A MANUAL

OF

FRESCO AND ENCAUSTIC PAINTING.

A MANUAL

OF

FRESCO AND ENCAUSTIC PAINTING

CONTAINING

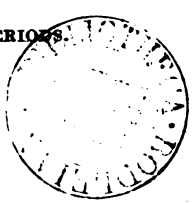
AMPLE INSTRUCTIONS

FOR EXECUTING WORKS OF THESE DESCRIPTIONS.

WITH AN

HISTORICAL MEMOIR

OF THESE ARTS FROM THE EARLIEST PERIODS.



BY W. B. SARSFIELD TAYLOR,

CURATOR OF THE LIVING MODEL ACADEMY, &c. &c.

LONDON:

CHAPMAN & HALL, 186, STRAND.

1843.

C. WHITING, BEAUFORT HOUSE, STRAND.

TO THE

RIGHT HON. SIR ROBERT PEEL, BART.

SIR,

In laying before you this work, as a tribute of my profound respect for your liberal and constant promotion of the Fine Arts, I shall only add, that it has been called forth by the institution and acts of "The Royal Commission on the Fine Arts," which has done more to promote the advancement of the superior classes of painting in this country, during the two years that the Commission has existed, than had been done for them in the two preceding centuries, with the exception of the foundation, by King George III., of the Royal Academy, in 1768.

Fully impressed with the correctness of these sentiments, which are also those of the ablest and best men in the profession, I beg leave to offer you my best thanks for your great kindness in permitting me to dedicate to you this small volume.

I have the honour to be,

Sir,

Your most obliged and obedient servant,

W. B. SARSFIELD TAYLOR,

Curator of the Living Model Academy, &c. &c.

ADDRESS.

THE Manual which the Author has now the honour to place before the British Public, has arisen chiefly out of the new position in which the Arts, generally, have been placed in this country, through the altered and improved condition in which high art has recently been encouraged amongst us.

In fact, the year 1841 has been rendered remarkable in the history of British Art by the selection and institution of the Royal Commission on the Fine Arts, by her most gracious Majesty Queen Victoria; and the present year will be still more memorable, for being that in which the artists of Great Britain have developed their great powers in the higher classes of art —an effect which was produced by the direct agency of that Royal Commission, and made manifest at the cartoon competition in Westminster Hall; a competition the result of which was quite of a gratifying nature; for the great merit displayed by our native school of art surpassed the expectations even of those who had the very best means of forming a right judgment in

this important business. This remarkable development of high graphic power was also produced at, what has been considered a rather short notice; but such a circumstance would only tend to prove still more the vigour and intelligence that were lying dormant in the minds of our artists, and which, but for the exciting cause already mentioned, never would, in all probability, have been in any shape brought before the public. Challenged as they were to a new species of contest, the British artists have acquitted themselves with honour, and proved that they are worthy of the respect and confidence of the nation.

In adding our testimony to the general voice of commendation, we must, however, guard against the supposition that it is intended to place those able productions of our native artists on a level with the best works of the greatest men of the Italian schools. If the facts would bear us out, nothing would afford us more sincere pleasure than to place them in such a lofty position. But we cannot adopt a fallacy, one, too, of of the most dangerous description—we mean that enervating vice called flattery, which, by making people believe that they have reached the utmost goal of talent, often causes them to be distanced in the race of excellence. Against such fatal errors we would strenuously caution our men of genius; and the annals of art give painful testimony of the failures of gifted men who were weak enough to believe they had won the victor's crown when they had only entered the arena.

Our artists have certainly made a fine beginning, one which promises to sustain well the higher classes of art; but it must not be forgotten that the sequel, and the termination are yet to come. Our gifted artists will, therefore, wisely continue in the school of Nature—that good course of training which has given force, as well as refinement, to their natural talents, and thus sustain the position which they have so happily gained in public estimation. These are the means by which, in due season, minds endowed with natural power will be found amongst the British people, capable of realizing the best hopes of society, by producing works of as transcendent ability as the best of those which were produced in the palmy days of the *Cinque Cento*. But time, and great labour of mind, and pencil, are very requisite in these matters.

Three hundred years were, it appears, required to train up about ten generations of painters in the favoured land of Italy* before Da Vinci, M. Angelo, Raffaelle, Correggio, &c., made their appearance. Yet in Britain the foundation of the arts cannot be traced farther back than barely seventy-five years;† that is, one-

* From Cimabue, 1220, to Raffaelle and Da Vinci, who died in 1520, there was a lapse of nearly three hundred years.

† Early in December, 1768, king George III. signed the document constituting and establishing the Royal Academy; and on the 10th of the same month the first meeting of the members was held, which Sir J. Reynolds opened with an eloquent address. This institution was little more than *vox et præterea nihil* as to any instructions it could convey in the arts, until 1780, when the members were esta-

fourth of the time previously mentioned, since that illustrious monarch, George III., the grandsire of our present most gracious Sovereign, on his own authority established the Royal Academy of Arts. So that three generations of artists have not yet had the advantages derivable from that institution, and the local branches derived from the same source.

Such, then, is the state of the question as to time, in the progress of the British and Italian schools of art, and therefore it would be hardly fair to expect that British artists should completely rival, at once, the works of those who have had such superior advantages as we have already noticed.

It was necessary that we should place this matter in its true bearings before our readers, to enable them to arrive at a correct judgment in the affair, whilst we proceed to show that this fine movement of our Government, is not founded upon novelties, but is based on a solid foundation, coeval with the creation of man's intellectual powers, of which a capacity to excel in the Fine Arts forms an integral portion, as being indispensable to human happiness. This position is proved by finding that in ages which mount up into high antiquity, the very same arts which are the subject of this great movement were thoroughly understood, and extensively practised, by the most civilized people then existing of whom we have any historical account.

blished in Somerset House, Strand, where they had rooms for the different classes of students, lectures, &c. &c.

Of this high and strong feeling in the human mind, wise statesmen and legislators have always availed themselves, as affording admirable means of promoting the civilization of the people, and of extending their industrial, manufacturing, and commercial enterprises, combined also with various other advantages which issue out of the arts collaterally. Thus the wealth produced by commerce encouraged the growth of the arts, and the productions of the latter reacted most favourably upon commerce,* and by these means many states arrived at a high condition of prosperity.

The very new position in which recent events have placed the arts in this country, called for an explanation such as we have here attempted; for unless all the principal facts of a case are made known, particularly one so important to us as a people, emulous to sustain and promote the elegant and useful arts, nothing like a clear judgment can be formed; and as we have had the trouble of assisting to clear away many absurd notions prejudicial to British arts and artists, formerly as well as now, we are anxious to leave after us such facts, founded on history and chronology, as may prevent a recurrence of such conceited absurdities as those we were compelled to mention in the first chapter of this essay.

* The people of Rhodes, Egina, Argos, Corinth, &c., were eminently commercial, and at the same time were amongst the most elegant and civilized states of the Greek Confederacy; they also excelled in the Fine Arts, of which the specimens of their works in our galleries and museums afford the best evidence.

With respect to the subjects treated of in this volume, we shall now place an outline before our readers.

It commences with a sketch of the origin and progress of fresco and encaustic painting, in various nations from the earliest times on which history throws a sufficient light to discover the real facts; these are curious and well-authenticated. Fresco, in the middle ages, is the next division of the subject, and it is entered into at some length, as the case required, and many errors in the construction of masonry walls pointed out as things to be carefully avoided by fresco painters.

After these follow several detailed instructions for mural paintings of every description: the various sorts of walls are carefully described, such as ashlar, rubble, brick, brick-lined, lath or stoja lining, trellis, &c., and the fitness or unfitness of these surfaces are pointed out, and reasons given in support of the opinions. Then follow the instructions for preparing the lime for frescos, according to the Florentine, Genoese, German, and French methods. This being a matter of first-rate importance, is entered into very carefully, not only as to the burning and slaking of it, but also as to the proper descriptions of limestones proper for this purpose,—such as Travertine, German, Genoese, Bath (Wick), Vogrie (Scottish), Durdham Downs (Bristol), &c., with a comparison of their various qualities.

The causticity of lime is then treated of fully, and the means of rendering it less caustic described. The

different sorts of gluten used in mural painting are also mentioned, and the method of preparing *caseum* is detailed. This is a cement worth all the cements that have been patented by the last half-dozen Attorney-generals; and it is hoped that the present great law functionary will not allow any *clever fellow* to shut this valuable discovery up from the public under the pretence of having been its discoverer.

The next important matter considered is "the cartoon," to prepare which, full instructions are given, and likewise for preparing the drawing and working drawing to be laid on the intonaco. Then comes the process of laying on the first couch of plaster, and the second over it, the latter being the *intonaco*, tunic, or surface, upon which, whilst wet, the picture is to be painted. The colours suited to fresco painting are also carefully enumerated, and distinguished from those which are not fit for this style of art.

The different methods of fixing the outline of the subject upon the intonaco, either by the stylus or pouncing-bag (*spolvero*), and then the process of painting in fresco, the brushes and other mechanical implements employed, are described. The process is given at great length, showing the different methods resorted to in these operations by various artists. Then the second day's preparation, the methods of getting transparency, loading with colour, glazing, &c.; retouching frescos, the fallacies and evils of this practice pointed out, and instances of its ill-effects described,

as well as those caused by that process of shading called "hatching."

Fresco secco is then described, and the details given of the proper method to be employed in its operations, and also as to the liquid to be passed over the surface for its preservation.

Encaustic painting is likewise fully entered into, and the various substances and machinery used are carefully described, with the methods of fixing the substances together by means of a *cauterium*. It should be observed that this is the first notice of encaustic painting, the details of its materials and processes, which has hitherto appeared in the English language; for it was not any part of the duty of the Royal Commission, to enter into an inquiry on that subject. It will, however, turn out to be a very important feature in our mural, as well as portable paintings, when our artists shall have directed their serious attention to its advantages; every detail is given as to the heaters to be employed, the heating of the walls to prepare the ground for the picture, &c. Then follows a comparison of fresco and encaustic painting, showing the superiorities and inferiorities of each with regard to the other.

The methods of painting in fresco, detrempe, fresco secco, encaustic, mosaic, and aureolous painting, having been laid before our readers, we now come to another class of information not only in strict connexion with these arts, but also one likely to be of extensive usefulness to the public generally as to the construction of

building in masonry. That is, "the prevention of damp in walls." The details of the process contrived by Von Klenze. Those of Thenard and D'Arcet, and of M. Polonceau are carefully given, as likewise a list of the materials employed. The effects of stained glass on fresco is also entered into, and carefully analyzed. A description of several frescos, by celebrated masters, is added to show the difference of style and methods adopted by them. Extracts from a very interesting letter on the same subject, from S. A. Hart, R.A., to Professor Wilson, are added.

Various methods are then described for detaching frescos from the walls on which they were painted: these processes are very interesting to the admirers of high art, because they have been the means of saving many fine mural paintings, and may yet save many others.

In collecting facts and materials for this manual, the Author has consulted many ancient authorities as well as those of the middle ages and of more modern times, not only as regards the historical details, but also of those connected with the materials and processes of the arts described. Of the modern authorities he must say he is much indebted for most valuable information derived from the Parliamentary Reports, drawn up by her most gracious Majesty's Commission on the Fine Arts. He has therefore had the best information at present obtainable on these interesting, and indeed important subjects, and he now

places the result of his labours before the British public, with the hope that it may be instructive to the artists generally, and particularly so to that class who may take these styles of art up professionally, and also that many arts described in it will be beneficial to society through the agency of the architectural profession.

The Author feels much indebted to many literary and scientific friends for hints of various kinds on these subjects, but to Mr. Eastlake, R.A., Secretary to the Royal Commission, does he find himself especially indebted for his valuable advice on several occasions.

The Author has added in an Appendix a sketch of the origin and progress of the Royal Commission on the Fine Arts, with lists of the successful candidates at the cartoon exhibition, and notice of further competitions.

In getting up this work, the Author hopes that he has evinced a spirit of good feeling towards the artists of other nations as well as to those of his own, it was his sincere intention to act on that principle, and his regret would be excessive if this desire should not have been carried into effect. As an Author* he has to thank the public for former favours, and he sincerely hopes that he may be equally fortunate now in obtaining their favourable opinion.

* Translation of J. F. L. Mérimée's work on Oil Painting and on Fresco. 1839. 1 vol. And the Origin, Progress, and Present Condition of the Fine Arts in Great Britain and Ireland. 1841. 2 vols.

CONTENTS.

CHAPTER I.

CHAPTER II.

CHAPTER III.

CHAPTER IV.

CHAPTER V.

CHAPTER VI.

CHAPTER VII.

CHAPTER VIII.

CHAPTER IX.

CHAPTER X.

APPENDIX.

A MANUAL,

&c. &c.

CHAPTER I.

SECTION I.

SKETCH OF THE ORIGIN AND PROGRESS OF FRESCO PAINTING, &c.

In commencing a description of the method and materials employed in the noble art of Fresco painting, we feel it to be our duty to notice, in the first place, the immediate cause of the important and gratifying results that have been so recently produced in the intellectual class of painting in our native school of art.

That cause, to which we have alluded, was the instituting of "The Royal Commission on the Fine Arts;" and we must say, that in whatever quarter that idea may have originated, or by whomsoever the advice to establish that commission may have been suggested to the royal mind, it is quite clear that those who may have advised, and those who carried that advice into effect, eminently deserve the most cordial thanks, not only of the large and influential classes of society, who really value the arts, from being well aware of their high moral influence and intellectual character—but

they are also fully entitled to the gratitude of the whole nation, for thus affording to British genius a full and fair opportunity of developing its mental energies, and of nobly refuting the pedantic calumnies of some continental writers,* who, with much more solemnity than good sense or practical knowledge of the subject, have laid it down as an incontrovertible dogma, "that British intellect was incompetent, in the fine arts, to produce works of a highly intellectual character, or indeed any above mediocrity." Of this assertion, and the other plausible absurdities which those prejudiced authors have placed on record, with respect to this important and national concern, it is only necessary for us to say, that they are highly amusing; because, along with displaying very shallow notions with respect to the true philosophy of the human mind in general, they show, in an extraordinary degree, the most profound ignorance of the British character; but the futility of such crude reveries having gradually become evident, and their total dispersion having now been completely achieved by the British artists in the recent cartoon exhibition in Westminster Hall, we shall dismiss the calumniators of British intellect, not with contempt, but complacency; for on other subjects those authors have done good literary service. Besides, as the victory now rests on our side in this intellectual contest, we can very well afford to be in a good humour with the rest of the world.

Having in our preface described the objects which

* The President Montesquieu, The Abbés Winkelman and du Bos, &c. A person named Waagen, from Prussia, has lately been endeavouring to revive the exploded conceits of the writers above mentioned, but he is a mere pedant as compared with them.

the Royal Commission had in view, we shall now proceed to show the extreme antiquity of fresco painting, and to lay before our readers its true nature and character, as well as that of "Encaustic painting," which resembles fresco so much in all its grander features and appliances, that it may be called "the younger sister" of this noble art; the difference between them consisting chiefly in the vehicle employed to fix them on the walls. These vehicles will be noticed among the materials and methods employed in their operations by artists in various countries from very remote ages, and with as much consecutiveness as may be possible, down to the present time.

SECTION II.

ORIGIN AND PROGRESS OF FRESCO PAINTING.

This splendid mode of beautifying public edifices and first-rate private mansions, has been known to exist practically, from the earliest periods of which any authentic documents relative to the fine arts have reached our days; and all those *data* concur in proving, that this art was coeval with architecture, and in strict union as sculpture also was, with that great division of art.

Of these facts—Egypt, that interesting region, which has long been considered as "the cradle of the arts" affords the most precious and conclusive evidence; proving that the superb temples of that land of early civilization were invariably and extensively adorned with pictorial compositions, in poetry, in history, and portraiture. But as the government of that country was a concentrated hierarchy, that held the arts completely under its control, the Egyptian paintings and

sculpture, always had a direct reference to the religious tenets and public worship of that singular people. Thus the action, expression, and attitudes of the figures representing their deities, or heroes, were restricted within narrow limits and generally incorrect in their proportions, but in their greatest sculptured works, displaying a simplicity of position, approaching to grandeur of style—yet the attitudes being limited to a very small number—and the forms of men, though not the lower animals, having become entirely conventional, and, as it always happens in the arts, when the study of nature is neglected, those inferior representations of living forms became worse and worse every century after they had passed their meridian, which was supposed to have happened in the time of Sesostris, about 1300 years before the birth of Christ, and from the accession of the Ptolemies, the downward course of Egyptian art was gradual, but never interrupted for a moment.

But if arbitrary interference with the natural progress of the human mind, damped and frustrated the natural genius of the Egyptian people,* by forbidding the exercise generally of those powers of intellect which it is clear they possessed; yet the solidity, and permanence of the works of their hands are truly surprising; and thus it is that their knowledge and industry have left us the most valuable links in the chain of art, from its earliest dawn of existence;—of this fact each successive traveller adds volumes of evidence to those already be-

* The recumbent lions in red granite, brought from Upper Egypt by Lord Prudhoe, and presented to the nation, now in the British Museum, are very noble specimens, though somewhat dilapidated, of true and high feeling; the treatment also, as sculptures, is broad and masterly in no common degree.

fore the world; from such authentic and valuable sources it is that we find in numerous instances, the frescos of Egypt must have been painted more than two thousand years before the commencement of the Christian era, and yet they retain all the brightness of hue, and freshness of tone, which they received from the painter's hand; and some of their representations of processions, scenes of domestic life, animals, &c., not connected with their religious ceremonies, display a range of fancy, and a knowledge of expression, much superior to the paintings found in their public buildings.

In the palmy days of Egypt their frescos were painted upon the smooth, but not polished surfaces of the stone walls, or columns, as it might be required; the vehicle, or liquid employed, was a finely prepared size, formed chiefly of the yolks and whites of eggs, which were intimately blended together with a little vinegar.* This substance, when properly made, forms a very lasting gluten even in our climate, and in the ever dry "land of Egypt," it appears to be impervious to atmospheric action, and in fact to yield only to actual violence.

The Egyptian style of fresco painting, it should be remarked, was materially different, like their architecture and sculpture, from that which was afterwards practised in Greece and Etruria; more widely still is this difference seen in the methods and materials adopted in Rome under the emperors, whilst a still greater revolution of ideas and practices is observable in the style of the frescos, which, on the revival of literature and the arts, were called in to adorn the temples of Christianity: and which with a very slow progress, that is to

* It should be borne in mind that the albumen (white of egg), used alone, will crack in a few years.

say, in about four centuries, attained under the great Italian masters of the *cinque cento* to a grandeur of conception, correctness of design, a power of developing the beauty and gracefulness of the human form, together with a truth of expression, unity of action, richness of colouring, and effect, until then unknown in painting, and which up to this time, remain unrivalled.

SECTION III.

GREEK FRESCOS AND ENCAUSTICS.

The Greeks, who appear to have derived some elements of the arts from Egypt, left all competitors behind, by adding their own good taste to the principles of art, then not well established, but of which they attained the true limits in sculpture by the celebrated statue called "the canon of Polycletes." In these intellectual pursuits the Greeks were greatly favoured by their free institutions; which happy circumstance, as under the British constitution, left the human mind unshackled, to find its proper level according to its natural tendencies, its moral and mental qualifications.

The greatest painters of Greece were, it appears, frequently engaged in painting grand historical and poetical compositions upon the walls of the temples and other public edifices of their country, as we are informed by Pausanius, Pliny, and other eminent writers. Some few fragments of the Greek frescos* have reached our days, and they exhibit a vigour of

* In the Royal Museum of France is preserved a portion of an antique mural picture. It represents Apollo and Marsyas; it is painted on a gold ground. Such a ground was occasionally used by the ancients.

thought and beauty of style characteristic of the principles of Grecian art. The Greek artists for some cause not well explained, gave a preference to "Encaustic painting" for their largest works on walls. This mode of painting is wholly different in its *process* from that of fresco, and likewise in *the vehicle* with which the colours are combined and united to the wall;—it is by some writers* considered to be more lasting than fresco, besides affording richer tones of colour, and more powerful effects in *chiaro-oscuro:* an account of this process will be found in Chapter VII. of this work.

Pliny informs us (L. XXXV., cap. 9) that Lysippus the painter, who preceded Pamphilus, the master of Pausias and Apelles, executed a work of this kind at Egina, and that he put an inscription under it, stating that he had himself subjected the work to the action of fire—an agent that appears to have been indispensable to the success of Encaustic painting.

We also learn a curious fact from Solinus (L. I., p. 49), who states that the celebrated painter Apelles, had painted a temple at Pergamos, and that some years after his death, the temple having been from some cause neglected for a time, bats and noxious insects did mischief to the pictures—until at length the people of Pergamos, being determined to preserve these masterpieces of art, bought for a very large sum, the dead body (preserved) of one of those serpents called *basilisks*, and had it suspended by golden cords in front of the works of Apelles, that the sight of it might drive away the obnoxious creatures, and thus assist in preserving this portion of the public wealth.

Pliny also informs us that Polygnotes had executed

* *Vide* Emmeric David, "Historie de la Peinture."

several paintings upon the walls of a temple of the Thespii; after many years the pictures were damaged, and the Thespians sent to invite Pausias to restore them, which he did admirably. Many more facts might be adduced from ancient writers, to show how much this art was honoured by the most enlightened people of antiquity, but these will serve to display the honest pride with which the Greeks regarded and preserved the works of high art in the respective states of their confederacy.

The Phœnicians also, then the most commercial people in the world, who have rightly been styled "the universal traders,"—they were likewise, we are told from high authority, "cunning workmen;" and that their knowledge in the sculptor's art must have been very considerable, is evident if only the fact of Hiram king of Tyre having cast the brazen sea for the Temple of Solomon be considered; for the knowledge of art must have been considerable, and of long cultivation amongst the people who were capable of producing so ponderous a work, which, indeed, even in our days would be considered a very difficult casting.

The numerous fleets of merchantmen from Tyre, Sidon, Carthage, &c., carried the arts from Egypt and Palestine into Asia Minor, Etruria, and the coasts of the Mediterranean generally; and may have, as long since has been conjectured, extended their commercial enterprise even to the great Western Continent afterwards rediscovered by Columbus, at a period long antecedent to the Christian era; which intercourse was afterwards lost, and even the memory of it forgotten, in consequence of the destruction of the Carthaginian power and nationality by the Romans,

which eventually annihilated their commerce, and of necessity put an end to their cultivation of the fine arts; although they carried the germs of them into various countries, where, having been matured, they have in a lapse of ages beautifully developed their high moral and intellectual qualities to the honour and profit of those nations who have had the wisdom to give them due encouragement.

SECTION IV.

FRESCO, ENCAUSTIC, AND MOSAICS, IN THE ROMAN EMPIRE.

In this section we approach much nearer to the theory and practice of these arts, than could be obtained from the earlier authorities; and we also find unhappily that they were less respected here, than in other lands.

The Romans, an insatiate, and always a semi-barbarous people, amongst whom the arts of civilization never had much extension, did not look upon the fine arts at any time with admiration, or even respect, if we except architecture, which the wealthy amongst them appear to have considered merely as a vehicle for displaying their vain and ostentatious love of exhibiting their wealth. Even this art they picked up from the Greeks, and soon corrupted its grand and simple principles, and fashioned it to their own climate and purposes. Still it was in the hands of Greek workmen, who being supplied with large means, derived from the plunder of other nations, erected numerous and sometimes grand edifices, both public and private, but never with the purity of taste that ever distinguished genuine Greek architecture.

Painting and sculpture, however, never were looked upon by this semibarbarous race, as intellectual pursuits;* the Roman people were too coarse-minded to conceive how these peaceful arts could confer wealth and honour upon a nation without fighting for them; "dull as night, and dark as Erebus," in every thing but war and rapine, they looked upon the arts as merely decorative occupations, which required nothing more to carry on their operations than mechanical skill, and a power of dexterous manipulation; and to this classification the very noble arts of fresco painting, encaustic painting, and sculpture, were consigned.

That ingenious and tasteful people the Etruscans, were the first who introduced fresco painting and the other arts at Rome. Greek artists afterwards brought in a grander style, and an improved practice, which was tolerated under the pagan emperors; and from the specimens discovered at various times, these paintings were evidently executed at an era when the Greek style had not yet been overlaid by the barbarous corruptions which submerged it in the age of Constantine. For when the arts which had been cultivated from their birth to maturity by the Greeks, and had long honoured, adorned, and enriched Greece and "its beautiful Isles," were dragged as captives at the chariot-wheels of the Roman conquerors, to serve in ornament-

* That very fact proves the low tone and confined calibre of Rome's national mind—brute force was their only implement. And even Virgil (not a Roman) encourages them to despise the sculptures and other liberal arts of Greece; and tells them to "be satisfied with being the conquerors of nations and masters of the world." Where are now their conquests or mastership of the world? The glories of Greek arts have survived them all. Greece is a free nation, and Rome is sunk in imbecility.

ing Rome and other Italian cities, they were looked down upon by those military barbarians; and these ennobling arts, with their possessors, were regarded in no other light than as *mechanical*, and *mechanics*. Thus misunderstood and maltreated, they naturally sank to a level with the heavy and gross ideas and requirements of their new masters; consequently a barbarous system of adorning the palaces and mansions of the wealthy Romans put gradually to flight every vestige of good taste in the pictorial art, and then gaudy colouring, mosaics, and gilding in profusion, usurped the place of intellectual beauty, grace, truth of nature, and expression.*

The constantly increasing progress of luxury contributed also to the degradation of good taste, genuine art was attacked, as it were, vitally. Pliny and Vitruvius have strongly expressed their regret, that the wealthy people of their time, who ornamented their immense mansions with paintings, preferred the false splendour of gaudy colours of the most rare and costly description, to the mental fascinations of fine compositions, or nobleness of expression and purity of design. "The ancient masters," say these authors, "were admired for the real beauties seen in their works; whilst those of the present period are only distinguished by the enormous outlay in which they involve their employers." This vicious practice originated when painting, having departed from its moral and true character, was looked upon merely as a simple means of decoration. Heliogabalus, Gallienus, and Aurelian†

* Even at this period some works of art were executed in fresco and mosaics, by Greek artists, which would be creditable to any age of Greek art.

† The barbarian who ordered the sublime Longinus to be assassinated for having dared to defend his country's independence.

especially, as well as their successors, favoured this movement by their inordinate ostentation and love of vulgar parade. Gold and vermilion were plentifully distributed through the paintings with which the walls of the palaces were *covered*, not adorned, and these gaudy incidents formed the chief merit of those works in the eyes of the ignorant judges of art. Quite satisfied if he could dazzle the eyes of his admirers, the painter neglected to elevate the thoughts and speak to the heart; soon, therefore, the canons transmitted down, for that purpose, from the ancient schools being neglected were forgotten.

