacture on the margin, "Anno R. R. H. VI. XXXVJ.," that is, the thirty-sixth year of the reign of Henry VI. (1457-8).

Combinations of encaustic tiles forming a cross were frequently used as mortuary slabs; and an example of this kind of monument is in Worcester cathedral *in situ*, whilst the detached component tiles are to be found in other ancient churches.

Many interesting ancient inscriptions are found entering into the designs of encaustic tiles, amongst which is the following, from Great Malvern, which has been deciphered with some difficulty, and rendered into modern English thus—

"Think, man, thy life  
May not ever endure;  
That thou do'st thy self  
Of that thou art sure;  
But that thou keepest  
Unto thy executor's care,  
If ever it avail thee,  
It is but chance."

A tile from the same place also bears the following quotation from the book of Job, curiously arranged, and beautifully combined with Gothic ornament: "Miseremini mei, miseremini mei saltem, vos amici mei, quia manus Domini tetigit me." The border of this tile bears the names of the evangelists, with the date A.D. MCCCCLVI. The armorial bearings or noble benefactors, and the devices