It was that strange desire for novelty and for extraordinary things, which began in the time of Augustus Cæsar, that led a great many of the rich patricians to prefer the fantastical patterns, which ornamented the drapery stuffs of India, to the poetical, elevating, and expressive subjects of the Greek artists. Similar to this was that vulgar love of display, which commenced just previous to the reign of Claudius, and infected the Romans with a strong desire to employ mosaic painting, which previously had been only used for floors, to decorate the walls, and soffits of arches in their great mansions. And in this mechanical art Commodus caused the portrait of Pescenius Niger, to be executed. The brightness of the marbles, fine stones, gilding, and coloured glass, which entered into the composition of this sort of pictures,* and, perhaps, the extravagant price of the work was a further inducement to shallow minds,

* This false taste will recall to the minds of some of our readers the celebrated observation of Apelles to his pupil, who had painted Helen decked out in a profusion of jewellery, "O young man," said the judicious artist, "not being capable of making the lady handsome, you have made her rich."

which could not consider any thing fine that was not rich and gaudy.

SECTION V.

ARABESQUE.

It was in the times of Marc Antony and Augustus,* that the style known as Arabesque painting was originally introduced at Rome. The models, or patterns for this class of ornament, came originally from India to Egypt, where the Ptolemies had established manufactories of printed cloths, of a very similar sort to those known as "India patterns." It has generally been believed that *Arabesques* are of much later date, but the mention of it expressly by Vitruvius, Apuleius, and Claudian, leave no doubt on the subject. The first-mentioned writer complains seriously of this new style of painting, which he considered to be equally contrary to the true principles, as it is to the moral tendencies of art. These *Arabesques* presented to the eye, little more than what we call, laying in the first painting, or dead colouring of a subject, and by no means offered careful and exact imitations of the objects intended to be represented; but, to make up for its want of true beauty, it was made to glow with gold, azure, and scarlet,—the tints of the emerald, the ruby, the sapphire, amethyst, and beryl, were mingled in the greatest profusion amongst innumerable and equally unintelligible devices; the

* At this time also, painting on walls in size colour (afterwards varnished) was introduced at Rome. At the same period, luxury required that the apartments which were not hung with the richly-coloured cloths of India, should be completely covered with ornamental paintings.

whole interior of the state apartments in those great edifices were made to resemble walls and ceilings covered with gold, and inlaid with the most brilliant and costly of the precious stones. Amongst the Mahometan nations, this florid style of decoration has always been in high reputation, and has been employed extensively in their mosques, palaces, and harems. The Moors in Spain were the greatest admirers and patronizers of this dazzling nonentity of painting, and they have left in that land of misrule some of the finest specimens of their fancy in this art: of these remains of Moorish magnificence, the celebrated palace of the "Hambra," near Cordova, not only is the most remarkable as to its architecture, but is also the finest specimen of Arabesque work in existence.*

This great corruption of taste continued, and rather increased under the various successors of Augustus; of that fact, the remains of such of their gorgeous palaces as time and violence have spared, give sufficient evidence. The baths of Titus, of Carracalla, and those stupendous Thermæ of Dioclesian,† and his palace at Salona, or Spalatro, which cover a space of fifteen acres,

* A most accurate and satisfactory knowledge of this splendid ruin may be obtained by consulting Mr. Owen Jones's admirable and valuable work on this interesting subject.

† From Maximin to Dioclesian, the greater part of the emperors erected monuments, the dimensions and richness of which may well astonish us. In every province and city they consecrated portraits and statues to themselves. A statue of silver was erected to Claudius II., which weighed fifteen hundred pounds; likewise one of gold, ten feet high. Tacitus consecrated three statues of silver to the memory of Aurelian; Gallienus ordered a statue of himself to be erected larger than the colossal one of Nero, with a quadrigia proportionate to that immense figure. He died, however, before it was completed, and the work was abandoned.

are imposing monuments of Roman grandeur. They present to the eye extensive and regular plans, majestic vaultings, grandeur of profiles, and a profusion of the richest ornaments, sufficient to astonish and confound in some degree the human mind. But good taste has evidently not been always the guide to the mind in the construction, and still less in the decoration of the several parts of these edifices; the fragments of sculpture are in a feigned, affected style, and incorrectly drawn, showing that bad taste prevailed in every walk of art.

SECTION VI.

THE BYZANTINE STYLE.

The various causes of this decay in art, acquired still greater force under the successor of Dioclesian, whose accession to the purple made important and extensive changes in the religion and policy of the Roman empire.

Constantine, who became a convert to the Christian religion, did not adopt either the true spirit or the manners of a Christian.*

* Directly after having overthrown Maxentius, who was a pagan, he allowed the cities in Africa to dedicate temples to the princes of the Flavian family, and to allow the base and grovelling senate of Rome to decree divine honours to himself; more ostentatious than Dioclesian, who, in that respect, had far surpassed all his predecessors, Constantine was vain enough to wear constantly rich robes of gold tissue, a golden diadem loaded with pearls, a gold collar and bracelets, &c. The princes, his sons, were attired in a manner equally effeminate and oriental. On his entry into Rome, after having defeated Maxentius, he caused medals to be struck (A. D. 315, &c.) to commemorate his victory. On these he is represented with his head veiled, and qualified as *Divus Constantinus, Sol invectus comes*, &c.; Euseb. Vit. Const. Eutrop., &c.

Instead, therefore, of displaying these features so very essential in the character of a truly Christian believer, this emperor was possessed with an extraordinary desire, a sort of *cacoethes* for city and church building. If, therefore, to conduct the arts to the highest state of perfection, it be sufficient, as sometimes has been advanced, to distribute amongst these professors great works whereon to exercise their talents,—the reign of Constantine would have been one of the most glorious in the annals of the arts; for the emperor choosing to remove the seat of empire from Rome to Byzantium* an ancient Greek town on the Bosphorus, rapidly raised an enormous city for that purpose. Here, then, was an incident never to be forgotten—which gave an opportunity to the artists of Greece and Italy to develop all the resources of their genius.† This master of the world, who was most anxious that the Rome of his creating should quite eclipse the grandeur of the ancient capital of his empire, dispersed his treasures profusely in its embellishments. The extensive marble quarries of Phrygia, and the Island of Preconnessus were already exhausted in this object. Not less than fourteen palaces, for the emperor, his sons, and his ministers; an equal number of temples for Christian worship; a vast forum surrounded by a peristyle, terminated by two grand triumphal arches; within it a lofty column with a colossal statue of the emperor; a second forum equally vast, called *Augustæum ;* a

* This place gives name to the Byzantine style of architecture and decoration, which put the Arabesque out of fashion in those countries.

† The Fine Arts were regarded in ancient Greece as being well worthy the best attention of its legislators; but at the time Constantine mounted the throne, the fine moral causes of the glory of the ancient masters no longer existed.

hippodrome; eight public baths;*—all these monuments, and many others, were constructed and decorated under the superintendence of the pompous head of the state. The *chefs-d'œuvres* of the arts, dragged from Greece, Rome, and Asia, were not enough to ornament his new city. Constantine ordered a vast number of pictures, statues, and bas-reliefs to be executed, to represent Jesus, the Virgin, the prophets, apostles, &c. Marble, bronze, and gold, displayed on all sides to admiring crowds the triumphs of this prince; his statues, and those of his mother, his children, his favourites, and of several wealthy Romans who had contributed to the embellishment of his new city,† now called Constantinople; and at the same period he commanded that churches should be built in a great number of places. It has been justly remarked that Pericles, Augustus, and other celebrated men have expended sums of money, far less considerable on improvements, and have been immortalized by them; whilst, on the other hand, the works left by Constantine strongly attest the degradation into which the arts had fallen, and continued during his time.

This was the epoch in which that style denominated "the Byzantine"‡ rioted in all its false glory.

* For these he deserves much commendation.

† One batch of statues which he had stuck up and down, in the cathedral of Santa Sophia, amounted to four hundred and twenty-seven; the greater part of these had been taken from Greece and Asia. They were chiefly the *deities* and *heroes* of *paganism*; others were intended to represent *Jesus Christ*, the *Virgin*, *St. Helena*, Constantine, and divers princes—"a goodlie companye," says an old writer. That it might be, but certainly a most incongruous mixture. Some of the masterpieces of the greatest sculptors of Greece were *grouped* with the clumsy, mechanical, carved images of the Roman workmen.

‡ In this style the groundwork or surface of the wall was richly

From the time of Septimus Severus the despotism of the Roman emperors fell heavily on the Greeks, and overlaid even the germs of public prosperity amongst that interesting people; the natural ardour of their minds was discouraged, emulation destroyed, and from that era painting, sculpture, and architecture constantly degenerated; so that, when Constantine came to the throne, the causes which led to the moral glory of the arts, and the renown of the ancient masters, had wholly disappeared.

Hence it will not be difficult to comprehend the debased character of the arts at this period; confused forms and allegories inexplicable, as they always are, were mingled in a sort of mechanical arrangement, we must not say order, with coarse, often ugly, frequently frightful, but always incorrect representations of the human countenance, the lower animals, reptiles, and other objects of natural history. These heterogeneous mixtures of incongruous and discordant parts were, however, the *fashion* of that day. The noble, ancient style of painting was looked down upon with disdain by the semibarbarians who directed, and the sordid manipulators, not artists, who executed these gaudy fermentations of decaying intellect. And, as if to make those manifestations of their imbecility indistructible, they had these sordid devices imbodied in the solid marble incrustations on the walls, ceilings, and soffits of arches of the Christian temples, and all the other great edifices of Constantinople. Procopius*

gilt, and upon that, scriptural subjects were inserted in mosaics, painting being very rarely employed.

* Procopius was an historian and monk, of the Lower Empire, who wrote in the time of the emperor Justinian.

with great simplicity, when boasting of the works set up by these emperors, tells us that "the pictures which adorn the grand vaulted ceilings of the churches and other public edifices, are not, as formerly was the case, painted with a composition of wax, and imbodied firmly with the surface of the wall by a strong heat; they are now composed of small cubes, which sparkle with great brilliancy.

This refers to mosaic painting, which had, from very humble beginnings, long been creeping into the track, and gradually displacing the noble art of fresco, which had been carried on from the days of the great Greek artists, as we have seen, until the vulgar minds of the Roman emperors, and debased people, strangely corrupted, and eventually destroyed amongst this race the intellectual character of the arts.

SECTION VII.

MOSAICS.

Of this spurious style of "painting," as it was then called, there were two descriptions,—namely, *opus tessellatum* and *opus sectile*. In the first sort coloured glass was chiefly used, in the second marble only, which was cut into the form required by the pattern.

It may not be superfluous here to remark that the essential merit of mosaic work, in its best state, consists in its durability; when used as a means of transmitting fine pictures from perishable surfaces, they thus become almost indestructible. But it is by no means a vehicle which a man of genius could employ to imbody at once the creations of his mind; with pictorial originality it therefore has no connexion; consequently

its operations must be confided to a class of subalterns, —in fact, workmen whose only merit consisted in a dexterity of hand, acquired by experience, but from whom, if they should venture out of the beaten track, and attempt original composition, it would be absurd to expect any thing like purity of design, grandeur and elegance of thought, true effect, or harmony of colouring; indisputably they would degrade and impoverish even the inferior designs of their contemporaries, and thus in proportion as the principles of the ancient, and good style of painting were neglected, to give this mode a preference, so the fall of the arts became rapidly accelerated.

Had great riches ever been a guarantee of good taste, then most assuredly Constantine might have patronized noble works, and some men might have acquired immortal renown:* but this emperor only solved that problem, he clearly demonstrated that immense wealth did not necessarily create, or even preserve good taste; although if the resources of wealth were applied in aid of the truly intellectual creations of the liberal arts, the nearest approach to perfection would then be achieved.

As it was, however, nothing could be done to convince this pompous monarch of these errors; consequently all the temples, public edifices, and great mansions of Constantinople, and other great cities under his influence, had their walls incrusted with various and richly coloured marbles, and further enriched with paintings, such as they were, sculpture equally crude, a profusion of gilding, and mosaic work, prodigiously magnificent according to the spurious notions then prevalent, and this Byzantine style continued down to the middle ages; and

* Many facts prove that Constantine did not employ the ablest artists of his time.

of this manner, Venice perhaps, of all the modern cities still possesses the best examples.

It is a very curious fact, and worthy of being well investigated by a philosophical historian, that although that branch of Christianity, "the church of Rome," greatly favoured the advancement of the arts, under the pontificates of Benedict XI., Julius II., and Leo X., yet, at the epoch when the Christian faith, under Constantine, triumphed over the ancient superstitions, the immoderate zeal of the Christians produced the most disastrous effects upon works of genius. The emperor, after having proclaimed to the full extent liberty of worship in his vast domains, soon afterwards interdicted his pagan subjects from sacrificing to idols, and caused these images to be broken and then shut up, dismantled, or utterly demolished their temples. In the sanguinary punishments which the Christians were so eager to execute upon the vanquished party—the inanimate gods of antiquity had their share of vengeance—the most beautiful works of Grecian genius were, if of bronze, thrown into the furnace,—if of marble, laid in the streets and roads for the waggons and other vehicles to crush them into dust. When any of these statues were transported to Constantinople, it was publicly announced *that they had been strangled as criminals*, and that they were sent to the capital for the purpose of being exposed to the ridicule of "the Faithful."* This very ridiculous and barbarous zeal of Constantine was followed up vigorously by most of the princes who succeeded him, and especially by Theodosius the Great, than whom perhaps a greater ruffian never existed. The sound of the sledge-

* The Roman empire at this time, has been considered little better than a "vast Lunatic Asylum," so far as the fine arts were concerned.

hammer during his reign and for long afterwards, was heard throughout the Roman empire, demolishing not unfrequently the finest works of Phidias, Praxiteles, Polycletus Callimachus, Scopas, Myron, &c.

In this savage *fashion*—for it was then *fashionable* to overthrow the works of resplendent genius—almost all the models of fine taste were annihilated; and these unhappy circumstances soon introduced amongst the schools of art the most fatal vices, which are sufficient to ensure the total ruin of art,—particularly a practice which we regret to say is more or less to be found in every school of painting in Europe at this day, though in a much less degree than it existed fifty years ago. This vice is the habit or manner contracted by the degenerate Greeks of that time, when they left off studying the living models, and painted entirely or designed, merely from their own imagination, or *recollections of nature.* There are in fact two sources of errors, equally dangerous to good art; one is "presumption," which leads an artist into the belief that, as the human models are all more or less imperfect in some parts, he ought only to consult his own ideas on the subject, and that by so doing he would be able to create forms of a preternatural beauty. The other great fault is "negligence," which prompts him to imitate nature *from recollection* for the purpose of accelerating his work, and diminishing his fatigues.* But he should not deceive himself, whether *presumptuous* or *negligent*, whenever the artist turns away from living nature, and thinks only of following a model conceived in his own imagination, he has then in fact no other guide than his memory.

* Labour is the price which the gods have fixed on every thing valuable.

Those who flatter themselves with the idea of improving, or embellishing "the human form divine," by forms unknown to nature, greatly deceive themselves; for should they not trace the objects they have seen in nature herself, or in the fine imitations of that source of beauty, they will only create monstrosities;—a correct memory may sometimes, no doubt, reform parts of the living model, but it can never supply its place. These two causes of error lead to the same unhappy termination: the painter who habitually allows himself to make designs without placing the human model in his view, departs constantly from the truth—for the same forms are reproduced each day by his pencil; abandoned to mannerism, he soon finds this machine to be his master, and he cannot lay it aside. His productions are besides, nerveless, cold, and conventional; and though some excellent parts may be found in his pictures, they never excite any of the lively and agreeable sensations which truth alone is capable of making us feel.

The mere love of gain, likewise, contributed very much to the ruin of art. Libanius relates that in his time the youth of Antioch would have abandoned the schools of the rhetoricians and philosophers, if the professors had required the smallest compensation; but that on the contrary they paid most cheerfully for their lessons in drawing and painting. The teachers in these arts gained considerable sums, which they often spent in luxury and extravagance. "By what artifice," he adds, "do you suppose they captivated their votaries? *They taught them to paint rapidly!*" The arts of design, therefore, became very much diffused, men of mean and sordid *notions*, not minds,—as now and then happens amongst ourselves,—dishonestly took upon

them the office of teachers in these charming arts: the eager desire to get money and the real ignorance of these incapables, caused them to adopt every species of quackery, and consequently their unhappy dupes were taught only false principles and bad taste.

In stern opposition to such base and injurious practices, should they unhappily exist amongst us, we would quote the invaluable advice of an ancient writer of great eminence; his words are, "Artists, men of letters, do not by any means hasten the execution of your works: Phidias produced masterpieces of art, which he could not have achieved, had he not employed sufficient time about them."*

Such was the state of the arts under Constantine and his sons. A display of gaudy richness of colours and materials was preferred to chaste beauty—the simple grace and grandeur of the Grecian antique was proscribed by the barbaric pride of Rome. And in architecture, nobleness of style had disappeared under heavy forms, loaded with ornament. In painting, drawing or design was wholly neglected, the study of anatomy abandoned,—draperies being easier managed, still presented some remarkable traits of the good style; the head still displayed an air of truth, and even of just expression, but the outlines of the figures were mostly poor and heavy, the articulations of the joints especially, manifested a falling off, a want of anatomical propriety; and this radical vice, exposing as it did the ignorance of the designers, demonstrated more than any thing else that the career of degradation in the arts progressed, but had not yet terminated. It was about this time also, that the Byzantine style of

* Themistius, Orat. xxv., p. 310.

art was in its meridian—of course nothing further need be said as to the corruption and bad taste by which it is characterized. No doubt all this charmed, as superficial finery ever will, the mass of people sunk in vice and barbarism, but to the eye of true taste it presents no intellectual charms, from which genuine art could derive any advantage.

FRESCO IN INDIA, AMERICA, &c.

Very numerous examples exist of the remote, as well as more recent employment of fresco in the temples, extensively spread over the vast region of India, but they do not offer any features of superior art; symbols and allegories connected with their system of polytheism, are the chief subjects of their graphic attention and exertions, and there display a profusion of barbaric ornaments and gaudy colouring, gilding, &c., expensive but not refined, as our recent publications on India clearly demonstrate.

CENTRAL AMERICA.—Mexico and Yucatan, are remarkable for the immense masses of fresco painting found in the tombs and temples of those countries. With respect to those found in Mexico Proper, the reading public have long been made acquainted; but those of Yucatan* have very recently been discovered, and although the frescos found in the vast ruinous buildings of beautifully-wrought stonework are not of a higher grade of art than those usually found in the Egyptian ruins, to which by the way they bear a striking analogy, yet they

* Yucatan is a peninsula, about the size of Ireland. It is situated to the northward of Mexico, opposite to the isle of Cuba, and between the bays of Campeachy and Honduras.

afford another convincing proof of the strong affection which the human mind has ever displayed for the pictorial art, and also of the inseparable union that has ever existed in the human mind from the earliest dawn of civilization; with regard to the three great sections of the fine arts, painting, sculpture, and architecture; and in regions vastly remote, and widely different from each other in soil, language, habits, and climate. In further corroboration of this view of the subject we offer to our readers an interesting extract from a work very recently published.

"The interior of some of the most important of these rooms are finished in a beautiful white composition laid on with the greatest skill. *Fresco painting* in these rooms is also observable, and the colours still in good preservation, sky-blue and light green being the most remarkable; figures in various characters are discernible," &c.—*Norman's Visit to the Ruined Cities of Yucatan.* New York. 1843.

CHAPTER II.

SECTION I.

FRESCO IN THE MIDDLE AGES.

HAVING traced the progress of fresco painting from its perceptible origin, through numerous centuries, regions, and peoples, the latter widely dissimilar to each other in language, manners, and customs, we now arrive at the period when this most ancient and admired art was resuscitated, like as it were a phœnix from its ashes; into which cinerous condition it might be said to have been reduced in the corrupt epoch that manifested its approach in the time of Augustus Cæsar, and attained its acme of false principles, ignorance, and bad taste, under Constantine and his immediate successors.

The renovation of fresco, like the upward course of art at all times, was extremely slow, for it had continued during so many ages in a state of subordinate, or, in fact, degraded existence, that it was merely considered as a handmaid in the mechanic art of decoration: regarded therefore with strong prejudices from the fact of its being seen for centuries always in inferior company, it cannot excite any wonder that its fitness for any better situation must have been very much doubted; conse-

quently it crept on in this obscure entanglement, chiefly employed in the representations of saints in various states, either of beatitude or torture, and reached at last that climax of bad taste—*representations of Christ naked*,* *with spike-nails driven through his hands and feet* to fasten him on the cross. Many other of those pious frescos were even more barbarous, absurd,† and disgusting, not only as to

* Not only naked as to garments, but quite denuded of all beauty, grace, and majesty. At a much earlier period—viz., in the fourth, fifth, and early part of the sixth century, we find frescos of a superior character at Rome. They are in the catacombs of St. Callista, St. Marcellin, St. Agnes, St. Priscilla, &c. Some of the figures are remarkable for the elegance of their forms, and good taste in composition; amongst them Jesus is represented as "the good shepherd;" with a Pandean pipe; in others, as Orpheus, with a Phrygian bonnet, and playing on the lyre, with which he charms the surrounding animals. Their elevated style shows that they are by the hands of Greek artists. The Crucifixions, however, did not come into *fashion* until the middle of the sixth century, and France has the credit of this invention. "Gregory of Tours mentions one which had recently been set up in the cathedral of Narbonne. The Saviour was quite naked, and the bishop caused a curtain to be placed before it. This is the earliest on record."—*Emmeric David*, "*Histoire de la Peinture.*"

† It was at a much later period that painters ventured to represent "the Eternal Father" under a human form, and to enclose that pure essence in a carnal body! It is to the happy confidence of some French artists that the Christian world is indebted for the first attempt to represent that which reason tells us cannot be represented, and which good sense will ever restrain its possessors from attempting, and to which misrepresentations the common sense of mankind had, up to that period, shown very great repugnance. The work in which this rare specimen has been discovered is a large and handsome folio Latin bible, on vellum; in the *Cabinet Royal de France* (No. I. Manuscrits Latin). This work was given to Charles the Bald by the canons of the church of St. Martin of Tours, in the year 850. "The Eternal" is painted four times in the first miniature, which is divided into three parts; viz., speaking to Adam, whom he has just created, touching the side of the first man who sleeps—presenting Eve to him—and calling the guilty pair after they have eaten the forbidden fruit. The Creator is represented as a man of about thirty years,

the subjects, but the treatment of them; and as it would only fatigue our readers, without offering them any adequate advantage, to enlarge upon this state of the arts, we shall go directly to a period when fresco painting once more disencumbered itself from the chaos of bad taste and barbaric ornament, in which it had for so very long a time been enshrouded, to take its lofty station in a higher degree than it had ever before attained.

This pleasing change did not become apparent until the time of Cimabue,* although the Emperor Charlemagne had laid down positive regulations for raising the sums necessary for rebuilding or repairing churches, &c., and for ornamenting them with paintings; yet at the same time he unwittingly caused immense mischief to the arts, by the military system he introduced of clothing his troops in heavy armour; this innovation was imitated all over Europe, and quite destroyed whatever remained of sound or just ideas relative to the symmetry or beauty of the human form.

The revival of learning in the ninth and tenth centuries, was extremely favourable to the restoration of good taste in the fine arts, a reformation which was beginning to be required, in the same degree that the minds of the people became enlightened, and fresco, from its cheapness, durability, and grandeur, became the favourite vehicle, in preference to encaustic and *détrempe;* for, although the mixing of oil with colours was known in the eleventh century, it does not appear that this combination was in any request as a vehicle for pictorial operations until after the time of John

without a beard, feet naked, clothed in a blue tunic, with red and gold mantle, round his head a golden nimbus, bordered with red. He holds a sceptre in his hand!

* About A.D. 1230.

and Hubert Van Eyck, who made so great an improvement in it, as to render it quite subservient to the artist's wishes, and these artists have consequently been denominated "the inventors of oil painting." (1420.)

A vast number of abbeys and cathedral churches, chiefly in Southern Europe, and many in England, called into activity the knowledge that then existed in the arts, and thus the artists gradually increased in numbers and practical skill; the general taste also became improved as knowledge, literature, and science, expanded.

The Crusades, also, eventually produced a favourable influence upon both literature and the arts;—the pious activity which was excited against the infidels, although it did not rescue the Holy Land from the Moslems' grasp, except for a short time, produced effects, perhaps, as beneficial to mankind by the improvements which this immense commotion led to in arts, literature, manufactures, and commerce, during that period which lasted above a century. The monarchs, princes, and nobles, who returned from the eastern crusades, many of whom were men of superior minds, saw much that they perceived might be introduced with advantage amongst their own subjects and tenantry. Thus a new style was introduced into architecture, one very superior to that of the former massive edifices, which were various modifications of the debased Roman style. Lightness and elegance being thus introduced, the religious edifices were found to be much better calculated to exhibit pictorial compositions than the previous style;* and thus the art of

* The abbey of Clugny (near Maçon, in France), rebuilt 1130, was one of the first great ecclesiastical buildings into which the pointed style, or lancet window, was introduced. The storm of the French

fresco painting received a powerful stimulus, which a succession of causes kept alive for above four centuries; and although from various causes, not necessary to be stated here, that excitement has long subsided, yet the practical knowledge of this art has been well preserved, together with accurate theories of the various methods adopted at different periods, and all the colours and materials used in its operations, a complete account of which will be laid before our readers in the course of this work; but it is requisite that those whom we have to instruct should know that although the artists of the twelfth, thirteenth, and fourteenth centuries employed the same sort of materials, and used similar modes of operating to those now in use, in the production of their works, that nevertheless their knowledge of the best principles of high art were very limited in many respects. Their intentions, however, were of an elevated character, nothing sordid, mean, or vulgar, in character or sentiment, was ever permitted to intrude into their compositions, which were numerous, the subjects for the greater part being taken from sacred history.

The gradual progression of the art may be traced with much regularity by the specimens of various ages which still ornament the situations where they were originally placed, from before the time of Cimabue, to the resplendent works of L. da Vinci, Raffaelle, M. Angelo, Correggio, &c., and, in fact, to a much later period, for we are not aware that the practice was ever wholly discontinued even for a single year in Italy. Those produced in the *cinque cento* were the great mas-

revolution, in 1790, damaged it very much; but the original large frescos of its lofty walls still remain in tolerable preservation.

terpieces of fine composition, purity of design,—that is, correct and elevated drawing of the living model, propriety and harmony of colouring, the *chiaro-oscuro*, or masses of light, opposed to masses of shadow, were not so much the subject of the artists' attention, but unity of action and truth of expression in form, countenance, and attitude, were strictly required.

To such of our readers as have not seen the works alluded to, which have stood for many centuries as examples of the durability of fresco painting, are several by Giotto, at Assizi, at Pisa, &c. At Florence, those of Benozzo Gozzoli, Massaccio, A. de Fiesole, &c. Of P. Perugino at Perugia, of Avanzo at Padua. At Rome, Siena, Orvieto, Pisa, &c., there are various examples in good preservation. All these belong to the fourteenth and early part of the fifteenth century, and, therefore, are interesting in a variety of ways; some have stood very well for six hundred years, others in rather less time have been injured by damp, but the chief cause undoubtedly is, that the latter have been painted on badly prepared walls, a circumstance which, however strange it may seem, is very common in Italy, for it appears but too evident, that Roman masons always rely too much on thick coats of rough cast or plaster to cover the irregularities and defects of their workmanship; and this slovenly practice appears to have existed amongst them for at least five centuries, to the injury of some and ruin of other fine frescos. In fact, Signor Colombo, of Rome, a person of great experience, declares that "the Roman masonry from the cottage to the palace, is the worst in Italy." And Mr. Professor Wilson further remarks that, "where such remarkable carelessness as to the quality of the

masonry has been exhibited, instead of being surprised at the present state of the frescos we ought rather to wonder that they are preserved at all." And Signor Bosio* says, "Since the building of what may be called modern Rome, the greatest carelessness has prevailed as to the materials, execution, and finish of the masonry, and the same processes have been resorted to down to modern times." The Venetians have shown themselves clumsy plasterers beyond all others, the works of Pordenone, especially, exhibit the rudest workmanship, the surface being very uneven and the joinings of the intonaco, which mark the different days' work, being very carelessly done. This is also the case in the frescos of Titian. The Florentine practice is better, but still far from presenting, in many of the early examples, sufficient attention to the preparation of the surface. If the wall happened to be even, the plaster was made so; but if the wall was uneven, so also was the plaster!

It is quite evident therefore, that Italian workmen in this line, or any workmen who would work in so slovenly and dishonest a manner, must not be employed to prepare walls for fresco painting; and on this very important subject ample instructions will be found in this manual. Fortunately, however, for our artists who

* As clerk of the works, he superintended the erection of the *Braccio Nuovo* in the Vatican, and on that occasion had opportunities of examining the walls built by Alexander VI. and other pontiffs, down to the time of Sextus V. These walls, he says, are of the class just now described, and are executed in a careless and insufficient manner; and, in fact, all the old foundations of the Vatican buildings are faulty, which causes the bulging seen in the plaster of the stanze, which injure the effect, and will, to all appearance, eventually destroy the splendid frescos of Raffaelle.

may embark in fresco painting, they need be under no sort of apprehension, as to the soundness of the walls, or the skill and carefulness of the workmen, for in these respects our masons and stucco plasterers are not to be surpassed as a class, or perhaps hardly to be equalled by any workmen in Europe: unlike the lazy Italians, British workmen feel a proper pride in turning their work out of hand in a manner likely to do themselves credit and give satisfaction to their employers. We therefore commence our instructions in this art, by showing how the walls should be prepared, so as to give the best possible guarantee for the preservation of the works of genius, of which they are to be the permanent depositories.

CHAPTER III.

SECTION I.

THE PREPARATION OF THE WALLS.

THIS very important operation is twofold, first as relates to the solid masonry of the building, and then as to the preparation of the surface for the paintings. "In raising the wall of an edifice whereon frescos are to be painted, too much care cannot be taken to prevent the admission amongst the materials, of either saline or alkaline matter, animal and vegetable substances it is well known ferment, and their decomposition produces saline or alkaline matter, by which moisture is rapidly absorbed; every precaution should therefore be taken to prevent such substances being admitted into a building where damp walls might be a matter of serious detriment to other objects. The practice of allowing workmen to urinate against the inside angles and recesses of an unfinished building, is also highly objectionable; where many workmen are employed for years, the quantity of moisture must saturate some parts of the building past all remedy. There are many other sources by which salts

may be conveyed into the walls of an edifice, and these may be much diminished.

Mr. C. H. Smith, in his valuable communication on the causes of, and means of preventing appearances of saltpetre from coming out on the surfaces of walls, expressly says, "Under ordinary circumstances it is scarcely possible to get rid of the various saline or deliquescent substances that have once been admitted into the walls of a building. The fixed alkalies (potass and soda), may probably be considered imperishable, no length of time can injure them, they may effloresce, or rather they may crystallize on the surface of a wall, and totally or partially disappear again and again, as often as a change in temperature, or of dryness or humidity takes place; these changes may be daily, or the salts may remain inactive during ages, and from some favourable cause a crop of crystals may be produced as vigorously as if the wall had recently been finished, the only way to abate the evil is to brush off the crystals whenever they appear to be in the most flourishing condition. If potash has been introduced into the walls, either from the putrefaction of animal or vegetable substances, or from other sources, however thick the wall may be, it will make its way to the surface, and then absorbing nitrogen from the atmosphere, which contains seventy or eighty per cent. of that substance, "nitrate of potash" or saltpetre is produced, salts are generally communicated to a building, in weak solutions, the water very gradually evaporates, carrying with it from the interior of the wall, the molecules that compose salt. The solution having arrived at the surface so as to be freely in contact with

the atmosphere (always so essential to crystallization), evaporation continues until the solution is sufficiently strong to crystallize, still leaving the mother water in the wall, which is indicated by a certain dampness."

From this extract our readers will readily perceive how very essential it is to the preservation of frescos, or indeed interior decorations of any kind, that the solid masonry of the walls should be soundly and honestly built, from the foundation to the wall plate, otherwise there is no saying what extent of injury to valuable works of art may be the consequence, which common care and common honesty would have prevented.

The solid wall, therefore, having been constructed as it should be, and as such walls are very likely to be constructed by our best builders,—and after it shall have been allowed to dry for three, four, or more years, after having had its interior carefully rough plastered,—the fresco painter then begins to look at it with serious intentions of commencing his work; and if he be a prudent man, he will not fail to take counsel from some experienced builder as to the state of dryness in which the wall may be; then if the wall to be painted is covered with old mortar, the ingredients of which are unknown, this coat should be entirely stripped off until the under materials are laid bare; the rough coat then applied is to be composed of river sand and lime. The proportions of the sand to the lime may vary in different climates, the chief builder and mason are sufficiently experienced on these points. In Italy it appears that two parts of sand were added to one of lime. The Germans generally use more sand,—namely, three parts to one of lime. The thickness of the coat

is such as is generally used in preparing the walls of dwelling-houses; the surface of this first application should be rough, but not equally so, and the mason should carefully avoid leaving cavities in it.

The wall thus prepared, should be suffered to harden perfectly; the longer it remains in this state, the safer it will be, especially if the lime used was in the first instance fresh; in that case, two or three years should elapse before any subsequent operations are undertaken.

Professor Hess, in speaking on this subject, recommends "bricks well dried, and of equal hardness," as the groundwork of the mortar and plaster, all the frescos at Munich are painted on the (plastered) brick wall: laths, with wattling and copper nails are not approved of, as the risk of bulging is thereby increased. The use of laths is sometimes necessary for certain surfaces, but the professors in Munich are decided that a brick ground is to be preferred whenever it is practicable, not only on account of its solidity, but because it is better adapted to the execution of the painting. The brick ground absorbs superfluous water, and keeps the plaster much longer in a fit state for painting upon. The painting ground (intonaco) dries much quicker on laths; as two surfaces are presented for evaporation, the main wall should be thoroughly dry; a wall of one brick, or a brick and half in thickness, is preferable to paint upon. Professor Hess states, that where the walls in the lower portions of buildings were five or six feet thick, the liability of saline matter making its appearance was much increased, as the mass of wall remains longer in a humid state.

In Italy the practice of lathing *walls* is hardly

known, but many of the finest Italian *ceiling* frescos are on lath, and are in perfect condition. Most vaulted ceilings, in what is called the *piano nobile*, or principal floor of every palace, are constructed of wood; the lathing in this case is not attached to single thin pieces of timber cut to the shape of the ceiling, but to a strong grating; in some cases the ribs and transverse pieces of this grating are four inches thick each way. The lathing in Italy is a very peculiar process. The material is the reed which is cultivated so extensively in that country, and used in so many ways: it grows to the length of eighteen or twenty feet, and is nearly an inch and a half in diameter at the base. When these reeds are used for lathing, they are split, and not being strong enough for the purpose in this state, are wattled upon the grating, the result of this contrivance is a framework of great strength.

Mr. Hamilton (architect), of Edinburgh, observes, "In the preparation of walls and ceilings for fresco painting, no expense should be spared, battens and lath are obviously perishable materials, and therefore ought to be avoided, the damp from exterior stone walls may be guarded against by lining them with brick, and now that the use of cast iron is so well understood, the girders or joistings of the houses where fresco painting is contemplated should be of iron, arched with bricks between, and thus a perfectly level ceiling may be formed, of the most durable kind." For the more effectual prevention of damp, Mr. Hamilton recommends that the brick lining should be somewhat detached, leaving a small space between it and the solid wall, to which it could be bound at intervals.* Mr.

* Some specimens, which were shown to Mr. Wilson from the

Wilson suggests, that strong tiles, placed edgewise, would answer this purpose without materially diminishing the area of the rooms. Vitruvius proposes, that where there is danger of damp affecting the coats of plaster, a thin brick wall should be carried up within, and in some measure detached from the main wall. These methods are all similar to the ancient practice, so fully demonstrated by specimens amongst the ruins of Pompeii, where the stuccos and painted walls are found to have been constructed with brick or rather tiles placed edgewise, and connected by leaden cramps to the main wall, from which this brick lining is detached a trifling distance.

When timber partitions were to be covered with stucco, two layers of split reeds were nailed with broad-headed nails on the upright and cross pieces, the one vertically, the other horizontally, the double row of reeds, thus crossed and firmly fixed, prevents all cracks and fissures.

The coats of plaster, from the rough cast to the finished surface, were numerous—after the rough cast, three of lime and sand, and three of marble-dust and lime were applied, the last coat was often highly polished.

Loggia, painted by G. da Udine, exhibited three coats of plaster, the first (next the lath) was of lime and coarse sand—it was one quarter of an inch thick; the next (same thickness) was of lime and pozzolana; and the last, or *intonaco*, was of lime and marble-dust, by no means very finely pulverized. This corresponds with ancient examples. In the baths of Titus will be found—first lime and coarse sand half an inch thick, then lime and pozzolana one inch in thickness, in which there is an admixture of sand and pounded brick—the last, or surface coat, is of lime and pounded marble. As to the two last coats, this is the very preparation used in Italy for floors, under the name of Venetian pavement, except that in the latter the fragments of brick and marble are much larger.

—Vitruvius adds, "When only one coat of sand and lime, and one of marble-dust and lime are used, the plaster is easily broken, and cannot receive a brilliant polish." When frescos were added, the surface was of course not so smooth. Vitruvius continues, "Colours, when carefully applied on moist stucco, do not fade, but on the contrary last for ever; because the lime having been deprived of moisture in the kiln, and having become porous and absorbent, readily imbibes whatever (moisture) comes in contact with it, and the whole when dry, becomes of one substance and quality. Hence stuccoed walls, when well executed, do not easily become dirty, nor do they lose their colours when they require to be washed, unless the painting had been carelessly done, or executed after the surface was dry." This points out how essential *a fine and even surface of wall* is to the due effect of the paintings, the opposite to which, an *undulating surface*, is a serious evil, as it allows the dust to lodge in quantities, irregularly upon the frescos, as may be seen in many places, especially upon those in the Vatican.

This general evenness of the plaster does not suppose any unpleasant smoothness of surface in the fresco; in many Italian, and indeed in many antique mural paintings, the traces of the brush often indicate a considerable body of colour, but care appears to have been taken generally not to load the surface unequally. In a London atmosphere this comparative evenness of the surface might, according to the Vitruvian principle, protect the painting longer from smoke and dust, while it would assist the operation of cleaning; but the work might be protected by other means; the plaster might be applied, so that the face of the wall, at least in the por-

tions of it intended to receive frescos, should not be quite perpendicular, but incline a little inwards towards the cornice of the room. As to the question of surfaces, it may be remarked, that the hardening of the lime takes place sooner in proportion to the roughness of the surface, smoothness of surface always presenting a great obstacle to the penetration of the carbonic acid.

Leon Battista Alberti, whose work is considered as the link connecting ancient with revived art, observes, that the more coats a wall receives, the better the surface may be polished, and the whole becomes more durable—he speaks of ancient examples in which there were nine successive coats. Alluding directly to the practice of his own time, he says, that no stucco should be composed of less than three coats. The first rough coat,* he directs to be composed of *pit sand* and pounded brick, the pieces of brick should not be pounded too small. For the second coat,† *river sand* should be mixed with the lime, being less apt to crack; this coat also should be rather rough, because nothing applied to a very smooth surface will adhere to it. The last coat‡ should be white as marble, in fact pounded white marble should be used instead of sand, this coat need not be thicker than half a finger's breadth, or the sole of a dress shoe. He states that nails have been found fastened in the wall in some places, and time has proved that they had better be of bronze, than of iron. Instead of nails he prefers the practice of inserting thin pieces of flint, projecting edgewise from the joints of the stone, and driven in with a wooden mallet.

Cennini who has recorded the old Florentine methods states that both the lime and sand ought to be

* *Rinzoffato.* † *Arriciato.* ‡ *Intonaco* (tunic).

well sifted. Should the lime be what is called a "rich lime," and have been recently slaked, there should be two parts of sand to one of lime. On being slaked, it should be well mixed and stirred, and a sufficient quantity should be made to last fifteen or twenty days. It should then be suffered to remain for some days in order to render it less caustic, for if too caustic the *intonaco** will blister. The mortar prepared as above serves for the first coat, the surface of which is to be left somewhat rough; the application of the thinner coat or painting ground is afterwards described, and the lime for this purpose is recommended to be well stirred and manipulated "until it appears like an ointment."

SECTION II.

CENNINI'S PREPARATION OF LIME WHITE FOR FRESCO PAINTERS.

This brilliant white is called *Bianco San Giovanni*, and is thus made: Take very white slaked lime reduced to a fine powder, place it in a large tub and mix well with water, pouring off the water as the lime settles, and adding fresh for eight days; these evaporating, the soft lime is divided into cakes and placed to dry in the sun. The longer exposed the whiter they become; these are improved by being moistened again and well ground once or twice, it is then perfectly white, and without it flesh tints and other bright hues cannot be executed in fresco. Another method, from Armenini: "Take the whitest lime, such as is commonly found in Genoa, Milan, or Ravenna; this

* Cennini mentions but two coats, and applies the term *intonaco* to both.

must be well washed before it is used, and the modes of preparing it are various. Some artists, in order to render the lime less caustic, boil a certain quantity of it well on a quick fire, and skim off the froth, it is then suffered to cool and settle in the open air; the water is poured off, and the lime placed on new sun-baked bricks; these absorb the moisture, and the lighter the lime (specifically) the purer it is found to be. Another mode is to bury the lime in the earth in proper vessels, after having thus washed it, and keep it thus several years before they bring it into use. Others expose it on the roofs of houses whilst it is undergoing this bleaching process. Others mix it in equal portions with marble-dust. But it has been found that if the lime is exposed to the air in a large vessel, and water that has been boiled poured upon it, the mixture should be well stirred; and if, the next day, it is spread in the sun it will be sufficiently purified, and may be used for painting the following day, but not for flesh tints, as these might undergo some change at the edges of the successive joining of plaster.

With respect to the brightness of the surface, it might be inferred that a mixture of so much sand with the lime must reduce it to a middle tint; Borghini alone notices this circumstance, and assumes that a slight tint of black is added to the plaster, perhaps when the sand is of too warm a colour. From the description of Leon Battista Alberti, it appears that the last coat was white, and the mixture of lime and marble-dust mentioned by Armenini seems to show that the same process was followed in the sixteenth century.

Armenini speaks of another process which agrees with the appearance which some of the older frescos

display; he says that some painters were in the habit of covering the wall with a coat or two of whitewash just before they began to paint, in order to give more brilliancy to the superadded colours. He does not approve of the practice, as tending to injure the effect of the shadows; the practice, however, shows that in this case the *intonaco* was not in the first instance white.

As too much precaution cannot be taken with respect to the composition of mortar for fresco painting, our readers should be made aware, that a diversity of opinion has long existed with reference to the proportions of sand and lime to be combined. From such examination as it was possible to make, it appears certain that those frescos have stood best in which it is apparent that there is a considerable portion of sand in the lime. Mr. Wilson is disposed partly to attribute the bad state of the frescos by Correggio, in the *Duomo* of Parma, to his having used what is called a rich intonaco, or a preponderance of lime to sand; and the faintness of the colours is, perhaps, attributable to the same cause.*

SECTION III.

FRESCOS EXECUTED UPON VARIOUS SORTS OF MASONRY.

Whatever the materials or workmanship of the wall may be, the immediate surface on which the pictures are painted must be plaster or stucco. The earliest examples of works in fresco, on the revival of the arts, are painted on ashlar walls in the "Italian Gothic" cathedrals of Orvieto and Siena, and more especially in the church of Assisi at Florence, where there still

* *Vide* Professor Wilson's Report.

remain numerous specimens of the earliest revival of mural painting. In these buildings the interiors are finished in fine masonry; the walls have ashlar facings, both internally and externally, and their cores are rubble. In some parts the walls are of marble, in others of cut stone, other parts are of brick, but the cut stone workmanship is fine in every case. Previous to these ashlar walls being painted, one or two coats of plaster, but very thin, to avoid interfering with the details of the buildings, were laid on them as a preparation. This coating was generally formed of lime and sand, sometimes of lime and marble-dust, and on these absorbent grounds the pictures were painted, whilst the plaster was still moist; but, as the coating was thin, the plaster generally dried before the work was completed; the pictures were then completed in distemper. This mixed style of work cannot, therefore, be considered as pure fresco, but they are still in tolerable preservation; although the plaster has fallen away from the ashlar facing in several places, probably from damp through neglecting the roof.

At Orvieto, the walls of the Sacramente chapel are of fine, closely-jointed ashlar; but the plaster, having been laid upon the smooth surface of the wall, has fallen down almost entirely. The same has happened with regard to the plaster of the fine stonework of the opposite chapel. As an exception to these instances and others of the plaster falling off after a lapse of time from smooth hard surfaces, we have the example of some frescos painted upon plaster, laid on the marble wall of a small chapel in the cathedral of Siena, in which instance the plaster has not fallen down. In general, however, the plaster is easily de-

tached from ashlar walls, particularly if exposed to damp or other accidents. Another objection to painting on ashlar walls is, that in warm weather the surfaces become very wet, from the condensation of moisture in the atmosphere against the cold wall, as may be seen on the frescos in the cathedral of Siena; yet in the library of the same cathedral—which was an addition built by Pius II., and supposed to be lined with brick—no damp ever condenses on the frescos,* which are perfectly even on the surface. This never is the case on rubble walls. These may therefore be referred to as instances of the durability of fresco painting upon brick, or brick-lined walls.

In St. Miniato, at Florence, the pictures by Spinello Aretino, though of a very early date, are in complete preservation: the wall is dry, perfectly even, and the dust, therefore, cannot settle on the frescos.

Those by Giotto in the Scrovegni palace, are also on brick, which always gives the advantage of an even surface; some of these pictures have become weaker in force and colour, these have constantly been exposed to the action of a strong daylight or of sunshine, others not so exposed have stood much better, and we must recollect that six hundred years have passed away since they were painted.

The walls of the Sistine chapel, are faced with brick externally, whether this has been the case internally is not known. It is believed that "The Last Judgment," is painted over a brick lining, as its surface is much more even than that of the other paintings in the chapel. Those upon the vaults must certainly be upon brick linings, and are very well preserved.

* Painted by Pinturicchio in 1502-3.

The frescos in the Farnasina, which are known to be on brick, are in excellent order, and the fact that Carlo Maratti repainted the blue backgrounds, is by no means an evidence that such an act was required.*

The frescos of the later Florentine masters, in the cloisters of several of the convents in Florence, are on brick walls, and except where they have been wantonly injured, are in excellent order.

Of a later date there are numerous frescos of the Carracci, and of their scholars. In the time of these eminent men the construction of masonry was carefully attended to, and in these instances the workmanship is excellent, the surfaces are smooth and even, and all their frescos are in good preservation, except where accidentally injured. And we strongly recommend all who may be concerned in fresco painting to observe those facts—that the frescos in the Palazzo Farnese, St. Andrea della Valle, St. Carlo di Catenari, Santa Maria Maggiore, the Ludovesian, and Rospigliose Casini at Rome,—in numerous churches and palaces in Bologna and its vicinity,—likewise in Modena, Piacenza, Parma, and elsewhere,—may be instanced as proving the durability of fresco, are all on brick, and in every one of them the plastering is excellent.

Here then, and almost exclusively at this period, it was that fresco painting had fair play, as to its durability and some other of its qualities, and fully has it sustained its character for grandeur of style and permanency of materials.

Equally satisfactory in these respects are a great many works in Genoa nearly all painted on brick

* The presumption of this artist is plainly and painfully proved by the unnecessary retouching with which he has injured Raffaelle's frescos in the stanze of the Vatican.

vaults; some are on lath or stoja, and nearly all are in perfect preservation. These paintings are by various masters, chiefly the works of Pierino del Vaga, by Cambiosi, Carlone, their pupils and successors.

RUBBLE WALLS.

Of all the unhappy contrivances in building with which fresco painting has been connected this appears to have been the very worst. We have already shown what a careless, ignorant, and clumsy sort of workmen the Italian masons are, and the unfortunate consequences of bad masonry are, to fresco painting, very extensive; for many of the most precious works of the great masters are painted on walls of this description, and to that their dilapidated state, and in some instances their ruin is attributed. It is to this rough mode of construction that great unevenness of many frescos is to be referred. It cannot be supposed that the wall behind these frescos is ashlar, nor are they likely to be brick, as the latter when plastered always has an even surface, nor do the bulgings in many cases proceed from the intonaco. In the chapel of St. Cecilia, in Bologna, the frescos by Francia and Costa are so much bulged that the wall can be seen in several places. It is evidently of the coarsest rubble construction, and the surfaces of the pictures are, therefore, very uneven. The walls of Santa Maria Novella at Florence are of the same bad masonry.

The frescos by Avanzi in St. Giorgio, and by Titian and other artists in the Capitolo di St. Antonio at Padua—by Massanio in the Carmine, by Ghirlandaio, at Santa Maria Novella, and by Andrea del Sarto in the

Annunziata at Florence, by Pordenone in St. Rocco at Venice, and in Santa Maria at Piacenza, have all very uneven surfaces, and, consequently, have suffered much from the accumulation of dust upon the inequalities, and from the cracking and breaking off of the plaster, owing to bad masonry, and the careless way in which the mortar has been applied. Similar inequalities and bulging of the surfaces, are also common in the works of Raffaelle and his pupils.

It may easily be supposed that frescos will not again be painted upon walls so utterly defective as the rubble walls just mentioned. The examination of ancient and modern frescos evidently proves that brick surfaces are best for this species of painting, and the practice of the careful Germans and modern Italians, favour this opinion. The next to a brick surface for durability and fitness is plaster laid on properly prepared lathing. There are many specimens of this sort of work in Italy; but they are mostly met with on soffits or ceilings. That by Orgagni, the "Trionfo del Morte," in the Campo Santo at Pisa, is in fine preservation. Orgagni was an intelligent architect; he knew the causes from whence danger was to be apprehended, both from the inferior condition of the masonry, and the infiltration of water from the roof, as likewise from damp arising from the soil, by capillary attraction. The latter is a very common cause of injury to buildings in all countries. His picture is executed upon a lathing of reeds or stoja nailed to the wall, and affords another strong proof that the idea so long entertained, that "the sea air injures frescos," is not well founded; for the works called "Giottos" have nearly all perished,

like most others in this edifice. And had this destruction been caused by the sea air, the Orgagnis would, no doubt, have had the same fate as their companions.

In the upper Loggia of the Vatican the ceilings, painted (in fresco) by Giovanni da Udine, are upon stoja or lath: the wooden frame to which the lath is attached, is executed with a degree of rudeness that would seem almost incredible. These works have suffered severely from the original defective carpentry, from neglect, and damp from the roof.

In the Palazzo Vecchio, at Florence, there is a chapel painted in fresco by Brontzino, and the paintings on the ceiling are on a lath foundation, and in high preservation, as are all the *ceiling frescos* in the public gallery of the Uffizj, executed similarly upon lath or stoja.

At Venice, in the Palazzo Ducale, there are some very important frescos by Tintoretto, likewise upon a lathed ceiling, which are well preserved; and those at the Villa Mazer (near Biadine), the frescos by Paulo Veronese, are on what may be termed a lath basis, though peculiar in its construction. The coved ceilings on which these frescos are painted, are constructed with more than ordinary care. The ribs, which form the arches, are made of inch deal, nailed together as centrings are usually made, so as to form a succession of ribs, each two inches in thickness, and thirteen and a half inches deep, and placed three feet apart. On the under surface of these ribs, laths of poplar, three inches broad by one inch thick, are nailed the broad way, but not quite close together—thus an excellent *key* is given to the plaster. The lathing is plastered above, as well as below, a common practice in the

framed ceilings in France, of which those of Versailles are amongst the best examples. This practice is an excellent precaution for preserving the works beneath from accumulations of dust and dirt, as it is not difficult to keep such places free from dusty accumulations. For the same reason, it is advisable to plaster the upper surfaces of brick vaults, as practised by the Carracci in the Palazzo del Giardino,* at Parma.

It appears, therefore, from the great number of authorities that have been consulted, as well as from personal investigation into the facts, that ashlar is the most ancient, but, in a moist or cold climate, not the best surface for fresco painting. Rubble walls—that is, walls solidly built of coarse materials, the stones not squared or ashlared, but taken, large or small, brickbats, tiles, &c., indiscriminately from the heaps; if too large, they are reduced by the hammer, and bedded in plenty of coarse mortar; no sort of skill being considered necessary, except to keep the wall perpendicular. Consequently, from its heterogeneous composition, it never has an even surface, and must inevitably bulge more or less in a few years. Brick walls, or walls carefully lined with brick or tiling, have proved to be the best, not only for preserving, but also for exhibiting frescos to advantage. Next to this, for similar reasons, is the stoja, reed, or lathed under surface, properly fixed upon almost any sort of wall.

The mortar of which frescos of former periods have been painted, cannot be sufficiently subjected to investi-

* But this precaution does not produce a permanent exemption from the insidious approaches of dampness, from which they have suffered; and precautions have been adopted to make the roof watertight, similar to those at Villa Mazer.

gation, even where portions have fallen off, as they crumble slowly in general, and, mingling with the dust of the place, the decomposed mortar is swept away; but this is not of any consequence, as the ancient and modern authorities are well agreed as to the proportions we have already given; but on no account must gypsum, or plaster of Paris, be mixed with it.

On this subject Vicat,* by a series of accurate experiments, ascertained that the resistance of mortars, made from very rich limes, slaked by the common process, increases from 50 to 240 parts of sand to 100 of lime in stiff paste, and beyond that proportion decreases indefinitely. Therefore, two parts and a half of sand to one of rich lime, is beyond the due proportion which is necessary for strong mortar. More sand would only weaken it still further.

* Vicat, Resumé sur les Mortiers et Céments Calcaires. Paris. Page 51, &c. This author's reputation deservedly stands very high amongst men of science.

CHAPTER IV.

SECTION I.

METHODS OF PREPARING THE LIME FOR FRESCOS.

AFTER having shown our readers how important it is that both the materials and masonry of walls intended to carry fresco paintings down to distant ages should be of the soundest and best description, and having also described the various surfaces that have been employed to receive the intonaco, tunic, or thin coating for the picture, our next object, in point of order, will be to describe the different methods adopted to slake and prepare the lime, both for the intonaco and the white pigment.

GENOESE METHOD OF PREPARING LIME.

The stone lime, well burned, is put into troughs six feet long by two feet wide at top, narrower at bottom, and about fifteen inches deep. It is then sprinkled with water, and slaked in the usual way; then plenty of water being thrown in, the mixture is worked with a lime-rake, somewhat like the implement used by our masons. With this it is thoroughly mixed, until the substance

attains to the consistence of cream. At one end of the trough there is a little sluice, the opening of which comes only to within an inch and half of the bottom. On being drawn up, the sluice allows the the liquid to run off; but small stones, or impurities, having sunk, cannot be carried away in the current, being stopped by the ledge below the opening. This white liquid is received into a pit, dug as carefully as it may be done in the firm earth, to the depth of several feet, but not lined, of an oblong shape. The process of mixing in the trough is carried on until the pit is filled with this creamy substance.

The lime thus prepared is left, covered up from the air, during from eight to twelve months, according to its ascertained strength. The lime for the first rough coat need not be kept more than two months. It should be mentioned here that the Italian plasterers do not use any hair in their works, but their proportion of sand to lime is the same as with us for the rough coatings,—that is, two of sand and one of lime. The lime of which the intonaco, or surface coating of fine plaster, is composed, is, however, to be subjected to a much more careful preparation than that used for the first coat.

We have shown that the slaked lime was carefully deposited in a deep pit, and secured from the action of the atmosphere, where it remains during the regular number of years or months. It is then carefully lifted out with a broad shovel, care being taken not to come too near the edges of the pit in any direction, lest any clay or earth should be taken up with the lime.* It is

* We cannot but regard the practice of allowing the slaked lime to run into earth pits unlined by tiles, or thin planking, to be a slovenly and wasteful one. A great deal of fine stucco is thus lost,

now thrown again into the troughs, and thoroughly mixed with water, till it is not thicker than rich milk. It is now allowed to escape again through the opened sluice. This time, however, it passes through a fine hair sieve into jars of earthenware. Many of these vessels are required. Each is filled about two-thirds; the lime-wash then settles, and the water that rises over the surface, is poured off each time until it ceases to rise. The lime then remains ready for use, about the consistence of cream cheese, and as smooth as butter. It is then mixed with twice its quantity of sand for the intonaco.

In Italy much pains are taken to procure a suitable sand. It must be a perfectly clear, sharp sand, the grains very nearly of an equal size—its colour light, to keep up that of the intonaco. The presence of any earthy particles in the mixture would ruin the fresco; great care is therefore necessary in preparing all the materials for works in this art.

THE GERMAN METHOD.

At Munich lime is prepared for the same purpose in another manner. There a pit is dug in the common earth (as before). This is filled with clear burnt lime-stones,* which, on being slaked, are stirred and worked until the substance is a complete amalgamation, of a consistence similar to that already described. The surface having settled to a level, clear river sand is spread

and, should a careless workman allow a small portion of clay to mix with it, the fresco will be ruined.

* Professor Hess directs that this lime should be kept in pits lined with brick. This is a great improvement, which, no doubt, will be adopted in Britain.

over it to the depth of a foot or more, so as to exclude the air, and then the whole is covered with earth. The German painters allow the lime to remain thus for at least three years* before it is used, either for the purpose of painting—for it is the white pigment used—or for coating the walls. A great quantity of this substance is generally kept fit for use at Munich, some of which might be had for work in this country; and we understand that the late Lord Monson intended to have a quantity of prepared lime brought from Munich for the works which Cornelius was to have done for him in this country (at Gatton Park).

In Florence, where this art was once carried to such a state of excellence, and where it is still practised, the artists are of opinion that the lime should be kept in the moist state from eight to twelve months, otherwise it will burn both colours and brushes.

THE FRENCH METHOD.

Very different from all the above modes of slaking lime for fresco is the method laid down by M. Vicat,† a very intelligent practical engineer, who strongly objects to the mixing with water, and thinning the lime down so much as some have recommended: in fact he attributes the cracks and scalings that take place on the newly-plastered surfaces to an excess of water having been employed in diluting them. M. Vicat's method is the following:—The lime to be employed must be

* Cornelius, it is stated on the best authority, prepared the lime for the Ludwig Kirche *eight years* before he commenced painting there.

† Vicat, Resumé sur les Mortiers et Céments Calcaires, &c. Paris.

stone-lime of the finest quality; this should be placed in a large basin, or trough, not porous; upon this the water is to be sprinkled by slow degrees, and with so much care as that it may readily circulate in the spaces between the stones: this will allow the pieces to absorb the exact quantity requisite to resolve them into one strong compact mass, of a pasty consistence, but by no means sufficient to allow it to run into a fluid state; neither must it be worked up and beat about by the hoe and lime-rake, as we sometimes see so improperly done with respect to the common lime mixtures. In about twenty-four hours after the heat of the operation shall have subsided, this paste will have acquired so firm a consistency that it cannot be detached from the trough or basin, without the aid of a pick; it is then rendered soft and plastic by a vigorous beating up, but without water: this is done by means of heavy iron mallets, with wooden handles, which are struck perpendicularly upon it; when rendered sufficiently plastic, to one hundred parts of this very tenacious and substantial lime-paste sand is to be added, in the proportions of one hundred and fifty to one hundred and eighty parts: these materials are to be well kneaded together by means of a heavy pestle; but if in defiance of the most vigorous efforts—and this amalgamating always requires great exertion—it is found impossible to unite these materials sufficiently, then a little water may be added, but very gradually, and with care; for it will hardly be believed, by those who have not witnessed it, that a single pint too much water added, will spoil a square foot of this mortar.

SECTION II.

THE COLOURS, BRUSHES, &C., REQUIRED FOR FRESCO PAINTING.

The more solid and substantial preparations for fresco having been sufficiently detailed, we now come to the more cheerful and interesting portion of the materials; and shall commence by cautioning practitioners, especially beginners, to pay the greatest attention to the preparation of tints on the palette. This is a matter of so much importance, that the neglect of it may cause the ruin of the whole work; for if through carelessness, haste, or ignorance of the fact, the tints are mixed as the work proceeds—and this all know is a common and not injurious practice in oil painting—if, we say, this mode should be followed in fresco painting, the inevitable consequence will be, that when *dry* the painting will assuredly appear quite streaky,* though this defect is not perceptible when *it is moist.*

The white pigment is lime, for preparing which we have given full instructions.

The yellows are—The ochres, terra di Siena, Naples yellow. The ochres calcined produce the reds, not very brilliant for draperies, but mixed with white

* The author can speak from personal experience on this subject; having had, along with a North American artist, a mischance of this kind in 1831, when taking a few lessons from the late J. L. M. Merimée, then secretary to the Royal Academy of Fine Arts in Paris. The two copies (heads) we painted looked, when dry, as my American friend said, "for all the world like the tulip-streaked countenances of rum-drinking Carolina slave-breeders!" Our readers may *calculate* how interesting they must have appeared. Our next attempt, however, was successful.

they produce very true flesh-tints. The reds include all the burnt ochres; burnt terra di Siena, the brightest parts selected in calcination produce a brilliant red. All the oxides of iron, from orange to violet.

The browns are—The umbers, raw and burnt, and burnt terra verte.

The black—Burnt Cologne earth, which, when freed by calcination from its vegetable combinations, affords a very pure black;—soft black chalk, charcoal black, lamp black, are the most intense and the most permanent of this class.

Purple—Burnt vitriol (Cassius purple), cobalt blue, and lake-coloured burnt vitriol. Green—Verona green, or terra verte, cobalt green, and chrome green. Blue—Ultramarine, cobalt, and the imitation ultramarine; the latter is most safely used for flat tints, but does not always mix well with other colours.

These colours have been well tested, and for the most part admit of being mixed in any reasonable way.

The following more brilliant colours, have also been tried in the various operations of fresco, but as yet they have not in every instance been found solid enough to stand the action of lime:

Chrome yellow, chrome orange, red lead, or minium.

Vermilion.—This colour, it appears, and lime, are hostile to each other, particularly when the open air acts upon them when in contact. Pozzo says he has often used it for draperies in pictures painted on the interior walls of edifices, where it has stood well. His method is as follows:—Take pure vermilion in powder, and having placed it in an earthernware vase,

pour on it the water that boils up when lime is slaked in it: the water, which should be as pure as it can be, is then poured off, and the operation must be often repeated. In this manner the vermilion is penetrated with the quality of the lime, and always retains it.

Contrary to this, we have the testimonies of Cennini, and Armenini, who distinctly say that vermilion will not stand in fresco. Pozzo was, however, a practical fresco-painter of considerable skill; the two intelligent authors just mentioned were not so, they were clever theorists, therefore the question is still an open one—well deserving further investigation—and by practical experiments only can it be determined. It should further be observed that M. Mérimée, an excellent practical chemist and painter, says expressly, "Cinnabar may be used by steeping it for some days in lime-water; it however loses some of its brilliancy, but still it is richer than the ochre reds, or the oxides of iron." The same intelligent writer also states that the oxides of iron are of various degrees of oxidation, and produce a variety of red tints, from orange to violet. The latter, made of the tritoxide of iron,* is rather a dull tint, but it can be made brighter by mixing the Cassius purple with alumine, and calcining them like cobalt blue.

SECTION III.

Blue is the only brilliant colour in fresco; the ancients were not acquainted with either the cobalt, or

* Called also "purple oxide of iron," is merely oxidized iron, which, at its highest point of oxidation, takes the violet tint. It is a dark but permanent colour, and, except the purple of Cassius, is the only purple that will stand in fresco.

ultramarine of the modern frescos—they were limited to a blue preparation from copper.

This blue, which is very brilliant, is frequently found on the walls of the temples in Egypt, and also on the cases enclosing mummies. The same colour is found in the ruins of some ancient edifices in Italy, and even portions of it have been discovered in the state in which it was prepared by the manufacturers, for the artists of those remote ages. Count Chaptal, as M. Mérimée informs us,* analyzed some of it, discovered in 1809 with several other colours in a shop at Pompeii; he found that it was blue ashes, not prepared in the moist manner like that which the paper-stainers use, but by calcination: he considered it a species of frit, the semi-vitreous nature of which renders it proof against the action of the acids and alkalies, at a moderate temperature.

Some years later Sir Humphry Davy employed part of his time in Italy by making researches to ascertain the proportions of the colours used by the ancient Greek and Roman artists, and he obtained results similar to the foregoing. Still further, by synthetic methods, he obtained a colour similar to that of the ancients, by exposing to a strong heat, for two hours, a mixture of fifteen parts carbonate of soda, twenty parts of powdered flints, and three parts of copper. He is of opinion that this is the blue described by Theophrastus, who has ascribed the discovery of it to a king of Egypt, and also that it was manufactured at Alexandria.

Vitruvius, who calls this blue *cerulæum*, informs us

* *Vide* the translation of his work on oil-painting and fresco. London. 1839.

that the art of making it was brought by Vestorius from Egypt to Pozzuoli, and that it was made by calcining in a potter's furnace balls made of sand, filings of copper, and *flos nitri* (carbonate of soda). It is believed that the Venetians who were so skilful in enamelling, knew how to prepare the Egyptian blue.

It is probable that Paulo Veronese has employed this sort of blue in many of his paintings, in which the skies have become green. This colour, which has remained without alteration as employed in distemper painting, would not for a very long time become affected by the action of oil. Had this artist, however, used our modern "blue ashes,"* he would soon have discovered their want of solidity, and would not long have subjected his works to such injurious changes. In distemper and decorative painting, the former stands well. It is very desirable that we should be able to recover the method of making it.

As regards the vehicle with which the colours are to be used, pure water, that has been boiled and is still warm, is indispensable but not exclusive; for it is requisite to add a sizy substance in the mixing and applying of those colours, which like blue are so arid that they would separate quickly from the plain water.† With only this liquid, it would not be pos-

* This is a precipitate of copper, combined with water (a hydrated carbonate), and is either natural or artificial. It is only employed in decorative painting, and turns green after some time, when used in distemper. The same change will be produced in it after a week or two, if it be ground up in oil.

† Some think that this addition of size does not take place until the retouching on the dry finished fresco. However that may be,—and we cannot see how arid colours can be united to water without a gelatine,—still, in either case, care must be taken to avoid mixing

sible to lay a good ground, or lay on a colour in a good smooth body. Cennini, in pointing out the colours tempered with simple water without the aid of gelatine, expressly mentions the *San Giovanni* white as one of them. Of the charcoal black he says, that it requires the addition of size in fresco, as well as in distemper painting. The argillaceous earths, such as terra verte, the red and yellow ochres, which retain water for a long time, need not be combined with any viscous substance, but azure, ultramarine, and some of the blacks, which like sand, do not combine with or retain water, may require it, and therefore cannot be worked readily without a portion of gelatine. This addition will also render the execution of the work more easy, without at all diminishing its solidity, for it is quite certain that the vehicles used become, when dry, insoluble.

The size which Cennini recommends for this purpose, is a mixture of the yolks and whites of eggs well beaten up together; it is only the albumen that can be employed, or the serum of the blood, which is a similar substance, or even the blood itself may be used for the brown colours. Any of these substances form, with the lime, an insoluble size.

Some painters mix a little milk with those colours which they require to retain in a soft state; the *caseum* of the milk forms, with the lime, another insoluble size; but it would be better to prepare the size from cheese prepared in the proper manner.

the blues with *tempera*—white and yolk of egg intimately blended together—for this liquid has a strong yellow colour, and would change the blues to green very soon.

SECTION IV.

CASEUM.

Method of preparing Caseum. — Take some fresh cheese prepared from rich creamy milk, triturate and work it with warm water until all the soluble part is carried off by the washing. This operation ought to be carried on in a sieve, or strong, coarse linen-cloth, through which the cheese is finally pressed to deprive it completely of the water; when this is done, the residuum will crumble like stale bread; it is then dried upon unsized paper, and in that state will keep fresh for a very long time.

This material, which is *caseum* mixed with a small proportion of butter, is not soluble in water except by the addition of quicklime; but by triturating this mixture, it becomes transformed into a very viscous sort of cream, which can be diluted with water to the consistency required for the work: it dries quickly, and when quite dry it cannot again be dissolved; therefore no more should be prepared than can be used immediately. This is probably the cause why the use of it has been abandoned; but at all times a solid advantage is worth the trouble and difficulty of its preparation and employment; besides, these objections could be greatly diminished by keeping in a well-closed vessel some powdered quicklime, to mix with the *caseum* at the moment of trituration: a slight use of the muller will be sufficient for that purpose. It would be still better to soften the *caseum* in warm water; and, for expedition's sake, the two substances should be kept in

a close vessel, after having been previously mixed dry in the right proportion, and reduced to a fine powder. This will give great facility to the trituration, and this species of size, when well understood and properly managed, must supersede all the others commonly employed in retouching frescos, as it will give much facility in the operation of painting.

The tools used in laying on the colours, are made of hog's hair like those used in oil painting, only of a larger size generally, and the hair longer in proportion than that of oil-brushes. For the finer parts, hair fixed in quills are used, they are made of otter or marten's hair; this substance has the power of resisting the action of the lime, which will burn or curl up sables, or other fine hair pencils.

The palette must be either of tin, covered with a light-coloured varnish to protect it from rust, and with a rim round it to prevent the colours which are thinned with water from running off, or else a very finely-made wicker palette covered with primed cloth, as being lighter; others use a large marble slab placed conveniently within their reach.

The colours ground, and to be mixed with water are kept in a convenient place ready for use. The water invariably used in diluting the colours must be either rain-water (boiled) that has not passed through an iron tube, or distilled water, which has also been boiled, and used rather warm in cold weather.

CHAPTER V.

SECTION I.

LIME SUITABLE FOR FRESCO PAINTING.

HAVING shown how carefully the walls should be built and prepared for fresco painting, we now proceed to another subject quite as important, any neglect in preparing which would be fatal to the artist's best exertions. This object is the proper selection of limestone of such a quality as will furnish the proper material for a white pigment, and be in other respects well adapted for the ground, or surface, which is to receive the painting. Not having long tested experience in our own country, our best plan is to consult the practice of the early Italian and modern fresco-painters of various countries.

A limestone consisting of as few foreign ingredients as possible, is generally esteemed the fittest; yet classes of limestones, which have long been used for preparing lime used in painting, have often been found to contain various ingredients besides carbonate of lime.*

* Carrara marble, which is pure carbonate of lime, is liable, when heated, from its granular crystalline structure, to fall into a coarse powder, and thus the inconveniences attending the burning and slaking render it unfit for use on a large scale.

The particular limestone recommended by Vasari is Travertine, the lime it yielded was no doubt used by the great artists who painted in Rome in the beginning of the sixteenth century, and was in all probability employed for similar purposes by the ancients. The Colosseum, St. Peter's, and various other ancient and modern edifices in Rome, are built with blocks of this stone; its colour is a yellowish white, but after long exposure to the air it acquires a reddish tint, probably from the small quantity of iron it contains. It is found in abundance throughout the Campagna, and even within the walls of Rome: it forms in a horizontal layer the face of the Aventine hill, to the height of above 100 feet above the Tiber. Some of the ancient quarries are near Tivoli, and the stone is the same in quality, with the sole difference of superior hardness acquired by age, to that still formed annually by the calcareous deposits of the waters of the Anio. The same tartar, as it is called, lines the ancient and modern aqueducts. The abundance of this deposit is easily accounted for by the origin of these streams from the chain of the Apennines, which in central Italy consist almost exclusively of a comparatively soft limestone. The stone called Travertine is thus a formation by means of fresh water; it is full of hollows, frequently cylindrical in form, occasioned by the calcareous sediment being originally deposited on vegetable substances.

SECTION II.

From this account of the origin of the stone, it might be inferred that it would be almost a pure carbonate of lime. Its analysis is in fact,

Carbonate of lime . . .	99.4
Alumina, with a trace of iron .	0.6
	100.0

The lime it furnishes is of the purest whiteness. It appears from Armenini that the Genoese lime ranked, in the sixteenth century, among those remarkable for their whiteness. The stuccatori of Genoa, areamong the most skilful in Italy, and the practice of fresco painting is still very common in that city. It has been already observed that frescos have lasted there extremely well on the external walls of houses, notwithstanding the action of the sea air. A specimen of the stone forming the lime used in Genoa for fresco painting has been procured; it contains a considerable portion of magnesia; its analysis being,

Carbonate of lime . . .	63
Carbonate of magnesia . .	36
Earthy matter, oxide of iron, and bituminous matter . . .	1
	100

The lime used at Munich is also remarkable for its whiteness: it is made from pebbles, washed by the torrents of the Isar, from the marble mountains of the Tyrol. The analysis of the stone is,

Carbonate of lime . . .	80
Carbonate of magnesia . .	20
	100

A specimen of the lime now used by the Florentine fresco-painters, has also been procured. On being ana-

lyzed, it proved to be so near to pure carbonate of lime, that no appreciable quality of any admixture is to be detected.

The analyses of the limes employed for some frescos that have stood well in this country, may here be added.

The frescos executed about eighteen years ago by Mr. Thomas Barker of Bath, have been already alluded to. The Wick (Bath) stone furnished the lime: the analysis of the stone is,

Carbonate of lime . . .	97
Impurity chiefly oxide of iron .	3
	100

Mr. David Scott, an artist of Edinburgh, painted a fresco in that city about eight years since, the limestone was obtained from the Vogrie quarry near Edinburgh: its analysis is,

Carbonate of lime . . .	94.5
Silica alumina, oxide of iron, and bituminous matter . .	5.5
	100.0

It has not been possible to procure the stone which furnished the lime for some frescos executed by Mr. John Zephaniah Bell at Muir House, near Edinburgh, about ten years since, which have stood perfectly well. But a small portion of the lime which had dried in a jar has been analyzed, and was found to consist of hydrate, or slaked lime, carbonate of lime, and minute traces of alumine and oxide of iron. It appeared to be well fitted for the purposes of fresco painting.*

* The analyses given in this statement have been carefully made

If these examples show that the *presence* of various ingredients of a certain kind, or to a certain extent, is not prejudicial, the extreme purity of the Travertine—not to mention the Florentine limestone—is on the other hand sufficient authority for selecting a stone furnishing a very pure, or as it is technically called, "a very rich lime." The following are analyses of stones from the neighbourhood of Bristol, similar specimens are to be found elsewhere.

Limestone procured by Mr. Phillips, from a quarry, called the "White quarry," on Durdham Downs, near Bristol:

Carbonate of lime . . .	99.5
Bituminous matter . . .	0.3
Earthy matter	0.2
	100.0

Limestone marked "Bristol Durdham Down white lime:"

Carbonate of lime . . .	99.6
Bituminous matter . . .	0.2
Earthy matter and oxide of iron .	0.2
	100.0

Limestone, marked "Bristol Durdham Downs,"* producing very white lime for plasterers:

by Mr. Richard Phillips (Museum of Economic Geology), under the sanction of her Majesty's Commissioners of Woods and Works. The chemical facts and theories adduced rest also on the authority of the same able investigator. (Appendix to 1st Report, p. 40.)

* Specimen furnished by Mr. T. L. Donaldson.

Carbonate of lime . . .	99.7
Bituminous matter . . .	0.1
Oxide of iron and earthy matter	0.2
	100.0

Thus the Durdham Downs limestone is equal, or even superior, to the Travertine in purity: the original colour is less promising, owing to the presence of bituminous matter, but this disappears in the burning.

SECTION III.

CAUSTICITY OF LIME.

The question as to the means of rendering lime less caustic, taking it in the general sense, seems to be quite determinable by chemical investigation. It is true the results are at variance with the opinions of some experienced living artists; but the Italian writers on art by no means insist on the necessity of keeping slaked lime for a very long period; and in the practice of the modern Italian, and indeed some German fresco-painters it is not considered essential to keep it longer than a few months. That all lime is for a certain period unfit for the purposes of painting, is however sufficiently evident. The well-known effect noticed by Cennini—and this should be borne in mind—is, that it blisters if used too fresh. In some instances it is said to have turned the colours to a brownish red. All, however, are agreed, that the caustic quality requires to be mitigated, and the only questions seem to be—What means are the best and shortest for effecting this object? And to what extent is it desirable? In order to obtain a

clear view of this subject, it may here be necessary to state a few elementary facts.

It is common to talk of limes as being *more* or *less* caustic—as if mere lime could vary in its essential quality. This essential principle is inherent in all limestones, and is only greater or less in quantity; the purest limestone, in atomic proportions consists of

Carbonic acid	44
Lime	56
Carbonate of lime	100

Thus constituted, whether in its original state, or reproduced by chemical agency, it is not at all certain. If the limestone be subjected to sufficient heat, it loses the carbonic acid, and there are left—

Lime	56

If to this lime there be added as much water as will combine with it, the result is a compound of

Lime	56
Water	18
Hydrate of lime	74

It is to be noticed that this proportion of water, in combining with the lime, does not, apparently, moisten it. Hydrate of lime is a dry powder; the addition of more water either mixes with the lime mechanically or dissolves it.

Let these seventy-four parts of hydrate be exposed to the air, the water is expelled by carbonic acid, and the result is as at first.

Carbonic acid	44
Lime	56
	100

This is, chemically speaking, the original limestone, although the original state of cohesion is never regained.

The non-caustic state of lime is therefore arrived at, when by exposure to the air, or by other means, it has regained its maximum of carbonic acid; but if buried, and kept air-tight, the lime cannot in any degree acquire that which renders it non-caustic. "Time," observes Mr. Phillips, "has no effect on fine lime, whether slaked, or unslaked, provided it be not exposed to atmospheric air, or some other source of carbonic acid."

One of these sources, though not an abundant one, is spring or river water, which contains carbonic acid and carbonate of lime; and the frequent washing recommended by all the authorities on fresco painting, is a means of restoring the lime to the state of carbonate—pure, or caustic lime, being constantly carried off in solution with the water wasted, and carbonate of lime being formed. The mixture of carbonate of lime with water is a mere mechanical combination; non-caustic lime may, therefore, be kept in a moist state. It might also be kept in a dry state without further change; but whether moist or dry, it would be wholly useless for the composition of plaster, and would not possess any adhesive quality. In the last state of mildness, it would resemble moistened chalk, and would crumble to dust. But as long as the lime remains

caustic, or so long as it has not recovered its quantum of carbonic acid, it will, on exposure to the air in a moist state, rapidly attract it, and the surface soon becomes incrusted, and in a manner petrified. This is precisely what takes place during and after the process of fresco painting, moisture being always the medium, the conductor, so to speak, of carbonic acid. It thus appears that a considerable degree of causticity is indispensable in lime to give it adhesive firmness, and to render it fit for the purposes of the fresco painter. This degree of causticity, experience only can teach; but the means of diminishing the caustic quality is always possible. In addition to the recombination of carbonic acid with pure lime, which, as we have seen, can be promoted in various ways, a mechanical mixture with non-caustic substances, pulverized white marble, or even chalk or whiting, might possibly answer the purpose. Armenini observes, that some fresco painters mixed lime and marble-dust in equal proportions; and Palomino, on the authority of Luca Giordano, states that the practice was universal throughout Italy in his time.

In fact, a mixture of this nature, with various substances, actually exists in several limestones. Thus the stones that furnish the limes of Munich and Genoa contain magnesia in considerable proportions. Perhaps, also, the lime known at Milan and elsewhere by the name of "calcina dolce" may be of this description; the presence of magnesia, if not otherwise objectionable,—and experience seems to decide that it is not,—cannot obviously lessen the whiteness of the lime. Other natural ingredients, although they might have equally the effect of rendering the substance less caustic, might be less desirable as ingredients in lime

for fresco painting: thus, iron would affect the colour; silica and alumina would probably cause the lime to set too fast.

But although the quantity of the lime may be thus reduced, we must not forget that, in itself, it is still perfectly caustic, until combined with carbonic acid. And in modern practice it appears that the same precautions are taken, whether necessary or not, with the magnesian as with the other limes. It is also to be observed that there is a considerable difference in the rate at which different limes recover their carbonic acid. The white (pure) limes take it up the most rapidly, and the argillaceous and magnesian limes the most slowly. On the whole, therefore, a pure limestone appears to be preferable.

SECTION IV.

With regard to the question of burning lime, or keeping it by some means air-tight, it is evident from the previous statements that, instead of rendering it mild, this treatment would preserve it in a caustic state for almost any length of time. There would be no danger of its becoming dry, even if buried in the mere earth; but for the purpose of preserving it clean, the pits had better be lined. Thus preserved in the state of *putty*, as it is technically termed, no chemical change could take place; but a mechanical alteration in the arrangement of the particles would probably be the result, which might be advantageous, by improving the consistence of the paste.

It is hardly to be expected that the ancient authors who have undertaken to explain these results should

be always accurate in their views; but their testimony with regard to the results is important. Vitruvius observes, "Stucco (*albaria opera*) will be well executed, if lime of the best quality be slaked long before it is wanted; in order that if any portion was imperfectly burned in the kiln, the action of moisture in long maceration might slake it, and reduce it to the same consistence as the rest. For if lime be used too fresh, instead of being thoroughly macerated, it will, when spread (on walls), throw out blisters, owing to the crude particles that lurk in it. These particles, not having been duly slaked, swell and destroy the smoothness of the plaster. This explanation does not satisfy the modern chemist; but it will be observed that the evil pointed out is assumed to result from imperfect slaking, not from the too caustic state of well-slaked lime. Pliny observes that the longer mortar is kept the better it is; and he notices an ancient law relating to building, which prohibited the use of mortar that had not been kept for three years; adding, that the stucco executed during the operation of that law was free from cracks." Palladius likewise recommends that lime intended for stucco should be slaked long before it is used, and describes it, after having been so kept, as soft and adhesive (*viscosum*). Leon Battista Alberti, after repeating the above passage from Vitruvius, asserts that he had seen some ancient lime, which there was reason to suppose had lain neglected in a trench for more than 500 years, and which far surpassed honey or marrow in consistence. These passages show that long maceration or souring, as it is now technically termed, was supposed to improve the consistence of lime, besides reducing its causticity.

SECTION V.

The opinions of early writers on art have already been given. Modern authorities, on the general nature of cements, have also considered this question. Professor Higgins, a writer of the last century, although very much opposed to the practice of keeping long, lime to be used for building, admits that the process may be necessary for the due preparation of stucco. After repeating the reason for so keeping it, as usually given by plasterers,—namely, the tendency of fresh lime to blister, he adds, "It appears to me that there is another reason which the workmen do not notice; for their purpose lime soon absorbs so much acidulous gas (carbonic acid) from the air, as to be increased in bulk and in weight beyond the half of its former quantity; and as stucco for inside work, for the sake of a fine grain and even surface, must have a greater quantity of lime in its composition than is necessary for cementing the grains of sand together, the incrustation would, by the access of acidulous gas, after it is laid on, be apt to swell and chip, and lose the even surface, if the lime were fresh when used in this excessive quantity; but this inconvenience is obviated by these processes, during which the lime imbibes a considerable quantity of the gas, and is therefore less apt to blister and swell after the stucco is laid on."*

* There is not any difference between lime which has been slaked only a month and lime which has been slaked ten years; for the carbonic acid of the atmospheric air only combines with the mere surface of the lime; it cannot penetrate further; therefore, the great body of the lime beneath this crust preserves its strength for a great number of years, and it is then fit for use.—*Mérimée on Fresco: translated by W. B. S. Taylor.*

Recent authorities merely state the fact that rich limes can be kept in the moist state for any length of time. The results, whatever they may be, are not by them considered important. It has been shown that these results are commonly supposed to be—first to render the lime mild, and next to improve its consistence. Assuming, then, that the effect of keeping pure lime in pits would be to promote the more complete comminution of the particles, it appears that the result might be as completely attained by the method before described, commonly practised by the Genoese workman,—namely, thinning the paste in water, and pouring off the finer particles as soon as the coarser have subsided. The process is objected to by modern writers on cements for building purposes, because it reduces the strength of the lime,—in other words, renders it less caustic. But this is precisely the further result, supposed to be attained by keeping the lime in pits. The method is, then, doubly recommended to the fresco painter.

After the above investigations, the following paper was communicated by Dr. Reid. The experiments proposed to reduce the causticity of the lime are founded on the general principles already pointed out.

SECTION VI.

"Lime can be rendered mild by numerous operations with much more certainty and rapidity than by exposure to the air, or to the slow action of air and moisture after being buried in the earth.

"Were the precise chemical condition of the lime known with minute accuracy, in so far as it is most

advantageously employed for fresco painting, a definite answer might at once be given to the question proposed; but this, so far as I am aware, has not been tested with those advantages which modern science presents; and should this opinion be correct, in which I would rather inquire for information than offer it, I should then consider it desirable to adopt the following course:

"First, that a series of experimental trials should be made with lime prepared in various ways by chemical processes, such as would afford at all times, and without delay, a material whose uniform texture might always be depended on.

"Mixtures of fresh lime in minute quantity with much carbonate—of precipitated lime and precipitated carbonate—of lime carbonated by exposure to steam and water with carbonic acid, and various other mixtures, these will occur readily to the practical chemist. Here it is to be observed that, if the lime requires to be fully carbonated, the carbonate can be prepared in the most minute state of division, and in the highest purity, by rapid precipitation from solutions of lime, the cost of which would not be so great as to prevent their use for this purpose, as they might be formed partly by materials of which hundreds of tons are dissipated weekly in factories, because there is no demand for them. The carbonate might also be obtained from any limestone that might be preferred in a much more minute state of division than it is commonly reduced to, should chemical purity not be a special object, by adopting some of the processes followed in manufactories for reducing solids to an extreme degree of comminution. But if, though much carbonated, it is essential that it should not be

entirely carbonated, then the experiments proposed will solve the question as to the best proportion. This is, perhaps, the most important point to determine.

"The mixtures of various other ingredients should be tried along with the lime, so as to ascertain if any peculiar combinations of earths should prove more favourable for fresco painting.

"Experiments should also be made with the view of ascertaining the extent to which the retardation of the setting of the lime may be secured both by admixture and by the production of artificial atmospheres, so as to give more freedom to the artist in the execution of his designs."

CHAPTER VI.

SECTION I.

HAVING laid before our readers the various modes of masonry proper or improper for fresco, the mortars, limes, stucco, intonaco, colours, cements, and other materials which are requisite to be in readiness ere an artist can commence his mural painting. We shall now proceed in the same consecutive order with those instructions which relate immediately to the operation of the painting. Commencing with the cartoon, which ought to be completely ready by the time the work is in a suitable condition to receive it; and it cannot be too well fixed in the minds of those who may be emulous to immortalize their genius and add something to the glory of their country, that they should be very deliberate in making their pictorial composition, and equally slow in designing the figures, lest any vulgar or conventional forms, any misplaced, extravagant, borrowed, or too tame attitudes should get on the canvass. Every well-experienced practitioner knows that these are matters which require a mind endowed with rational enthusiasm, capable of serious and continuous reflection, deep thinking, and patient investigation, combined with indomitable energy

in the execution of his plans. With such qualifications, joined to a practical skill and perseverance, the artist whose professional objects are of an elevated character, can scarcely fail of success—and so far as that may extend, will contribute to the intellectual glories of his country. But to gain a position so exalted, one worthy the honest ambition of the noblest minds, "Great Nature" must be the artist's guide, in her boundless temple of truth must he constantly worship with unflinching ardour. But his devotion to study will be well requited according to its sincerity and devotedness. The possession of invaluable knowledge acquired by this high training, combined with the natural vigour of his mind, will confer upon him that noble quality which the illustrious Wellington declared was indispensable to those who would be great in arts, as in arms, "the power of overcoming great difficulties."

The soundness of these precepts are acknowledged by many, but as yet are practised but by few, in proportion to the number of practising artists—that is, if we admit all to this honourable distinction who assume that title. However this may be, it is admitted that these principles cannot be too often reiterated, especially to the rising generation, for whose instruction and advantage, in a great measure, this work has been brought forward at no trifling labour and expense.

SECTION II.

THE CARTOON.

This substantive is spelled *cartone* by the Italians, and meant originally a large strong paper or pasteboard, on which the artists made their first sketches, designs, or compositions. The two specimens of the original car-

toons by Agustino Carracci,* and that of the "Murder of the Innocents," by Raffaelle,† which are at the head of the staircase in the National Gallery, will give the best possible explanation of the manner in which the most accomplished fresco painters prepared their original compositions to be transferred to the wall.

The largest pasteboard being of a size too limited for the grand scale on which the finished subjects are prepared, are only used as they were originally, for small drawings, which are the preparatory studies for the great composition which is made out from them.

The following mode of preparing the surfaces for these large compositions has been found suitable, and has been adopted generally by the artists who were competitors in the recent competition at Westminster Hall:

A very strong frame being prepared,—it may be a stretching-frame or not,—a strong cloth is to be stretched upon it exactly as if it were to be prepared for painting; upon this cloth, cartridge paper is carefully glued: some glue on a second layer of paper; but if the first layer have a good substance, there is no occasion for incurring the trouble and expense of a second papering. But in laying down the paper, care should be taken to rub down the edges where they overlap, that the surface may be as even as possible. Over the surface is then passed a wash of size and alum, on this, a wash of some neutral colour may be passed if required; and on this, when dry, the subject is sketched with charcoal, Italian or white chalk, the full size of the intended painting. This is to be done from smaller

* Presented to the nation by Lord Francis Egerton. Of these, the "Aurora" has not the pricked outline: the "Galatea" has it.

† Of this work, the outline is full of pinholes.

drawings of the whole composition, every part of which must be well defined in studies carefully prepared from nature for this purpose. When it is found inconvenient to prepare a cartoon the full size of the picture, when this is very large, it is optional with the artist to make his drawing half the size, or to divide the whole composition—but of the full size—into two or more cartoons. The fresco is therefore an exact transcript of the cartoon, the forms being traced on the wall as we shall presently describe.

When the drawing on the cartoon is finished, if in charcoal, it is requisite to fix it by wetting the back of the cloth with cold water, and then steaming the drawing in front, to soften the gluten sufficiently to cause the adhesion of the charcoal to the surface, and thus render the drawing permanent. This mode of fixing is however liable to failures, if not managed by persons very expert in processes of this nature; but when well operated, and the drawing preserved clean, and free from streakiness, it is very effective for the purpose intended.

Some mark their outline and put in their shadows with Indian ink, seppia, or bistre, these tints do not of course require steaming; others put in their lights and shadows with black or brown tints, and white mixed with size; that is also a very safe method, and one by which the full effects of the chiaro-oscuro can be given without much difficulty.

The artist having prepared his drawing carefully, the full size of the intended fresco, he then places over it transparent oil-paper, on which he makes an outline trace from it, this is the *working sketch*, and completes all the preliminary circumstances for commencing to

work on the wall. We shall therefore leave these matters in perfect readiness, and return to the final preparation of the wall, and the laying on of the intonaco.

The wall and rough mortar surface having, as previously directed, been allowed to dry perfectly hard, and to become well seasoned, is then wetted repeatedly with water that has been boiled, or with rain-water, until the absorption quite ceases. Immediately as this takes place, a thin coat of plaster is spread over that portion only which is to be painted; the surface of this coat must be moderately rough, as soon as this begins to set—say in about ten minutes, it will be more or less according to the atmospheric temperature—then a second thin coat is laid on somewhat fatter, that is with more lime and less sand, or about equal quantities; and both these layers together should be little more than a quarter of an inch in thickness. These coats are laid on, and the surfaces smoothed with a wooden trowel,—the last coat, it should be observed, is the *intonaco* or tunic, whereon the work is to be painted, and this some painters like to have made quite smooth, others like it a little rough—and to do this, one of the modes is to fasten some beaver nap to the trowel: another mode is to pass over the surface in all directions lightly with a dry brush or a roll of soft wet linen to remove the extreme smoothness, also the traces of the trowel, and to stir the sand. The surface is next to be passed lightly over with a handkerchief to remove the loose particles of sand on the surface, which in ceiling painting might injure the eyes.

To return to the traced outline—a portion of which, sufficient for one day's painting, is cut off and nailed to the

wet wall; then the forms are again traced with a sharp point, which makes an outline indented in the soft plaster, and this is a sufficient guide for the operation of painting.

Another mode of making a correct outline on the plaster, is that of placing the paper which is to be applied to the wall, behind, and in close contact with the finished cartoon; the outlines of the latter are then pricked, and the operation leaves a similarly pricked outline on the paper behind; a proper portion of this pricked paper is then to be fastened to the wall, similar to the oil-paper tracing as above directed; a pounce-bag, in which there is some red, black, or brown dust, is then pounced against this paper, which is then removed, and a corresponding outline is found upon the wall.

For works of small dimensions this method is sometimes adopted, as it does not in the least degree disturb the surface of the plaster. The plan of tracing on transparent paper and transferring this to the wall is generally employed, because it gives the best and firmest outline, and leaves the finished cartoon unblemished by pinholes. A considerable number of the finest Italian frescos show very evidently, when examined closely, the indented outline produced by the tracing.

No alterations, except such as are trifling, can be made on the fresco, this process being justly styled "a final operation;" therefore should any changes suggest themselves to the artist's mind, after he has finished his cartoon drawing, he must make them on the cartoon by displacing, or cutting from the surface, such parts as he may have rejected, and fitting the new

parts in their places; and from the last arrangement of the subject the tracing or pouncing outlines must be made.*

Another circumstance of some importance, because it will save time and much useless labour to the artist is, that previous to commencing to paint on the wall, he should have prepared a coloured sketch of the whole design, as neither colours nor form can be changed satisfactorily after the fresco has been finished. It appears that the German artists rarely make studies of this kind; this is an oversight on their parts—at least we have not heard any good reason assigned for their neglecting to acquire so useful a habit.

SECTION III.

THE PROCESS OF PAINTING.

We have come at length to the most interesting process of all those connected with this class of painting, and shall lay before our readers the various methods employed in this operation, commencing with the history of the outline, which is a process of great interest in the works of Italian masters. From this it appears, that whilst the modes of outlining already described were adopted in this art, each artist used them accord-

* Great care must be taken in tracing the first portion of the composition to fix the paper precisely in the right place, because the subsequent lines all depend on the first. To ensure this point, the whole drawing should be fitted to the space before it is cut up for the purpose of tracing. The edge of the portion first applied should also be pounced, as a direction where to cut off the superfluous *intonaco*. The latter is not, however, to be cut away close to the line so marked, but about an inch from it, to avoid cracks, and to secure the completion of the portion traced to the very edge.

ing to his own particular fancy or convenience, uninfluenced as it would seem by any acknowledged rule; and the peculiar mode of each artist being once understood, affords good evidence of the authorship of a work. The practice, however, of making an indented outline with the stylus is very ancient; as this appears to be the mode used by the Etruscans in the paintings on their tombs, but the external outline only was marked with the point. The early Italian masters used it precisely the same way in outlining their *distemper* works *on panel.* Of these specimens remaining, Giotto's are the earliest, and his pupils adopted the same method. It was also the practice of the Sienese school, which however is distinguished from the other schools by one peculiarity; this was the constant habit of marking in "the Madonna," not merely with an external line, but also the outlines of all the folds in the drapery, with the stylus: and this circumstance distinguishes a true Sienese Madonna from all those of contemporary schools. At a later period it came into use in every part of the picture,* in tempera and even in oil painting.

It is however a curious circumstance, more connected with the early history and practice of the art, than affecting modern practice, that while the stylus was used in distemper pictures on panel, it rarely is

* Signor Pacetti, of Florence, who carefully studied this subject, says that the ground on which old paintings, whether in oil or distemper, were executed, was formed of a fine whiting, called *gesso da oro.* This is said to be a production of Tuscany, and is considerably finer than any whiting used in other parts of Italy or in this country. It was mixed with a white size, made from parchment shavings, and could be drawn upon by the point with the utmost facility.

seen in those of the same period painted on walls. It is never found in the mural paintings by Cimabue, Giotto, Orgagni, or Benozzo Gozzoli, but it has been found in the *architectural backgrounds* only of Fra Beato Angelico's works in the Vatican.

In the frescos by Massaccio, in the Carmine, the lines of the *architecture* are put in with a point, but not the figures. There is another specimen by Andrea del Sarto, in the Academy at Florence,—it is not a large fresco,—in which the architecture is put in with the point, and the figures are painted with the brush, independent of any peculiar outline.

Luca Signorelli was amongst the first, as it appears, who used the cartoon and point in the manner now adopted in the German school. Signorelli carefully marked in every necessary outline, as did many others; but the evidence which the use of the stylus gives in mural painting is decisive of the fact, that such paintings were *always* laid in in fresco, although it not unfrequently happened that they were finished in distemper, and sometimes frescos were painted without the outline having been indented; but the smooth even indentation of the point shows that it was produced when the plaster was soft, which it must be for fresco painting only: then on the other hand, if attempts were made to indent lines on a dry surface with the point, it would produce a scratchy and broken appearance. Another curious fact is, that the ardent spirit of Michael Angelo did not patronize the stylus, he adopted the much slower process of the pouncing-bag.*

* The dotted line left by the pouncing is then to be gone over with black chalk, which will leave a dark line and slightly indent the surface, so that, should the chalk line be obliterated, the indentation will still serve as a guide.

There are not any marks of the point in the "Last Judgment." A remarkable picture attributed to him (in distemper), in the tribune at Florence, is drawn in with the point: and it is the only painting attributed to him in which the marks of the stylus have been discovered.

The *spolvero** was also patronized by Pietro Perugino, and likewise by his great scholar Raffaelle; but the pupils of the latter artist adopted different modes, each according to his own fancy; and this is evident in the frescos of the Stanze,† in painting which different hands were employed. As for instance, the point is not used in the Dispute of the Sacrament, nor in the School of Athens, except in the drapery of Hippias, where it appears in an alteration of drapery folds. In the Parnassus, there is no mark of the stylus visible, save in the robes of Homer and Tasso. It is not at all used in the Heliodorus. In Attila, or mass of Bolseno, in the Peter Delivered, the stylus is seen to have marked the outline of the moon. The Incendio del Borgo has first been pounced, and then outlined, with a sharp stylus on the soft plaster, with tolerable care. The Oath of Leo III. is similarly outlined, but very carelessly. These two frescos form, in this respect, a striking contrast to the others.

Giulio Romano did not use the point in his "Battle between Constantine's army and that of Maxentius."

Raffaelle's judgment with regard to making his outline, was most correct. He did not use the stylus in

* The pouncing-bag.

† In the Royal Academy of Arts (London), there is a set of the Stanze pictures. They are copied small in oil, are very well executed, and must have been painted at least a century ago.

those beautiful works in the Farnasina, as he knew that it would have injured them very much; and, indeed, it should not be seen in works that the eye can approach near to, particularly if they are lighted from one side, as the channelled line cut by the stylus will then be partly in shadow, and will make a hard outline wherever it has been used. The Venetian masters were by no means careful. Titian is remarkable for the little care he appears to have taken in the preparation of the outlines for his fresco pictures. This class of painting evidently was not a great favourite with him, although his style and talents are sometimes well displayed on the intonaco.

Pordenone, who, with great talents, must be ranked as a slovenly operator at times, used the stylus; and, in some places where he had changed his mind as he was painting, he appears to have taken the first thing that came to his hand to cut or scratch a new line—a sharp bit of wood or the end of his dagger; and with such clumsy implements he often broke away lumps of the plaster, thus causing irregularities in the surface, which he did not seem to regard, and did not repair. Now, on the other hand, Innocenza da Immola exhibits in his works a remarkable contrast to the practice of the artists just mentioned; for his constant habit was to put in with the point every hair, wrinkle, and even the small folds of the drapery, before he commenced painting.

SECTION IV.

THE PROCESS OF PAINTING.

Every preliminary process essential to the successful

operations of fresco painting, and the permanency of such valuable works,* having now been placed before our readers, we will suppose that the artist has got his wall, his cartoon, and his tracing ready; his colours and implements prepared; and that he has a portion of his subject traced with the sharp point, or pounced, as may best suit his purpose, upon the section of intonaco which has been prepared for his day's work; and that the surface of the latter is in the proper state to commence upon, that is, firm enough to receive barely the impression of the finger, but not so moist as to endanger its being stirred up by the brush, as this would prove a great inconvenience, and fill the brushes with sand; and there is little or no danger of the plaster drying too rapidly, if the wall has been well wetted previously; but if, in the course of a summer's day, the surface should begin to harden too much, and refuse to receive the colour kindly, the operator may take a mouthful of water occasionally, and sprinkle it over the surface, as sculptors do, to keep their clay model sufficiently moist. And we beg to impress it upon the artist's mind, that very much depends on the thorough wetting of the dry mortar on the wall previously to the applying to it the first coat of plaster and the intonaco.

The dotted outline having been gone over with black chalk as already directed, the surface of the intonaco is again to be lightly wiped with a handkerchief to remove the charcoal that might remain, it is then to be sprinkled with water from a plasterer's large brush.

* Should any of those primary objects be neglected, or carelessly performed, complete success in his painting need not be expected by the artist, and it may become altogether a failure.

This implement, and a vessel of clear water, are to be kept at hand, as the same operation may have to be frequently repeated, especially in summer. Another brush, and a separate vessel of water, should be kept for washing out any work which may require to be effaced. The water in this second vessel gradually becomes tinged with lime, and cannot be used for sprinkling the work, as it would occasion white spots. In frosty weather it is necessary to keep these vessels on the fire, and in preparing the wall, it would be proper for the assistant to use warm water. "But," Palomino* continues, "if, owing to extreme cold, the surface of the *intonaco* should freeze, this will produce a worse effect upon it than rapid drying; for no absorption can take place, and the colours afterwards crumble off like ashes, as I have myself experienced. If, therefore, the use of warm water should be insufficient to overcome such effects, it will be most advisable to wait for a milder season."

The temperature, however, being favourable, the artist commences by painting in the background, and distances of the portion allotted for the day's work. His next operations are to lay in the shadows of his flesh tints carefully, and then working in the half-tints and lighter parts with this colour, this first wash is quickly absorbed, and the colours appear very faint. They, however, are not lost, as they form a foundation for the next painting, in which the colours must be laid on in a fuller body (*impastare*), and this may be done to a greater extent in fresco than in oil painting. But wherever there is a large space to be painted flat in a

* Palomino was a Spaniard, and an eminent painter in fresco. His principal works are at Granada, Salamanca, and Valencia. He died 1726.

single colour, especially flesh tint, it should be done with large brushes, to prevent the overlapping of the edges of colour, as that occasions a streaky, and, of course, an unpleasant appearance,* which it is difficult, sometimes impossible, to overcome, but may be avoided by using brushes of a superior size, which, by covering a large space each time it is drawn over the surface, and by dexterously avoiding the edge of the preceding sweep of the brush, an even flat tint in flesh, or any other colour, may be obtained with certainty.

After the painter has laid in his general colour, he should wait half an hour, or an hour, according to the setting of the colour (which again is contingent in a great degree upon the state of the weather), before he proceeds to more delicate modelling. In these primary operations, he should avoid warm or powerful tints, for these can be added with better effect as the work advances. The second painting requires a full body of colour, and this *impasto* has, by some of the old masters, been carried to an extraordinary degree of fatness. In fact, the artist may lay on his mixture of lime and colour with the brush as thickly as he pleases; and this practice is quite observable in the works of Pordenone at St. Maria Campagna (Piacenza), where the light parts have evidently been laid on with as great a body of colour and lime as possible, and much greater than could be attempted with oil colours. Paulo Veronese, also, in his frescos at the Villa Mazer has charged his lights surprisingly; but his *imitators* have quite surpassed him in this false imitation of nature. These

* This appearance is not uncommon in the German frescos, from the cause mentioned. We think the use of large brushes would prevent this defect.

men have loaded their works so much, that the lights stand up in lumps upon the wall! Such extravagances are, of course, to be carefully avoided. The lights, we all know, must be laid on with a much more full pencil than the shadows; but the same thing happens in oil painting, because, in each case, there is considerably more white pigment in the high lights than in the shaded parts. But these appliances should not be carried to an excess, which violates the best rules of art, by disregarding the plain, unaffected manner in which Nature carries on all her operations.

That an extraordinary dexterity of manipulation with the brush has been attained is but too evident in the paintings of many masters, and in none, perhaps, more flagrantly than in the works of Pordenone, already noticed, and Polidoro di Caravaggio in St. Andrea, on Monte Cavallo, and in the Farnasina; but it is a dexterity not deserving of any commendation when carried to such extravagance, setting both good art and nature at defiance, and is attainable by very inferior practitioners.

The really "great masters" laid in their colours without any sort of ostentatious handling, as Professor Wilson justly remarks, and "their works do not exhibit any of the tricks of manipulation."

After the second painting has been completed, another pause of ten or fifteen minutes takes place, and then the artist proceeds to finish his picture by a process of glazing peculiar to fresco. Transparency may be obtained in the first and second painting by laying on the colours flat and quiet, and with brushes of a sufficient size to carry the washes rapidly over the surface. By this mode of operating all streakiness is

avoided, and there is no occasion to go over them to get rid of the streaky appearance; for, should the quiet flat surface be disturbed to remove the streaks, these may be subdued,—but then, transparency is lost, and opacity succeeds. The latter is one of the defects of the present German school; whilst, on the other hand, the old examples prove that this union of tints was obtained without losing the transparency.

Titian, it appears evident, leaves the bare intonaco not unfrequently to assist in giving transparency. In one of his frescos at Padua, he has laid in his shadows in brown with much transparency; but for half-tint he has left the bare lime. This practice cannot be recommended: it is never found in the frescos of the Florentines or Romans; and that great fresco painter, Luini, obtained equal lightness and transparency without those contrivances. Such practices give to works a sketchy character, which is particularly objectionable in the principal figures, and scarcely to be tolerated in the inferior parts. To obtain the power mechanically of producing transparency must, however, in a great measure result from practice.

A Milanese professor says, on this subject, that it is necessary to lay the first tints early in the morning, then to leave the work, and not resume it for two hours. He further states that the lime, if it have any remains of an injurious caustic quality, will exhaust its fury on the first colours, and may be more safely painted on afterwards.

To these directions Professor Wilson adds, "It must be observed that the frescos by Appiani, which the Milanese professors point out as successful examples of this practice, are very far from exhibiting

the quality of transparency; but as other artists hold the same opinions, it is proper that it should be stated."

Whether this mode be effective or not, can, however, be easily determined by practical experiments.

SECTION V.

GLAZING.

This is a rather important process in fresco painting, which it appears was, by the old masters, well understood, and is clearly exemplified in their works. The celebrated picture at Siena, in the gallery of the Academy, and known as the "Cristo alla Colonna," is a particularly interesting example of its just application in fresco; that is, in fact, of its being applied whilst the intonaco was still moist. In this instance, parts are made out by its agency, and both lightness and transparency are attained. Razzi's works are those which most decidedly exemplify what may fairly be called "legitimate glazing" in fresco, and to a greater extent than those of any other master.

The superiority of some frescos, in point of colouring, is no doubt owing to the process by which these colours are applied. On this subject Cennini says, "There are some painters who, when they have prepared a head,* take a little of the San Giovanni white, diluted with pure water, and give with it a few touches to mark the relief of the most prominent points of the lights. They next apply a rosy hue to the cheeks and lips with care; then, after a little delay, they pass

* That is, after they have laid in their first and second courses, so as to have completed all their solid painting.

over the whole *a very liquid wash of acquarelle* (distemper) flesh colour; the head is then considered com plete as to the colouring process, requiring nothing more than some touches of white upon the high lights. This," he observes, "is a good method." He says further — "Others, at first, apply a general tint of flesh colour to the face, and (after a little delay) put in their shadows with a mixture of that colour and of green brown (*verdaccio*), they then finish with a few touches of flesh colour. This method is that of persons not well acquainted with the resources of their art."

It is very evident that this is a description of the glazing process which produced tints very different from those obtained by the solid, or paste mode, and much more brilliant: and it plainly shows that after the local colours of the complexion were touched upon the *impasto*, or second painting, the vehicle with which the wash, or glaze of flesh colour was passed over the whole, was a fine and much diluted size; and Mérimée asserts that the cracks seen in the frescos of Raffaelle, Domenichino, and others, are actual glazings, which not having been applied in a sufficiently full body, have sunk into the colours beneath them.

The application of this glazing, requires some caution to keep it from rubbing up, or attacking the colours over which it is passed: and for this purpose Cennini advises the use of brushes with a fine grain, the points of which should be very soft; and also that the glazing should not be attempted until the colours to be glazed upon should have become sufficiently firm by the absorption of the greater portion of the water with which they were laid on; for, should this process be attempted

directly after the solid painting is completed, it would disturb the under colours, and perhaps spoil the work.

Very different from this is the method invented, or adopted by Pordenone, which in its effects resembles that used in oil painting. It appears as if his works had been glazed after the lime had been allowed to dry; the flesh in all his figures is richly glazed,* so that the transparent colour fills up the hollows occasioned by the peculiar loading already described as so remarkable in his frescos,—so called, for there is something ambiguous about them, the only other master who seems to have adopted a somewhat similar process, one so foreign to fresco painting, is Polidoro da Caravaggio. The adopting of such a practice must no doubt have arisen from the artists not having a clear conception of the true application of fresco painting. The Venetian painters generally were no better off in this respect. Titian himself fell into the mistake of attempting to produce the same effects of light, shadow, and colour, which he had been accustomed to produce in his oil pictures.

The light and brilliant colouring of P. Veronese enabled him to paint with a stronger resemblance to the true character of this style than most of the Venetians; not that he seems to have known or cared about that matter,—for this success is merely the result of his system, and not any intention on his part to apply the principles of colour suited to the peculiar art of fresco painting, which he often practised, and with triumphant success at the Villa Mazer. But of all the masters of

* This glazing very much resembles the liquid combination of wax and resins used in encaustic paintings, and probably is such a vehicle.

the Venetian school, old Palma was the only one who appears to have had a just conception of the powers and purposes of fresco painting, as his mural pictures sufficiently prove; of these, two remarkable specimens by him of saints, are to be seen at Castel Franco, they are painted with great breadth of style and dignity of character.

SECTION VI.

Having entered thus largely into the executive methods, and merits of some celebrated fresco painters, we shall now return to our fresco, which we left when the glazing was passed over it. By means of this agent, the requisite degree of completion can be attained, provided the daylight and the absorbing power of the plaster last. But if the touches of the pencil remain wet on the surface, and are no longer sucked in instantaneously, the artist must cease to work, for henceforth the colour no longer unites with the plaster, but when dry* will exhibit chalky spots;—as this moment approaches, the absorbing power increases, the wet brush is sucked dry by mere contact with the wall, and the operation of painting becomes gradually more difficult. To go on after these symptoms would be injurious to the work,— to cease further exertions, therefore, is advisable.

* It is stated by Condivi (Vita di Michelagnolo) that some blues are best added when the work has become dry, and he instances the circumstance of the successor of Leo X. (Adrian VI., a Dutchman) having compelled M. Angelo to remove the scaffolding from the Cappella Sistina before he had time to put in the blue colours, which, of course, were afterwards applied to the dry surface. This solitary instance is not satisfactory. That ultramarine will be permanent, if used in fresco secco, is quite true; but surely it would not be less so if applied here to the moist intonaco, as it has been in other places.

But should the wall begin to exhibit drying symptoms too soon, for example in the second painting, some time may be gained by moistening the surface with a large brush, and trying to remove the crust, or setting that has already begun to take place, but this is only a temporary remedy, which cannot be repeated with effect. The change of the colours from the wet to the dry state, is very considerable in some tints, but can be tolerably well ascertained by touching them first on a light-coloured brick or tile that absorbs moisture.

After having completed the portion allotted to the day, any plaster that may extend beyond the finished part is to be removed, and in cutting it away, care must be taken never to make a division in the middle of a mass of flesh, or of an unbroken light, but always where drapery or some other object, or its own outline forms a boundary. Should this be neglected, it will be almost impossible the next day, in following up the operations, to match the tints so that the junction shall not be visible; but by making these joinings correspond with the outlines in the various parts of the composition, the patchwork which is unavoidable may be quite concealed; and in the next day's operations, when the old under coat of mortar is being wetted as before, to receive the stucco and *intonaco*, great care must be taken to wet the cut edges of the former day's plaster; this must be done delicately with a smaller brush, in order to be sure that even the smallest corner shall not be neglected, and also to avoid sprinkling or soiling the finished portion; therefore it is better to begin at the upper part of the wall, and carry the work downward, for then there cannot be any danger of wet descending upon it from any work above.

When the artist is compelled to leave his work dur-

ing the day for some time, without being able to finish a portion at once, there is a contrivance used by the Munich artists which stops the drying of the work for some time: they have a board of sufficient surface to cover that part of their work, and this is padded on one side, this cushion being then covered with waxed cloth; a wet piece of fine linen is then spread over the fresh plaster and painting, and then pressed to the surface of the wall by the cushioned side of the board, while the outer side is buttressed firmly by a pole from the ground.

It sometimes happens that a part of the work gets damaged or perhaps quite spoiled; whenever a defect of this kind occurs, the spoiled portion must be carefully cut out, and the process of wetting the wall, &c., above described is to be renewed, with a fresh *intonaco* to recommence; and upon revising the finished work, if some part should not come up to the artist's intention, he has the same remedy, but no other,—the objectionable part must be cut out, and a renewal of the first process, on which he must begin afresh; he should also take very great care to see that the portion cut out shall be bounded by definite lines, for it is obviously a matter of great importance, in fresco painting, to make a nice adjustment of the various portions of the work, so as that it shall present an entire unity of appearance when completely finished.

SECTION VII.

Previously to entering upon the subject of retouching with distemper when the fresco is dry, we shall lay before our readers the description of another process of

fresco painting of a recent date, from the pen of Professor Wilson, to whose zeal and intelligence the British public are justly indebted, and the author of this manual particularly so, for much very valuable information in every process connected with fresco painting.

The professor says, "I lately went to the Royal Palace (Genoa) to see the Signor Pasciano paint a ceiling in fresco; his tints had all been prepared before my arrival, he had only two in pots; viz., pure lime, and a very pale flesh tint, he had no palette, but a table, the top of which was a large slate: on this slate he set out with the palette-knife, terra verte, smalt, vermilion, yellow ochre, Roman ochre, a dark brown ochre, Venetian red, umber, burnt umber, black. These colours were all pure, mixed only with water, and rather stiff—there might be from one to two ounces in each. He mixed each tint as he wanted it, adding to each some from the pot of flesh tint, or of white, as it suited his purpose. Near him lay a lump of umber, and on taking up a brushful of colour, he touched the colour to it; this earth instantly absorbed the water, and he was thus enabled to judge of the appearance which the tint would present when dry: the painter used a resting-stick with cotton on the top, to prevent injury to the *intonaco*. The *intonaco* being prepared in the manner which I have described, the moment it could bear touching he went to work. The head was that of the Virgin, he began with the pale tint of yellow round the head for the glory. (The colour of the ground it is to be observed, was a cool middle tint, owing to the admixture of sand with the lime.) He then laid in the head and neck with a pale flesh colour, and the masses of drapery round the head and shoulders with

a middle tint, and with brown and black in the shadows. He next, with terra verte and white, threw in the cool tints of the face, then with a pale tint of umber and white, modelled in the features,—covered with the same tint where the hair was to be seen, and with it also indicated the folds of the white veil. All this time he used the colours as thin as we do our water-colours, he touched the *intonaco* with great tenderness, and allowed ten minutes to elapse ere he would touch the same spot a second time. He now brought his coloured study which stood on an easel near him, and began to model the features and to throw in the shades with greater accuracy. He then put the colour in the cheeks, and put in the mouth slightly, then shaded the hair and drapery, deepening always with the *same* colours, which became darker and darker every time they were applied, as would be the case on paper for instance. Having worked in this way for half an hour, he made a halt for ten minutes, during which time he occupied himself with mixing darker tints, and then began finishing, loading the lights and using the colours much stiffer, and putting down his touches with precision and firmness: he softened with a brush and a little water. Another rest of ten minutes, but by this time he had nearly finished the head and shoulders of his figure, which being uniformly wet, looked exactly like a picture in oil, and the colours seemed blended with equal facility. Referring again to his oil study, he put in some few light touches in the hair, again heightened generally in the lights, touched also into the darks, threw a little white into the yellow round the head, and this portion of his composition was finished, all in about an hour

and a half. This was rapid work, but you will observe that the artist rested four times, to allow the wet to be sufficiently absorbed into the wall, that he might then repass over his work.

"The artist now required an addition to the *intonaco*, the tracing was again lifted up to the ceiling, and the space to be covered being marked by the painter, the process was repeated, and the body and arms of the Madonna were finished before I left him at one o'clock."

Nothing we believe can convey a clearer idea of the process of fresco painting than the foregoing letter, so far as the first process. We shall now subjoin to it extracts from another letter from the same gentleman. "Yesterday I went again to see Pasciano, and I found that he had cut away from his tracing, or cartoon, those parts which he had finished upon the ceiling; in fact I now found it cut into several portions, but always carefully divided by the outline of figure, clouds, or other objects. These pieces were in some instances a good deal detached from each other, and were nailed to the plaster, so as to fold inwards or outwards, for pouncing the outlines. The *intonaco* had just been laid for the upper half of an angel supporting the feet of the Madonna, this was one of a group much larger than those surrounding the glory, therefore requiring more colour and finish: more than half the figure too was in shadow, with a strong ray of light on the face, and on one of the arms; this was a good opportunity for observing the painter's management of shadow. Having gone over the outline carefully with the steel point, he waited until the *intonaco* became a little harder, and in the mean time mixed a few tints, he then commenced with a large brush, and went over the whole of the flesh, he next worked with a tint that served for the

general mass of shadow, for the hair, and a slight marking out of the features. He now put a little colour into the cheeks, mouth, nose, and hands, and all this time he touched as lightly as he possibly could, not to wash up the *intonaco*, he then halted for ten minutes, looking at his oil study, and watching the absorption of the moisture, and he called my attention to this outline, none of it was effaced by this washing.

"The *intonaco* would now bear the gentle pressure of his fingers; and with the same large brush, but with water only, he began to soften and unite the colours already laid on. Observe, he had not yet used any tint thicker than a wash of water-colour, and he continued to darken in the shadows, without increasing the force or depth of colour. This I before noted to you, that you can strengthen by the simple repetition of tint; but if the day be very dry, after an hour or two, this process of repeating with the same tint produces an opposite effect, and instead of drying darker, it actually dries lighter.* I now perceived that he had increased the number of his tints, and that they were of a much thicker consistence, and he now began to paint in the lights with a greater body of colour, softening them into the shades with a dry bush, or with one a little wet, as suited the purpose. In drying, the water comes to the surface, and actually falls off in drops; but this does no harm to the work, although it sometimes looks rather alarming."

SECTION VIII.

In addition to the above luminous and interesting detail of the actual process of fresco painting, the

* The cause of this appearance is explained at page 101.

author begs leave to add some observations derived from his own practical experience in this art. In the year 1831, he commenced the translation of M. J. L. F Mérimée's work on "Oil Painting, Harmony of Colours, and Fresco." In the autumn of the same year, being in Paris, he was introduced to that talented artist and estimable man, who never seemed tired of giving useful information to those whom he saw desired it sincerely, and these friendly acts were done with a courtesy of the most natural and pleasing description. This gentleman was at that time engaged in making experiments in fresco painting, which it was intended should be submitted to the Institute of France, which had then under investigation specimens of every kind of mural painting, the knowledge of which has reached our days. And the object of their inquiry was to ascertain which style, whether fresco, encaustic, or mosaic painting, would be most suitable, intellectually and permanently, to excite and develop the high moral powers and purposes of painting for the enrichment of churches, palaces, halls, and other public edifices.

The specimens of M. Mérimée were highly approved by the Institute, and his account of the methods and materials he employed was entered on the minutes.

This was a favourable moment for obtaining an insight into practical fresco-painting, and the author accordingly took advantage of it, in company with an American artist and two or three of M. Mérimée's pupils. Our instructor, however, adopted a method somewhat different from that of Pasciano, as described by Mr. Wilson. M. Mérimée commenced by marking in the shadows of the features, or other carnation parts, and then the half-tints were added; he then passed a

light but cool flesh-tint over the face, neck, or arms, according to the part he was engaged upon, and then he paused for a few minutes to allow his first lay of tints to be firmly united to the *intonaco*. In the second painting, his method was very similar to that above described; he laid on a full, but not extravagant body of colour in the lighter parts, and charged his pencil a little more with white pigment in touching on the high lights. It was in about ten minutes or a quarter of an hour after we had completed our second or solid painting, which was then quite safe from being disturbed, that we passed over the flesh parts the thin glaze of *acquarelle* and flesh colour, which restored the transparency that had existed after the first painting, but which was lost by the second lay or solid painting. Upon this glazing a few touches of light were given in prominent parts, and the effect was then like that of an oil-picture with a very fine transparent surface. When it was dry next day, the glossy appearance had almost entirely gone off, but the transparency remained.

It should however be mentioned, that these experiments were upon a small scale as to the dimensions of the frames* being from three to four feet in length and breadth, but the heads and limbs painted within these surfaces were the full size of nature; but being like easel pictures, they were more under control than mural operations could be, although the frames, which were of strong deal,† wire-latticed at the back, were very

* Mr. J. B. Lane, who had studied in Italy for several years, brought to London, in 1832, two of these portable frescos, which he had painted in France. They were much admired. His method was a good one.

† Pictures of much larger dimensions may be painted on these latticed, or on lathed frames, and afterwards fixed in their situation

heavy when charged with the rough cast mortar, the first stucco coat, and the intonaco; the two last, however, together not being more than three-eighths of an inch in thickness. In the course of these operations great care was taken (after some mistakes in the beginning) to sweep the first colours on rapidly, and with large brushes, to prevent the streaks which are inevitable where the succeeding wash runs over the edge of that just laid. These streaks can, no doubt, be afterwards removed by working the softener over these parts; but this action disturbs the surface, and renders the parts dull and opake, besides causing a loss of time which a little more care at the outset would have prevented.

Palomino states that the ancients, previous to commencing their painting, went over their intonaco generally with a light tint of white and *terra rosa*, for the purpose of rendering the surface more even. This we did not do in our operations; but we used the end of the finger afterwards, with good effect, in softening parts where even a fine brush would have failed. We however, when the work was completed, pressed some large sheets of paper on the surface to lay it smooth and even, and this is an object well worthy of the fresco painter's attention.

in the wall. It is a common notion that the celebrated "Aurora of Guido" in the Rospigliosi palace, at Rome, was painted on a copper trellis, and fixed afterwards in its present situation. This is quite a mistake. It is painted on a brick lining, and nails are said to have been driven into it, probably to *key* the plaster.

CHAPTER VII.

SECTION I.

RETOUCHING FRESCOS.

THE description just given of the different modes of operating in fresco are confined to what may strictly be called "pure fresco painting," a process to which the German artists adhere most rigorously, and for which inflexibility of principle they are entitled to great commendation, not only on moral, but also on pictorial grounds. Our readers are by this time aware that there are four distinct ancient modes or processes of mural or monumental painting—namely, fresco, encaustic, fresco secco, or tempera, and mosaics. Therefore, when it is said that a painting is executed in any one of those modes, we expect, of course, to find that it is so done *bonâ fide*. But with respect to fresco paintings, even of the best time of Italian art, such is not always the case; for, by some means or other, a fallacy was soon coupled with the early or pure fresco. This was the retouching system, by which the painters sought to repair and disguise the mistakes or carelessnesses of their execution, and which a lapse of years has only made more flagrant. Now it is quite clear to all practical

artists, that if fresco cannot stand alone, without such patchwork, and highly deceptive contrivances, it would be better to abandon it altogether, as unworthy of public favour, from its incapacity to record honestly the great traits of sacred and profane history, poetry, &c. But fresco is not that feeble and incapable vehicle for conveying high moral instruction to the human mind: fresco has, within itself, all the powers requisite for producing these great objects of the pictorial art, as frequently has been proved, in former, and even in ancient days, as well as by the modern German school, which has rightly rejected all the spurious and meretricious aids, that the Italian painters, even some of the greatest among them, unhappily, we would say weakly, adopted, to finish, as they believed, but certainly to disfigure some of the noblest works in this style of art. The great geniuses we allude to found this intrusive practice in full operation, and it must be supposed that they considered it to be a legitimate adjunct to the simple operations of real fresco; consequently, having this staff, which turns out to be a broken one, to depend upon, they undertook larger portions of the work each day than they could honestly finish in pure fresco; carelessness was the consequence in numberless instances, and then detrempe, that is, raw eggs and vinegar, were blended together as a vehicle in which colours were mixed and applied to the dry surface of the intonaco to patch up the blunders or slovenly doings of either the master or his pupils. The latter class, it is clear, have done serious mischief to the fine compositions they were engaged upon when the master has been absent, or not sufficiently watchful of what was going forward amongst the youthful and thoughtless

operators. The same sort of misfortunes may befal frescos in this country from similar causes; but should such discreditable and injurious practices be permitted here, we should be wholly unpardonable, because incorrigible. Hopeless indeed would be our condition in the executive operations of elevated art, if the broad and clear light of long experience were in vain, which has "unveiled truth" and distinctly pointed out, not only the grandeur and beauty of the mural paintings of the middle ages, but also the lamentable injuries which careless or ignorant operators have inflicted on them, and the ravages which neglectful *guardians* have permitted to visit these the noblest creations of intellectual art.

If, therefore, "to be forewarned" is "to be "forearmed," the public may, we think, reasonably hope and expect that the guardians of the public purse and of the public taste will lay down and act upon a plan of systematic vigilance, founded on good faith with regard both to the true interests of elevated art, and that of the British people, both intellectually and financially. To do this great duty effectually, "that spirit of evil," that concentrated essence of injustice called "jobbing," must be utterly repudiated; and persons of real genius must be sought for and employed, according to their peculiar talents or fitness for the various operations of fresco or encaustic painting.

It is only by the directors of these national works acting up to the spirit of impartial justice in these important affairs, that the high hopes so justly entertained by the nation on this subject shall not be disappointed, and the just pretensions of the British people to intellectual gratification and greatness in the fine arts, ruined for ever. This is a matter of very serious and im-

portant consideration; for should family connexions or private intrigue place the execution of these permanent works in the hands of impudent pretenders, even partially, instead of giving them to men of real genius—and of these gifted men there is no scarcity in the British isles—men whose correct feeling always keeps them from soiling the purity of their minds by stooping to the low artifices of the charlatan,—such deplorable acts, so far as they might be carried, would display a lasting record of our matchless dulness and imbecility, at which the finger of ridicule and scorn would, especially by foreigners, be justly and incessantly pointed.

To those who are well acquainted with the practical movements of society as they now are, and have been carried on for a long time, it will not appear in the least degree surprising that we should dwell so emphatically upon the great necessity that exists for the greatest vigilance to be exercised by the Royal Commission, or whomsoever shall have the proper authority to select the artists who are to execute these great monumental works.

We have the highest confidence, and we apprehend that this feeling is very general, in the honour and judgment of the noblemen and gentlemen composing the Royal Commission on the Fine Arts; yet there is no doubt but that various artful contrivances will be put in requisition by inferior, and even incompetent men, to warp the judgment or excite the compassion of those who may have to decide upon the merits of the candidates.

Such is now the state of the question; and as we, in common with the vast majority of our fellow-subjects,

feel a strong desire to increase and uphold the moral and intellectual grandeur and beauty of the arts, as conducive to the prosperity and glory of the nation, so do we sincerely hope and trust that those only shall receive the rewards of merit who may truly deserve those honourable distinctions.

SECTION II.

Having thus candidly, and it is hoped clearly and respectfully, stated what we know to be the sentiments of the best-informed persons with respect to the incalculable evils which the spirit of jobbing would, if not thoroughly repressed, inflict upon the British character, we shall now return to the subject of "retouching frescos," a practice, as we shall show, fraught with numerous evils, and offering no real advantage, to this class of painting.

How this interpolation of distemper touching upon fresco originated, has long been a matter of conjecture. The best, and we believe the true solution of that question, has been given by Mr. Wilson, who considers it very probable, that the practice may have been the unavoidable consequence of painting on thin intonacos, spread on stone, which could not remain moist long enough to allow the completion of a portion of fresco to any (tolerable) extent. This method early adopted out of sheer necessity, to give some appearance of finish to those works, that is, tempera painting over the dry fresco, may have been afterwards retained, even where unnecessary, from habit. But in the best age of art, when proper fresco grounds were employed, tempera was looked upon merely as a sort of remedy only to be

tolerated in cases of accident or unusual difficulty." Here we have a rational way of accounting for the origin of a practice that became, at last, quite an abuse in art. And from the first and second Reports, we shall add some instances of the mischief it has done to many of the great frescos in Italy.

Of this practice Armenini gives his opinion very decidedly, from much observation of frescos. He says, "In frescos which are not exposed to the weather, it is possible to give the requisite completeness by going over the work when dry." He further states, that the shadows may be finished and deepened "by hatching," as in a drawing with black and lake in water-colours, using a brush of marten-hair not too small. In diluting the colours, some use gum, others thin size, or tempera (yolk and white of egg); this latter was not used with the blues, on account of its yellow hue. And he concludes by admitting, that "in the course of a few years such retouching will fade."

Andrea Pozzi,* a very able fresco painter, says, that it is better not to retouch; and adds, that as the lime always undergoes some slight change, particularly in the shadows, it is sometimes unavoidable. He further observes, that such retouchings are useless in the open air, as the rain soon washes them away.

The Chevalier Agricola, in his report on Raffaelle's frescos in the Vatican, distinctly states, that the effect of those paintings was originally much heightened by retouchings, some of which have faded, "or darkened." In most cases it is easy to detect this retouching, as it generally is darker than the parts around it, and whilst in many frescos a remarkably fine luminous

* Author of "The Jesuit's Perspective," "A Treatise on Fresco," &c.

surface is observable, the retouched parts are invariably dim.*

The "Heliodorus," "Miracle of Bolzena," "Attila," and "Deliverance of Peter," seem to be pure frescos, with a few exceptions. In the first-named painting, unfortunately the chair-bearers have been greatly retouched in distemper, and these parts have become very dark.

It also appears, upon a close inspection, that the grandest picture perhaps ever painted, the "Last Judgment," is much retouched in distemper,† evidently, it appears, by the master's own hand, and this has darkened considerably. This accounts for the dingy tone of this noble painting, without paying any attention to the idle supposition, that the smoke of candles has been the cause, other specimens will be mentioned a few pages further on.

These and other examples prove, that although as good art advanced, the extensive use of distemper was given up, and that the finest works were executed in fresco, yet the practice which had so long prevailed, was not wholly abandoned; and, until the time when good art was revived by the Caracci, it may fairly be doubted whether there is one mural picture in existence that is completed in pure fresco.

After the adoption of true fresco painting, its comparative difficulty of execution caused many artists to return to the older and much easier, or as it may be denominated "the lazy man's" practice, Pinturicchio, Baldazzar Peruzzi, Melozzo da Forli, and others, em-

* This is very conspicuous in the Evangelists, by Domenichino, in the church of St. Andrea della Valle at Rome.

† Communicated by M. Orsel, a distinguished French artist.

ployed it much, and it is seen that where they have used the egg vehicle with a full body of colour, it scales off, and *the pictures darken and become of an inky tone.*

A great many more facts might be brought forward to prove the vicious nature of this deceptive resource of indolence or incapacity, but we trust that our readers are by this time quite satisfied that such fallacious modes of proceeding cannot and will not be tolerated in this country; it is in fact a downright deception, may it not be denominated a "a fraud" upon those who having contracted for pure fresco painting, get one, half of it distemper instead.

If adopted at all, therefore, and we should say *let it not be adopted*, "the limits," as Mr. Eastlake very justly observes, "seem marked by the practice of Raffaelle in his later works, where it is indeed very moderately and subordinately used;" but he judiciously observes also, that "loose opinions upon this subject might lead to careless practice, and in this view of the case the severe injunctions of the German masters are of value."

SECTION III.

HATCHING.

This is a practice which prevailed very much amongst the old masters in their fresco paintings even in their genuine pictures, as well as in their retouchings; from this it would seem as if they experienced a difficulty in getting flat tints to any extent, it was a sort of makeshift, most likely arising out of a defective state of the painting materials, or from undertaking too much *intonaco* at once, which would not admit of waiting until the surface had attained sufficient firmness to receive

broad washes of colour, and thus transparency would be lost; but the hatching could be commenced immediately; for as this process consists in drawing inflected lines parallel to each other, and in the application of it there is no crossing of the lines—thus there would not be any danger of blotches from the lines running together on the wet surface. These lines require great freedom and steadiness of hand in their execution, being a colossal resemblance of the direct or single hatching of a bold line-engraving, which when clearly and evenly cut, display a vigorous and yet mellow style of execution; except, therefore, to keep up the appearance of transparency,* hatching is quite out of place in fresco painting, and is but a poor substitute for the quality which is intended to preserve—although its use, extensively too, has the sanction of the great Michael Angelo, whose "Last Judgment" displays much *tempera* hatching executed with great skill and regularity. But in the works of Raffaelle, "the most perfect of fresco painters," as Mr. Wilson most truly remarks, there originally was no hatching; for, as Mr. Eastlake properly observes in a note, "the clumsy hatching visible in parts of 'the Stanze' is evidently to be attributed to Carlo Maratta." Neither is this obtrusive practice to be found in the beautiful works of Correggio. "For the hatching with which Correggio's cupids in the Convent of St. Paolo, at Parma, are *overlaid* and

* In the ancient examples, it is observed that a quiet flat tone has been obtained without losing the transparency. It is true, some of these works are very slightly executed, the colours seeming to be laid on in a single wash, as seen in the works of a Venetian painter in a church near Cornegliano, in the old Venetian territory. As works of art, they are not of much value; but they possess the fine qualities of flatness and transparency in a remarkable degree.

ruined is evidently the work of another hand. The lunettes underneath have fortunately escaped this profanation."

Many important pictures exhibit much of this hatching, it is probably not in fresco, but done in retouching, to cover mistakes, or failures in laying in the flat tints. In fact it is very difficult to form a just opinion in all cases as to whether the hatching was done on the wet surface of the *intonaco*, or put on after it was dry.

The whole of the processes and of the materials used in fresco buono having, we believe, been described, the spurious practices, as well as the legitimate modes having been clearly separated, and the effects of each distinguished, we shall now for the sake of order, lay before our readers an account of the other style of fresco, called "Fresco Secco," which does not appear to have been extensively adopted in the good age of art, but afterwards came into very general use, and has continued to be patronized up to the present time.

The painters of the later times have got up very extensive works in fresco secco, which are still to be seen, mostly well preserved, on the ceilings of the palaces in Rome, Florence, Genoa, &c., and amongst others the ceiling of the Barbarini Palace in the first-named city appears to be in this peculiar style of painting. It is the mode almost constantly adopted at present in Italy for mural decorations of all kinds, as it is applicable to every sort of subject, is quite under the control of the artist, is not very difficult in execution, is the most economical at present known in the arts, and its durability is quite established.

In Munich this practice has been adopted for several

years past, to ornament the ceilings of corridors, staircases, arcades, &c., in the Royal Palace. It was the Chevalier Von Klenze who originally introduced it there, and he is very well satisfied it seems with the experiments to which it has been subjected in that city.

SECTION IV.

METHOD OF PAINTING IN FRESCO SECCO.

After the general plastering of the wall intended for this process has been finished, and a superior coat, or couch, of pure lime and sand has been laid over the surface, the whole is then allowed to dry thoroughly; this takes a longer or shorter time according to the solidity of the wall, and the state of the temperature to which it may be exposed: a dry warm atmosphere will of course accelerate the process of drying considerably. When this wall is found to be in a perfectly dry state, the surface, so far as may be required, is rubbed with pumice-stone, and late on the day previous to that on which the painting is to be commenced the plaster must be carefully washed with water, into which a small portion of lime has been infused; next morning the wall must again be washed. After this is completed, the cartoon is fastened up, and the outline being pounced, the artist commences his work. The colours used in this method, are similar to those employed in true fresco (fresco buono), they are mixed in the same way with water, and the white pigment is also lime.

If, as the operation goes on, the wall should become too dry, a syringe, pierced with many fine holes, is used to moisten it. Painting done in this way will

bear washing as well as real fresco, and is equally durable. As regards mere matters of ornament, it is a more certain and ready mode of working than solid fresco; for owing to the complicated forms of ornaments, it is impossible, in the latter art, to make the joinings at the proper outlines; therefore merely decorated walls in fresco never are satisfactory to the eye of taste, and this defect is very evident in the *Loggia* of the Vatican.

Another great advantage fresco secco has, as to the operation, over fresco buono is, that the former may be quitted and taken up again at any point; for the artist is not in the least degree compelled, as in the other style, to calculate his day's work, and he has it in his power to keep the plaster constantly in a state fit for working upon. We have now shown all its advantages.

On the other hand we are bound to say, that except where merely ornamental painting is concerned, it is in every other respect a very inferior art to real fresco; for paintings in secco are always opake and heavy in their character, differing quite in this essential point from true fresco, which is lightsome, and has much clearness of tone, often a fine transparency. Fresco secco, therefore, cannot be placed in the same elevated rank as fresco buono; indeed with few exceptions it has always been in the hands of inferior masters of the later Italian school, and none of the works of these men in this style have any high reputation. With respect to the very early pictures which the Italians point out as having been painted in fresco secco, great doubts are entertained, although at present it is impossible to ascertain the fact with certainty. Secco

may have been used to repair them, and thus it may have been hastily concluded that the entire works were done in this manner.

There appears, however, to be an important difference in the durability of the German fresco secco and the Italian of the present day; the former will bear washing, the Italian fresco secco of the present time will wash out: both of which useful facts Professor Wilson ascertained at Munich and Genoa. At the latter place Mr. Wilson says, with great truth, "The paintings in the churches and palaces have no claim to be called 'real frescos,' although they bear that denomination. A compound process has been followed in their execution. They were all commenced, or partly commenced, in fresco, but were finished in distemper; and as size has been used in mixing the colours, these can easily be removed by washing. The object of the Genoese artists, no doubt, has been to supply the fancied deficiencies of fresco painting in point of colour; but although they have succeeded in making use of vermilion, brilliant green, and bright yellow, they have not produced satisfactory works of art. The paintings are garish and out of harmony. The colours subsequently added in distemper do not harmonize with those previously used in fresco, and the general effect is totally devoid of that transparency which is distinctive of good fresco painting. The Genoese have, in fact, brought fresco down to the level of mere size painting, and the works they have produced are strong proofs of the danger of carrying the practice of retouching too far."

Nothing can be more just than the above observations as to the evil practice of attempting to substitute

the glare and glitter of colours for intellectual beauty and mental expression. It was an effort to give the merely physical ingredients, a superiority over the creations of superior intellect; in fact, to give painting a body without a soul.

Instances of a still more objectionable mode of treating, or rather mal-treating fresco, are unhappily still to be found in the Doria Palace at Genoa, wherein there are large mural paintings, which were *not entirely prepared* in fresco, and then retouched in distemper; but of which certain *portions only* were painted in fresco, and then the plaster being allowed to dry, the remaining portions which had not been touched when wet, were begun and finished in distemper! This very mechanical process has been attributed to Pierino del Vaga, and Pordenone, both of whom, though clever in many things, brought some vulgar practices into this class of art.

CHAPTER VIII.

SECTION I.

ENCAUSTIC PAINTING.

THIS very ancient species of art does not appear to have been known to the Egyptians, at least we have no evidence, either by pictorial, or literary records, that it was practised amongst that ingenious people, although their use of resinous substances, wax, and bitumen, as it is well known, were very extensive.

To the Greeks, therefore, we must in the present state of information on this subject attribute, if not absolutely the discovery, at least the application of encaustic painting to grand pictorial purposes. We have already stated some few instances of its employment in the ancient temples, and other public edifices of Greece, merely to establish the fact of its vigorous existence, in company with fresco painting amongst the Greeks, more than two thousand years ago. Its fitness for graphically imbodying grand poetical, or historical circumstances or sentiments, was developed by men of high fame: Lycippus, Aristides, Pamphilus, Parrhasius, Apelles, Pausias, Protogenes, Nicias, &c., are the prominent names

on record, as the operators in these grand styles of painting.

As to the extensive employment of encaustic painting, we have abundant evidence. Pliny says of it, "We employ wax as a vehicle of painting, not only from the beauty it gives to the pictures painted with it, but also because it is a preservative of the walls which it adorns."*

Plutarch also speaks in very glowing language on the subject of encaustic painting, which he says "even by time cannot be effaced."† And Pliny, moreover, distinctly tells us, that Lycippus, who preceded Pamphilus—also the latter, with Aristides his contemporary, Apelles and Pausias his pupils,—Nicias and Protogenes, who lived rather later,—painted on walls with the encaustic vehicle and pencils" (or brushes). Distemper varnished was also commonly employed in Rome about the age of Cæsar Augustus. This process was also finished by the application of a strong heat to its surface: it was more used for ornamental purposes, and might be called a demi-encaustic style.

The true encaustic, however, was very much in favour, as well as real fresco. Indeed many inquirers into these matters are of opinion that the greater part of the mural paintings discovered amongst the ruins of Rome, Pompeii, Herculaneum, &c., have been encaustics. On this subject, however, there is much controversial excitement; for whilst Mengs, Cochin, and Requier, have maintained, that all the paintings in Herculaneum and Pompeii are frescos, Winkelman,

* *Ad parietumque etiam et armorum tutelam.* Pliny, lib. xxxi., cap. xiv.

† Plutarch, Amator, t. ii., p. 759, commencing Η'γὰρ ὄψις ἔοικε τὰς μὲν ἄλλας φαντασίας, &c. &c.

Fougeroux, and Lalande, showed that to be an erroneous view, by stating that the colour could be detached in scales from the surface, and thus allow the under preparation to be seen, but these authors concluded that all those works were done in distemper.

Amongst artists and antiquaries, the general feeling, or rather prejudice, for there does not appear to have been any just foundation for the opinion, was, for centuries, that all those ancient mural paintings were executed in fresco, or at least that this manner of painting was by far the most general in ancient times. In fact the terms "painting on walls" and "fresco" were considered quite synonymous terms. Such is the power of habit, that the translators of the classic authors fixed the appellation of "frescos" to mural paintings, the process of which the ancient authors did not mention; and when the translators found occasionally in the original text, such sentences as "painting in wax" and "with liquid," or "melted wax" and their concomitants; they, not allowing the facts to disturb their fixed habitude or false opinion, did occasionally exercise the very great and unpardonable licence of leaving out such passages.

Count Caylus, to whose exertions the arts owe a great deal, was, we believe, the first who broke through the barrier of prejudice with which this question had for ages been surrounded, and excited general attention to "Encaustic Painting." The learned Caylus did, however, little more than raise doubts as to the supremacy of fresco painting; he certainly pointed out the existing error, but from some reason did not go far enough into investigations which would have caused it to explode.*

* Mémoires de l'Académie des Belles Lettres, lib. xxviii.

Therefore subsequent to the time of this learned Amateur, paintings have still been reported and believed to be frescos, in the materials of which portions of minium have been found; and upon further analysis it has been discovered that *the colours* were *incorporated with bitumen.**

This contradictory evidence did not, however, excite much attention, until the learned Abbé Requeno took up the question, and his deep investigations into the matter laid open the real facts of the case. By repeatedly analyzing the substances of the ancient pictures said to be frescos, and by making experiments analogous to those analyses, he re-discovered, if not all, certainly the principal elements, for encaustic painting.† And this liberal man of science, has communicated his discoveries so clearly as to make this art be practically understood by many artists who have produced large and clever paintings in this method, both at Paris‡ and Munich,—but as yet, not with all the success that could be wished; but this circumstance does not proceed so much from the want of sufficient practical experience, as from the walls not having been properly dried before they were painted upon.

The Abbé Requeno, however, it should be remarked, having overturned the old prejudices as regard fresco, did, as clever men, and even great discoverers are apt to do, he became so enthusiastically enamoured with his discovery, that he fell into the opposite prejudices and

* Correvon, Lettres sur Herculaneum, let. viii., p. 240.

† V. Requeno, Saggi sul ristabilimento dell' antica arte de Grec. et de Rom. pitt. Saggio II., c. iii.

‡ The splendid church of *La Madeleine* is adorned with encaustic paintings; also *Notre Dame de Loretto* (Fauxbourg Montmartre), and likewise at the palace of Versailles. The other new church, *St. Vincent de Paul*, is also under preparation for similar paintings.

expressed his strong belief that the ancients either did not ever paint in fresco, or if they did employ this art, that their practical methods were very different from those employed in more modern practice, down to the present time; and he has proved that the ancients adopted much greater precautions, and were in every part of their process in fresco, much more careful, than the artists of the middle ages or of modern times.

Thus we have before us the two extreme opinions; but as "the middle course is the safest," in cases of this kind, we choose to adopt it; believing as we must, that fresco and distemper painting were much practised by the ancients, yet it also appears quite clear to us, from various ancient authorities, that encaustic painting was, for some reason or other, more generally adopted—at least amongst the Greeks—than either of the two styles just mentioned; and from our sources of information, it appears not improbable, that encaustic mural painting, will again be adopted to some extent even in Great Britain, although it does not appear that it has ever been practised here, and may be reported as "wholly unknown in the British islands."

In fact the authorities in proof of the extensive employment of encaustic painting, even long since the commencement of the Christian era, are numerous, and we should say incontrovertible. We shall merely mention the names of the principal authors, in whose works the mention of this process of art will be found; and they may be consulted at large by those who may have leisure and inclination to obtain further historical knowledge on this subject. The authors referred to are, Apuleius,* Tertullian, Eusebius, St. Ambrose,

* Cera inustum. Apul. Apolog. ed. ad usum, p. 424. Pingit illicitè,

St. Athanasius, Himerius, Ausonius, Boethius, Procopius, St. John Damascene. The patriarch Nicephorus (A. D. 828), &c. &c., all of whom state in various ways that the pictures which they mention or describe, whether portable or mural, were executed in wax, and with pencils (or brushes); they all likewise speak of flowing or liquid wax, and of wax attached, or penetrated by the action of fire; and taking all these circumstances together, we cannot but admit that encaustic painting was even in those periods of the Christian era, we must not say the only mode of painting then in use, but apparently that one which was most esteemed, and most generally patronized.

SECTION II.

It appears that fresco and encaustic were sometimes associated together in the same work, and in this way it is understood that they were employed by those who executed the paintings of the Villa of Hadrian, and those in the baths of Titus, of which portions are still in existence, and also in some vaults of the most ancient of the catacombs.

Frescos have been discovered of a single tint, as a ground, or priming upon a mortar surface, of lime

nubit assidue—bis falsarius, et CAUTERIO et stylo, totus adulter. Tertull. Adv. Hermog. pict., c. i. Euseb. de Vita Constan., l. iii., c. iii. St. Amb. Heram., l. vi., c. viii., t. i., col. 131. St. Athan. De Sab. Apud St. John Damascene. De imag. Orat. ii., p. 34. Auson. Eidyl. vii., p. 289. *Paries habet illitus...e minio...lepidâ picturâ, cerâ liquenti.* Prud. contra Symmach., l. ii., vers. 41, 42. Boethe de Arith. præf. *Christi Dei ac Sanctorum imagines opere tessellato, atque cera liquenti factas, erasit.* Nicephor. C. P., brev. hist. apud Labbe Corp. Byzan. hist., p. 49.

and marble-dust carefully polished: on this ground, figures and ornaments in encaustic were painted in relief. It would appear by these instances, as if they wished to obtain a rich effect, with much attention to economy.

In the ninth and tenth centuries, when it was the custom to cover with paintings the whole interior surface of the church walls, and when various dilapidations, chiefly from want of care or bad workmanship, made it indispensable to seek out and adopt modes of adornment of a less costly character, the employment of fresco buono and fresco secco became more common, and encaustic being rather more expensive at that time, was gradually disused, even for portable pictures; so rapidly was it laid aside in that economic age* that contemporary writers scarcely mention this art, although they describe fresco, distemper, and paintings on glass very clearly. After some time, that is, in the eleventh century, it recovered its patronage but partially, and was occasionally employed in the two following centuries, and even later. For Lanzi informs us of an analysis which was made at Pisa of several paintings done in the thirteenth and fourteenth centuries; in the materials of those pictures wax was found to be an ingredient, and it was the opinion of the investigators on that occasion, that this substance had been used as a varnish.

In the fifteenth century we find it clearly noticed in the manner following by a writer,† who appears to

* The tenth century, at which time one of those false and very absurd prophecies had seized upon, and to a great extent had paralyzed, the mind of Christianized Europe. This was, that in A. D. 1000 the world would be at an end, and the day of judgment begin.

† Cœlius Rhodiginus, a native of Rovigo, in the Venetian state,

speak of it as a method of painting in use at that time.

In the present age, there are said to be in Greece some of the unhappy descendants of the Apelleses and Pausiases who have the secret of this ancient process, and that they transmit the knowledge of it as a precious secret from one generation to another; and however startling it may appear to some of our readers, we can call in the testimony of the learned editors who imbodied the celebrated Pandects of Justinian;* and also that of the venerable fathers who assisted at the second council of Nice (A.D. 787); also the learned Himerius, &c.,† as witnesses of the favour with which encaustic painting was regarded, and of the extensive patronage it continued to receive at Constantinople and in its dependencies in their times.

Upon a resolute and persevering search for facts and authorities from ancient times in these matters of taste, it is really surprising to think of the quantity of good materials that are obtainable; and these are often discovered in situations where it would by many be considered useless to try for them,‡ and the circumambulators of quiet old libraries are sometimes blessed with the sight of an unknown authority or two, like as our circumnavigators formerly were, by falling in with a new island, or group of them, in the great Pacific Ocean. We will not, however, alarm our readers by inflicting any more authoritative quotations upon them,

born in 1450—viz., *Sunt et sua* PICTORIBUS *Cauteria in ea pingondi ratione quam vocant Encausticen; Latini Inustarium dicimus coloribus inustis et ceris igne resolutis.* Antiq. lect. lvii., chap. xxxi.

* Lib. xvii., D. *De instr. et fundo instr.*

† Council, Nic. II., act v., col. 309; act vi., col. 375, 376 (ed. 1714).

‡ *Himer.*, Eclog. iv. *In divit.—Ignis autem ministretur picturæ.*

and our apology for having done so now to this extent, is to convince those who may not be conversant with the facts, that the two species of painting especially treated of in this work have excited, considerably more than two thousand years ago, the admiration of the most civilized nations then existing, and that this fine feeling never has, during that long period, been wholly suspended, notwithstanding the awful visitations with which the human race have been afflicted in that long revolution of time; and, therefore, the intellectual characters of these arts, having been so long established and so highly valued, there is nothing new in this recent affair, except our having, as a People, at last condescended to patronize arts that have conferred, and which always can confer, when they are properly encouraged, both honour and glory upon nations.

Returning to the state of encaustic painting in the early ages of the Eastern Roman, or Lower Empire, we have to regret the want of sufficient fragments of painting in this style to enable us to give a correct idea of the extent to which they might claim to be ranked amongst the creations of cultivated intellect. Some few specimens that have been saved display a chaste and quiet character of composition as well as of colouring; the latter is not very florid. We have not seen any thing amongst these fragments of painting that could convey to the mind any high feeling of any sort; the forms of the figures are tamely correct; but though in taste displaying certain traces of the Greek style, yet the forms are conventional, and the execution mannered—vices that may always be expected to exist, when the study of the human models is abandoned, and the vapid creations of memory or fancy

substituted in its place. But the Ottoman barbarians having, like the Iconoclasts of the fourth and fifth centuries of the Christian era, demolished almost every work of art on which they could lay their savage hands, it would not be quite fair to give a verdict against the pictorial powers of those descendants of the ancient Greeks. But even when the Byzantine style of ornament had gained a paramount ascendancy, not only in the Eastern, but also in the Western Empire, when the most brilliant coloured marbles, and even precious stones, were arranged and inserted with great mechanical skill into richly-gilt marble incrustations, which covered the interior faces of the walls in the cathedrals, churches, and palaces,* still encaustic painting was patronized until the reign of Justinian, when it was denied admission at the palaces, as being too vulgar, and its gaudy rival, mosaic painting, then became quite the fashion.

* It is well worthy of being recorded, that even under the patronage of princes who had great riches but vulgar notions of art, the unfortunate Greeks still maintained a strong feeling of the traditions which distinguish Hellenic art at all times—that is, a unity of purpose. This quality is finely exemplified in the cathedral of Monreale and the Chapel Royal of Palermo, in Sicily, which island we know was in part colonised by the Greeks. In these examples of decorated architecture, historical painting in mosaic has been so admirably adapted to the character of the buildings, that, whoever contemplates attentively these structures, must admit that the edifices were designed to harmonize with the pictures, and the painting for the places they occupy. The subjects, number, character, treatment, and arrangement, have all been regulated by the architect's taste, and the whole appears as if guided by one mind and one will. We hope this important consideration will be well acted up to in our public buildings.

SECTION III.

METHODS AND MATERIALS EMPLOYED IN ENCAUSTIC PAINTING.

In fresco buono and fresco secco we have shown that water, and in the latter instance the addition of size or gluten, are the only vehicles employed. Water is also used in the encaustic painting, but only for the purpose of grinding the colours employed in its operations. In applying those colours to the surface of the wall, a preparation of liquid wax is the material with which they are tempered. This wax must be of a pure and clear sort; and being broken, or cut into small pieces, is put into a wide-necked bottle, which is to be filled with it about one-half or not quite two-thirds. Upon this wax must be poured some clear oil of naphtha, sarcocolla, with solid bitumen, mastic, or incense. Other equally good solvents for wax are, oil of spike, volatile oil of wax, fine spirit of turpentine, or oil of lavender. When the wax and mastic, and other resinous gums, &c., are thoroughly dissolved, a process that can be somewhat accelerated in a sand-bath, a clear and almost colourless liquid is formed, which must be carefully drawn off, to prevent any dregs from mingling with it, and placed in a bottle with a close stopper, lest, owing to the volatile nature of the oils of solution, some evaporation should arise, and render the liquid too unctuous for use. Pliny and Vitruvius advise the addition of a small quantity of linseed oil, probably to give more solidity. This solution will be improved by being kept a few days closely stopped from the air, but in a tolerably warm situation, and it is then fit for the opera-

tions either of saturating the wall or mixing with the colours for painting.

Having provided himself with the quantity of this wax liquid—which will be sufficient for his work, whether large or small—the artist then sets about the preparation of his wall. This is a circumstance of vital importance to the permanency of his work, and therefore must be attended to with the greatest care imaginable.

When the artist has satisfied himself that the materials and masonry of the walls are of the right description, and that they have been properly secured during their construction by the application of a hydrofuge of sufficient strength to prevent the ascension of moisture from the soil, or of infiltrating from the roof through the wall, two formidable means of destruction to mural paintings of every kind, as the great masterworks of the middle ages afford melancholy evidence.

Having firmly established himself in this first point, which, to use a military phrase, may be considered as "the key of his position." The artist next prepares his machinery, and directs his assistants to proceed in priming, or rather saturating, the surface of the wall with the liquid preparation of wax already mentioned. Previous to applying this hydrofuge, the face of the wall must be heated by means of a portable grate or heater constructed for these purposes, armed at the back with a reflector or guard, and it should be large enough to heat four or five square feet of wall at a time. The size of the furnace for this purpose need not be more than sixteen inches in length by a foot high. This machine is provided with two strong rings at the corners of the front upper bar; these rings are

for the purpose of hanging it on a strong iron rod placed horizontally and parallel to the face of the wall. This rod must be between four and five feet long, and the ends are to rest in metal racks fixed on the upper edges of two perpendicular boards, of a strong scantling, placed a few inches nearer to each other than the length of the iron bars. These planks are to be connected together by strong braces at top and bottom; this will form a portable framework, the height of which must be determined by the height of the situation and circumstances in which it is to be employed, and alterations or helps to the wooden framework may be requisite. This, however, is the general principle on which these furnace pedestals are to be constructed. The back of this heater is to be provided with two sufficiently long and strong handles, likewise of metal. By these it may readily be moved on the iron rod of suspension; and when all these conditions are complied with, the apparatus being placed at a proper distance opposite to the portion of wall intended for the operation, and the furnace properly ignited, the heating commences at the upper part of the wall; and so soon as the thermometer indicates that the surface of the wall exposed to the action of the heater has reached 100 degrees, the prepared liquid is to be applied to it with large brushes, and as the hot wall absorbs the first coat of liquid readily, another must be added, still keeping up the temperature of the wall, until at last the absorbing power ceases. The heating apparatus, which ought to be fitted at bottom with rollers or castors, having been moved on to its new position; the heating and absorbing are there repeated until the proper quantity of surface has imbibed the hydrofuge liquid

to saturation. It scarcely need be mentioned that it is when the furnace has been pushed forward to a second station against the wall, that the portion just heated is to be treated with the wax fluid; and should this part not have absorbed it satisfactorily, the furnace can be drawn back to its first position and placed as before. On these second occasions, air-bubbles are apt to arise, sometimes numerous and rapidly, but the absorption is then very soon completed. The liquid must be applied until absorption shall have ceased completely, and this will sometimes require from three to four thick layers, as it must, in some degree, depend on the degree of porousness of the stone, into which the liquid will penetrate from one-eighth to three or four eighths of an inch; but care must be taken not to allow the heat to rise much above 100 degrees, lest it should carbonize the liquid, which would be a great disadvantage.

When the upper portion of the surface has been covered, the furnace and its apparatus must then be lowered about eighteen or twenty inches,—it may be even more or less, according to the necessities of peculiar cases,—and the heating and absorption of the liquid is to be repeated. These descending movements and other acts are to be carried on so long as there is any surface to be saturated.

The wall having been prepared in this manner, is allowed to cool, which it will do sufficiently in a day or two, according to the season and temperature, to allow of the picture being commenced.

ANOTHER METHOD OF PREPARING THE SURFACE.

The wall having undergone a minute examination to ascertain its state of dryness, and this being found quite

satisfactory, a quantity of strong linseed-oil must be brushed plentifully over the surface to the extent required; afterwards another coat, or *couche*, as it is sometimes expressed, is laid over the first, the latter composed of linseed oil, Greek pitch, and mastic, or other resinous gum; these are to be dissolved, and united by white Persian naphtha, which they designated "oil of naphtha" or "oil of Media." After this second application a heater is applied at the proper distance from the wall, and the heat having melted the resinous substances, they will be absorbed into the wall, or stuccoed surface, as it may be; and upon that preparation the ground or surface for painting is to be laid. This ground is composed of wax and gum mastic dissolved, and combined intimately by the medium of volatile oil of wax, spike, or lavender, &c. With this vehicle some white pigment, is to be well ground up, and then painted over the surface in a tolerably full body; upon this ground, when it has become sufficiently firm, the picture is to be painted.

This variety in the manner of laying the priming will not, however, make any difference as to the materials, whether colours, brushes, or vehicle. All the colours used in oil painting may be employed in encaustic, and blended together with as much mellowness and finish as in that vehicle; but to produce these latter effects, it is quite requisite, after the whole has been completed, to pass over the surface a coat of varnish, composed of wax, mastic, and liquid bitumen. When this has dried sufficiently the second cauterization is to take place, and this operation should not differ in its mode from that of the first heating. In this repetition the effect believed to be produced is, that it so tho-

roughly penetrates and softens the varnish-coating of the surface, the picture itself, the ground on which it is painted, and the first preparation on the wall, that the whole sudorizes together, and forms, on cooling, a combined body of those substances, from whence it derives its name of *en-caustic*, *in-ustion*, &c. The varnishing process being completed, is again either slightly warmed by the heater or by the warmth of large candles, set in close reflectors, and then polished with some fine linen to any degree required; but to prevent the glaring effect of oil painting, this work is kept in a *mat*, or under tone of polish, luminous, but not glassy on the surface, and finely transparent, although so solidly painted. Perfectly secured by the wax and resinous substances, against attacks of internal dampness in the walls or that from the atmosphere, it presents a brilliant and almost imperishable work of art.*

SECTION IV.

The differences of the executive processes, therefore,

* The frescos painted on the walls and ceilings at Fontainbleau, and some other public buildings, have almost wholly faded or disappeared in a period of about 170 to 200 years! With good reason, then, may it, we think, be said that, had the mural paintings of ancient Rome been painted in *fresco*, shut up as they have been for almost two thousand years in humid vaults, or equally buried from view under the vast incumbent ruins of the halls and palaces which they once adorned, they would have been destroyed by the saltpetre which is found in such places. It is reasonable, therefore, to believe that they are encaustic paintings, and to suppose that the solidity of the materials, and the polish of the surface, have contributed to their preservation; but we know not of any other mixture than that produced by wax and resinous substances which could have preserved their colours in the state of brightness which they now display.

that exist between fresco and encaustic painting are very considerable, the following summary of each may be gratifying to our readers:

Fresco painting must be executed upon a damp surface of fine mortar; the artist is limited in his choice of colours, for he must not employ any substances the colouring principle of which will be injured by lime, and amongst these substances are fine scarlet lake, cerulean blue, yellow or green lake, indigo, arminium, another green lake, orpiment (orange and yellow), minium, and several others; these, however, are of the bright and brilliant class, which are requisite to give the richness and variety of nature to the subjects which advanced civilization and refinement of manners sought for, and which wealth was willing to encourage. The fresco painter, always obliged to watch the state of his plaster surface, which is gradually drying, is compelled by that inconvenience to trace a portion of his subject, to lay on his colours, and each day to finish a portion of his painting before the neighbouring parts can be commenced or even sketched, as there does not exist then any ground for them to be laid on. He cannot return on the following, or any other day to retouch, except in distemper, and finish to his mind the parts which he thinks require such attention. Unable to view the whole subject at a glance, the artist has not the power of comparing the corresponding parts between which he wishes to establish an harmonious arrangement. And although he may have acquired much experience as to the management of his colours, yet he is sometimes disappointed in his calculations of their tints by the greater or less causticity of the lime; his is a contingency, against which he can hardly ever

be prepared. These appear to be the principal difficulties with which a fresco painter has to contend, and they certainly are somewhat formidable, and to men of inferior genius and energy would be insurmountable; so far however as the latter class of artists is concerned, this would be an advantage, as it would prevent the mediocrity of mural painting from being inflicted in any quantity upon the nation in perpetuity. Therefore it is only men of superior qualifications in the arts that can succeed, or ought to undertake great mural works in fresco.

Encaustic, on the other hand, does not present such collateral difficulties as those just described, and indispensably connected with the sister art. The painter of encaustics can command the whole range of colours, whether natural productions or factitious preparations; these he has the power of using pure, or combining in any way that he may conceive most suitable to his purposes, whether grave or gay: he is not constrained to carry on his work incessantly by any apprehensions as to his *intonaco* becoming unfit for his operations; on the contrary, he is left quite at his ease in this important part of the business; he may commence, leave, and recommence it, and return to it after days of absence, yet he will find it in all respects ready for working upon; for he has in it every resource to be found in oil painting,—and of these the power of placing the sketch of his entire composition, however large, before him on the wall, is a very decided advantage, not only in the arrangement of the subject, but in preventing a waste of time, which is caused unavoidably by the dissected state to which the working sketch of the cartoon must be reduced, as each fragment is

placed upon the moist surface of the wall; and besides this a much higher degree of finish can be given in encaustic than is possible in fresco painting.

These appear to be the essential if not the critical differences between these two great styles of mural painting; and, if we mistake not, a very different sort of schooling is required for each. In the British islands the art of painting in fresco may be considered as quite a novelty, for the few works executed amongst us by native artists* are not sufficient to alter that denomination as regards great public works.

The three specimens referred to, however, have a character about them well worthy of being recorded—leaving their great merit as works of art out of the question; the character we refer to is their being not only *first attempts* at this new and formidable style, but actually successful ones; from which we fairly think favourable inferences may be drawn as to the capability of our well-trained artists being likely to produce works of great merit in this newly-patronized art, yet some of our very able and established artists will no doubt take care how they venture upon "a voyage of discovery" in these affairs, and in advanced life, together with rather fixed professional habits of thinking and acting. This view of the case is certainly not very favourable to the commencement of a new and extensive style of paint-

* Mr. Thomas Barker, of Bath, 20 years ago; Mr. John Zephaniah Bell, at Muir-house, Edinburgh, about 12 years since; and Mr. David Scott, of Edinburgh, about a year previously. In connexion with these incidents, another curious one may be mentioned; namely, that the only foreigner (Mr. Aglio, an Italian) who has, within 30 years, painted frescos in England (at Moorfields chapel and at Manchester), has not succeeded in giving them any permanency—they have faded. The effect is said to have been caused by using fresh lime.

ing, which bears upon its front the strongest symptoms of a great revolution in at least the highest classes of art, more especially of painting. For this particular branch of mural or monumental painting, a new course of instruction will be quite necessary. Those rising artists who may have ambitious feelings to distinguish themselves by their future works in fresco painting, must not lose any time in preparing for the powerful exertion, mental and physical, which they will have to make in order to gain a high rank in this art, and to maintain that position; and until a class of this description, educated properly in the study of nature and the fresco school, shall have arisen with unmixed views, true feelings, and strong predilections for their noble branch of art, we cannot expect that it will display all its high qualities and powers of imbodying and recording the great facts of sacred or profane history, or the fascinating graces, and sublime imaginings of the poetic muse

Should encaustic painting, however, be considered equally suitable with fresco, for the mural paintings of our public buildings, the probationary terms for acquiring a proper degree of execution in it, if any, will be very brief. Because there is no difference of any consequence either in the materials or practical operations between this mode, and oil painting; therefore our artists who are clever practitioners in the latter style, would be able speedily to accommodate themselves to the trifling change in practice, which would be required to give them all the power and facility that they already possess in their original profession; therefore it seems very probable that there will be many more candidates to compete in encaustic than in fresco painting, should competition be invited.

The German school, at least that of Munich, has adopted both these arts, but for different classes of subjects; fresco is employed for the religious and moral —whilst encaustic is used in representation of historical subjects, on account, probably, of its greater command of colour and more brilliant effects.

In addition to fresco and encaustic painting, the ancients had a sort of mural painting that may be considered as a species of "demi-encaustic," the colours in this mode were combined with, and fixed to the wall, by a strong animal gluten, and then varnished with the same sort of varnish used in encaustic painting. The work was afterwards well warmed, and polished as in the manner just described for encaustic. Sometimes the painter laid on his colours in a rich full manner, and finished with care; but more frequently he made too much haste to dismiss his work, "having been taught to paint rapidly," that is to say indifferently, and even in great, or rather large works, he was satisfied to lay the flat tints of the principal colours in their proper places—and upon these bases to mark the lights and shades by hatchings of different tones. This no doubt was a very expeditious process, but must have terminated in a dry, cold, and feeble mannerism. Sometimes their paintings and transparent glazings acquired strength and richness by the gold leaf, or metallic foils which the painter had previously laid on the surface of his ground; this description of painting was called "aureolous," or "translucent painting,"* and in the draperies and other ornamental

* Theoph., lib. i., c. xxv. Tabula colorum, in voc. Aureola, fol. 1.

accessories, they frequently heightened them with gold* and silver.

Such were the modes of mural and ornamental painting, of which ancient authors furnish us with any information, and from hence it is clear enough that oil painting was not of the number; and yet the knowledge of mixing linseed oil with colours, was known and practised, but only for flat work, or household purposes. This simple mixture dries slowly, and they had not then chemical knowledge sufficient to make it dry rapidly as can now be done.

* This was the case at a much later period. Even in the time of Raffaelle, the tapestries which were worked from his celebrated cartoons were enriched in the shadows by gold work, the lights were heightened by silver,—which latter, of course, soon became tarnished. When the revolutionary French army entered Rome, A. D. 1798, the beautiful set of tapestries, duplicates of our cartoons at Hampton Court, were soon missing from the Vatican. In 1816 they were accidentally found in Paris, in the possession of a Jew, who had cut out and burned some pieces of them to extract the gold and silver! The man was obliged to give them up; and, when repaired, they were restored to their original situation.

CHAPTER IX.

SECTION I.

CAUSES OF INJURY AND RUIN TO FRESCOS.

HAVING, as we hope, explained to our readers the essential circumstances intimately connected with the preparation and processes of fresco, encaustic, fresco secco, distemper, distemper encauterized, and aureolous painting, we shall now lay before the public certain facts derived from experience, to explain the primary causes that have destroyed many frescos, and which will always destroy such works whenever it can come in contact with them. This formidable cause is dampness, and it is the greatest enemy of all, to frescos: bad masonry and bad stucco work being added to other fertile but inferior matters, are causes of great injury and often of ruin to frescos. And having shown the mischiefs occasioned by damp walls and bad roofs, we will offer complete remedies for such evils, and give practical proofs of their complete efficacy; we do this as a duty both to the artist and the public, although it was not at first contemplated in this manual; but being extremely desirous that the higher efforts of British genius in the arts should exist, unimpaired, quite as long as the walls on

which they may be painted, this feeling has suggested the propriety of showing how to make walls impervious to dampness,—and the same process will be equally applicable to other walls, so that this scientific information may be made available for the public generally. And it is hoped that architects and builders will adopt these precautionary measures, and see them properly carried into effect: the security of walls and ceilings when thus permanently established, would serve as a further stimulant to the employment of artists, as the old and extensive excuse of "damp walls" may in a few years be quite unknown in this country. And it is a curious circumstance, well worthy of observation, that the mild and elegant art of painting should have been the primary cause that led to these discoveries and improvements, from which so much benefit will be derived to society. To France we are indebted for these great improvements in architectural construction; and that great country has also the honour of having revived the ancient and splendid art of encaustic painting, and of affording it extensive patronage,—an art which is, singular to say, not only capable of beautifying walls externally as well as internally, but that contains in the very materials employed in producing these moral and fascinating productions of mind, the means of preserving those walls, either of stone or other materials, which they may be employed to adorn.

To the German school of architecture we are also happy to give that meed of praise to which it is unequivocally entitled, for the discovery and application of *a certain means* of preventing the ascension of moisture in walls, by capillary attraction from the soil, or from a

damp situation, causes that are perfectly natural, and which have committed ravages upon the architectural creations of mankind ever since the construction of solid buildings; but against such an insidious enemy, it does not appear that any thing like scientific or philosophic precautions have ever, until within these few years, been conceived or effectively adopted, for preventing the ascension of damp vertically, in walls of any description.

It is certainly true that for centuries the practice has existed in Lombardy to some extent—of using a hydrofuge of pitch and sand, without a lining of tiles, to exclude damp and saltpetre from the surfaces of walls, whereon pictures were to be painted. This composition was thrown like rough cast against the wall, and thus afforded so strong a hold for the mortar laid over it, that in breaking through walls thus protected, the mortar and hydrofuge have never been found to separate at their point of junction.

At Munich, however, they do not apply any hydrofuge behind the superficial course of bricks or mortar; such preparations would be useless in a building where the ascension of damp has been completely intercepted.

The method adopted to produce this desirable effect, is the discovery of M. Von Klenze, the well-known architect of Munich. This skilful observer, when investigating the chief causes of decay in buildings, remarked in many places the ravages occasioned by damp, on both the external and internal walls of many Italian buildings, and the consequent decay of many paintings executed upon them. To put a permanent stop to such evils in the architectural works he was about erecting, this ingenious man thought of a plan; which

was, to cover with a thin sheet of lead, the whole horizontal surface of the wall, at the third course of bricks above the level of the ground, this lead he covered with a coating of pitch on each side, and thence the building was continued upward as usual. M. Hittorff, of Paris, a man of great practical experience, being consulted on this application of lead and pitch, gave his opinion decidedly in its favour, and hitherto, after several years of experience, it has sustained its anti-moisture character.

SECTION II.

ANOTHER METHOD OF PREVENTING DAMP IN WALLS.

M. Polonceau, an eminent French architect, conceived and adopted another mode of rendering walls impervious to the ascension of damp from the soil: this mode was simply putting over the horizontal surface of the masonry, when it has been carried a few inches above the ground, a coating of liquid asphaltum laid on pretty thick, and very carefully, with a strong brush; this is then covered with coarse sand, and at the same level a projecting joint of hard asphaltum is laid to cut off completely the capillary communication of the moisture.

M. Polonceau further states* that the asphaltum employed by him is not apt to escape even in summer, and under the greatest pressure, and that it is nevertheless elastic at a temperature of four or five degrees below Zero—and likewise, that it differs from the asphaltum sometimes used for pavements, inasmuch as it

* Reveu générale de l'Architecture, vol. ii., p. 589.

contains no lime; the thickness of this layer is only one quarter of an inch, over which coarse and very dry sand should be spread evenly.

Another artist who tried M. Polonceau's method; from hearing some doubts expressed of its sufficiency for the purpose, gives a very detailed account* of the difficulties to which he exposed this plan in building a house of three stories, close to the Lac d'Enghien. After the details he adds, "I confess I was not without fears as to the compressibility of the asphalte when softened by the great heats of summer, although I am inclined to believe that walls of twenty inches thick never attain the temperature of the atmosphere, especially at the base, on account of the proximity of the soil, and the alternation of temperature by day and night. I thought it, however, possible that the layer of asphaltum might spread under the pressure of the walls, and protrude beyond the external joints, but it has not protruded one *millemetre*.†

" I had even supposed that the unctuous nature of the asphalte might, in case of an unequal settlement of the foundation, occasion a partial slip of the materials. To obviate this objection, rows of flints as large as a fist had been incrusted midway in the thickness of the masonry, and parallel with the axis of each wall, forming as it were a *key* (*engrenage*) between the foundation and superstructure ; and it is to be understood that the asphaltum completely covered these flints."

Therefore, from this, and other trials also, it may with reason be concluded that the method tried and warranted by M. Polonceau is safe, and the cost of it for a superficial

* "Reveu générale" for February, 1842.

† About the 26th part of an inch.

metre, or square of thirty-nine inches and a half of our measure, would be less than three shillings British.

The scientific writer in the *Revue générale* continues his very useful information thus: "To prevent damp from penetrating the walls of ground-floors, it is usual to paint their perpendicular surfaces, to line them with woodwork or with plates of metal. These methods, it is true, prevent in some degree the evaporation of moisture in the apartments; but far from hindering the ascent of humidity from the soil, they, on the contrary, promote that evil. Oil colour applied to the external surfaces of walls is a certain means of rendering the ground-floor uninhabitable. The damp with which the base of the walls is saturated during winter, being no longer allowed to evaporate on the outside by the action of the sun and the warm dry air, is driven inwards. Then, if again wainscot, or zinc linings, or coats of paint be opposed to it internally, the damp rotting or oxidizing such protections in its progress, may ascend to the first story, especially if the wall be cemented with stucco. The writer remarks further, "That he has seen in the country, places where walls were treated as just described—in one place the damp ascended about twenty-seven inches above the level of the ground—a coating of zinc one *metre* (thirty-nine and a half inches) in height was, in this case, applied to remedy the evil. The following year the damp rose to thirty *centimetres* (about thirteen inches) above the zinc, the zinc lining was raised fifty *centimetres* (nineteen and a half inches) higher; and the following spring the moisture had passed even this new protection by from twenty to thirty *centimetres*. These facts and observations warrant the conclusion that the only means

of preventing moisture from penetrating the walls of the ground-floor consists in interposing between two courses of masonry, and at the internal level of the ground, an elastic, but moderately compressible substance, which shall be imperviable, insoluble, and incorruptible, such as bitumen properly prepared, lead, tin, &c."

Oil paint on the exterior of houses, the author quite condemns. He considers this application, in almost every case, rather injurious (as regards the point in question) than otherwise; it does not expel the damp from within; on the contrary, it drives it back: it does not even preserve stucco coatings; for, after the application of the paint, a sort of chemical decomposition takes place in them on every part exposed to the rain, the wet lodging in the numerous minute fissures, which appear in a few years in the pellicle of paint, dissolves the plaster, producing channels which rapidly increase, and give the surface a worm-eaten appearance. To remedy this evil, it would be requisite to paint the wall every two or three years, which would be a very serious expense.*

This intelligent writer further states his opinion as to the preservative coating for stone walls: "It is that," he says, "which, by its unalterable transparency, is calculated to preserve the grain, the colour, and the *mat*, or absence of shine on the stone." He continues:

* Mr. Eastlake, R.A., observes properly, in a note (p. 47—2d Report), "It must be obvious that, provided there be no damp to escape from within the body of the wall, there can be no danger in rendering the exterior surface impervious to it. On the western coast of England, the sides of houses are often lined with slates; and some such defence (in addition to that above recommended) would often be necessary in exposed situations."

"Of all the known methods, encaustic painting appears to me the only one calculated to produce these desirable effects—that is, when it shall have undergone in its preparation and practical application, all the improvements of which it is susceptible. But in order to employ a hydrofuge (of whatever kind) on the perpendicular surface of the wall effectually, it is indispensable, in the first instance, to prevent the moisture of the soil from ascending through the walls, and then to devise means of drying the masonry completely before the application of the hydrofuge upon the vertical surfaces."

"In Italy, paintings on ceilings," Mr. Eastlake truly observes, "and on the upper parts of walls, have been damaged, and in some cases obliterated, by moisture penetrating from above; but in a well-constructed edifice, duly inspected from time to time, the danger from this cause is so remote, that it can hardly be necessary to call attention to it." The infiltration of water from pipes has destroyed a painted ceiling in the Louvre. The possibility of such accidents might suggest precautions; for example, coatings of asphaltum in the upper portions of walls and over ornamented ceilings. The injurious effects of flues behind paintings, is another evil of an opposite kind. The best means of intercepting the heat would be to leave a vacuity between the flue and the back of the bricks or tiles on which the painting is executed; the vacuity to have holes opening into the room to ensure a circulation of air.

SECTION III.

PROCESS FOR EXCLUDING DAMP, &c.

In addition to the above precautions for securing walls from damp ascending from the soil, or descending from the roof, we shall add a description of the process employed by Messieurs D'Arcet and Thenard, the eminent chemists of Paris, for completely excluding damp from the internal surfaces of walls, and which, in this instance, was brought into operation upon the surface of the cupola which crowns the splendid church St. Genevieve,* well known at that time (1813) as "The Pantheon."

The experiments were made soon after M. (afterwards the Baron) Gros had been selected by Buonaparte to paint that edifice with historical compositions.

The interior surface of the stone was first treated with a strong coating of size, upon which another of white

* This church was originally dedicated to St. Genevieve, who was contemporary with Clovis and Clotilda, the first Christian king and queen of France. At her solicitation, a church was built near this place. In 1764 Louis XV. gave to Soufflott directions to erect one near the old structure upon the great scale in which we see it. In 1791 the National Assembly decreed its consecration as a place of sepulture to the eminent men of France, and it was converted into "The Pantheon." In 1806 Napoleon directed that the Pantheon should be completed and restored to its original purpose as a place of worship, under the invocation, as before, of the patron saint of Paris, St. Genevieve, but not to change the destination given to it by the revolutionists. And in 1813 the "Empereur," as stated, employed Gros to decorate the cupola, which he commenced. The abdication of Napoleon, however, stopped the work; but Gros afterwards completed it, as we shall see presently.

lead and drying oil was laid in the manner commonly adopted in preparing primed cloths.

M. Gros, not feeling sufficient confidence in the firmness and solidity of this preparation, consulted the chemists above named, who at once gave their opinion that it was not quite a safe ground for the intended purpose, stating that moisture might in time act on the pores of the stone, and therefore a picture painted upon such a ground must inevitably undergo great changes. The new priming was therefore condemned, and MM. Thenard and D'Arcet were directed to prepare a new and solid ground in its place. They conceived a plan of saturating, as a preliminary step, the stone facing with some unctuous substance, liquefied by heat, and which, solidifying as it cooled, must, so far as it penetrated, stop up the pores of the stone. For this, they state that they had the authority of the ancients, who, on some occasions, coated the surfaces of walls on which they intended to paint pictures with wax liquefied, and applied by heat.

After making some experiments, not requisite to be noticed here, they gave the preference to a composition of one part wax and three parts linseed oil, boiled with one-tenth its weight of litharge. The absorption took place readily by means of heat, and the liquid penetrated the experimental stone, to the depth of a quarter of an inch. The composition, as it cooled, acquired solidity, and in from six to eight weeks it became hard.

These experiments having produced successful results, the same process was adopted for the cupola, the surface of which was in the first place carefully scraped so as to remove entirely the preparation of size and paint with which it had been covered, and so to lay the

wall quite bare; then, by means of a portable furnace,* the whole superficies was heated in successive portions† by moving on the *cauterium* horizontally, parallel to the wall, as such part became sufficiently heated, and then the composition‡ was applied with strong brushes (when the stone was at a temperature of one hundred degrees.) The first application having been quickly absorbed, others were repeated until the stone ceased to absorb, and as it was rather porous, it required the heating to be repeated oftener than would have been necessary for a stone of a closer texture; and in these heatings care was taken that they should not be so strong as to carbonize the oil; at length the stone having refused to absorb any more "*mastic*" (composition), and the surface which it covered being soon cool, smooth, and dry, it received a coat of white lead and oil well ground together, and it was upon this preparation that the groundwork of the distinguished artist, Gros,§ was painted, and which for about fifteen years

* This machine we have already described; its French appellation is *un rechaud.*

† About a square yard at each heating.

‡ The word "mastic" is used in the original. This is a very useless and uncalled-for use of that term, and can only tend to confuse, instead of clearing up the sense. "Composition" is clear and unequivocal, quite suited to this occasion. "Mastic," as popularly understood, is varnish made from the resinous gum of the mastic or lentisk tree. Scientific men ought to be tenderly cautious of introducing arbitrary terms into their description of facts. In this instance, "mastic" is wholly inapplicable and confusing, as there is not any mastic in the composition.

§ Soon after the restoration of the Bourbon dynasty, Gros was again appointed to complete the immense picture, which he did in a few years, *with alterations* suited to the then reigning family. The picture, which is upon a magnificent scale, and displays considerable talent, extends over a superficies of 3256 square feet. For this

appeared to have defied all influences injurious to mural painting, when MM. Thenard and D'Arcet published their description of their experiments (1828) it was in perfect condition; but a few years later and up to the present time, it has shown some indication of discoloration, the cause of which seems to be wholly unknown; it is scarcely possible that it can arise from damp, but suspicions are entertained that the colours, or the vehicle with which it was painted, have been the cause of this cloudiness of parts. It is a subject, however, which the *savans* of France ought, we think, not to lose any time in investigating, for to discover the cause of this disturbance, would be of much value in mural and monumental painting.

With respect to another grand mural picture in Paris—we mean that painted by Mignard, in the dome of the church called Val de Grace,* (*Rue Fauxbourg St. Jacques*,) we do not find any record to inform us how the wall was prepared for its reception; it is, however, a fresco, and has stood very well, but the retouchings, which the artist put in with crayons, when the surface was dry, have quite faded.†

work Gros received 100,000 francs (4000*l.* British currency); and when Charles X. paid a visit to this church, he expressed his satisfaction of the work by creating the artist a baron; that is, "a peer of France." Such are the honours which foreign nations confer on great artists.

* This church was built in pursuance of a vow made by Anne of Austria (mother of Louis XIV.), about A.D. 1664. The painting by Mignard is on a stone surface. It contains more than 200 figures of colossal proportions, and is intended to represent "The Glory of Heaven." It is the largest work of the kind in France.

† These spurious finishings always fade, or else grow darker, in a few years, and this circumstance has injured the character of fresco painting.

MM. Thenard and D'Arcet recommend saturating stucco on ceilings, with wax and lithargerized oil, as a preparation for oil painting. The composition it is stated, penetrates so deeply into the stucco, that no damp from the body of the wall or roof can decompose it, and it becomes so hard at last, that broken stonework has been made good by adapting the stucco to the forms of mouldings first, and then saturating it. They further remark, that had the stuccos of the ceiling been thus prepared in the *Salle des Antiques*, in the Louvre, Barthelemi's painting upon it would not have been destroyed as it was in 1820, by the infiltration of water thrown on the room over it.

But it is not merely for ornamental purposes that this composition (we beg leave not to call it "*mastic*") may be useful, it can be employed to expel damp from ground floors, and from cells of prisons ; to make cisterns and reservoirs water-tight ; to render vases of plaster fit to contain fluids; and among other uses, to preserve corn for any length of time in subterranean chambers.

Hence it is clear enough that the researches of scientific men have within these few years past made great discoveries with regard to hydrofuge preparations and their applications, which should give great confidence to those artists who may be engaged in mural painting, so far as the preparation of the walls are concerned, whether for fresco, encaustic, fresco secco, or oil painting. Should failures take place hereafter as to fading, darkening, &c., other causes must be sought after to account for such disappointments.

We shall now proceed to the other interesting matters connected with these arts, and with which our readers should be made acquainted.

SECTION IV.

FRESCO AS COMPARED WITH OIL PAINTING.

Dr. Cornelius, the eminent fresco painter of Munich, is decidedly of opinion that fresco should be preferred to oil painting for the decoration of the two Houses of Parliament. In pronouncing this opinion he is of course, as Mr. Eastlake properly observes, "not alive to any of the considerations that would weigh with English judges respecting the present ignorance of the process of fresco in this country, and the comparative mastery of our oil painters. In no circumstance probably would he prefer oil pictures to fresco, in which he has for many years been constantly engaged, and in which his taste has been formed." He however supports his preference (at least with regard to certain applications of painting) by argument and example. He maintains that fresco is on every account fittest for monumental permanent works in public buildings, in which painting is to be considered as the handmaid of architecture. The Italian masters, he observes, were always fully impressed with the necessity of adapting their works to the effect of the architecture, so as to make one harmonious whole.

The nature of fresco fits it for such a purpose. It is indeed impossible to produce the illusive effect which is considered so desirable in oil pictures—the same depth of shade is not in the artist's power; but this very circumstance while it compels attention to composition, colour, and form, also renders fresco more clearly appropriate for strictly decorative purposes.

On no point is Cornelius more decided, than on the necessity of placing a given series of frescos under the control of one directing artist: this appears to be quite compatible with the employment of many such directors, by subdividing the works; but he thinks it quite desirable that in one complete series there should be a congruity of style, and general execution. In Munich, where great experience has now been gained in these undertakings, several independent masters have formed scholars to work in their style; and these have ultimately been engaged on original works. This gradual education of scholars is observable, if we follow the career of Cornelius himself. For example, when he was employed on his first work at Munich (the frescos of the Glyptothek), the cartoons were all the work of his own hand. The assistance he received, was only in the execution of the paintings. In the Pinakothek, his sketches and small drawings sufficed for his pupils to prepare some of the cartoons; and, lastly, in the *Ludwig-Kirche*, the invention of some subjects was intrusted to a scholar named Hermann.

And it should be known as a trait of fine feeling in Cornelius, that he is now undertaking to superintend the execution of Schinkel's designs in Berlin,* with scarcely any addition of his own.

Cornelius states, in reply to a letter addressed to him on the subject, "The London smoke may, undoubtedly, have a disadvantageous effect on frescos; but with a due warmth—for example, by the introduction of warm air or warm water in tubes, I am of opinion that in the situation where the new buildings are, no

* His own first original work in that city is to be the decoration of a Campo Santo.

particular evil effects are to be apprehended. If, however, after fifty or a hundred years it should be found that the dirt had accumulated to a great extent, the surface could be cleaned with bread, the mouldy efflorescence that sometimes shows itself is to be removed by a wet sponge—that appearance may in some cases be owing to saltpetre in the walls; for this there is no remedy; but on the other hand it never appears when the walls are built with well-seasoned and dry materials. In the Munich frescos no saltpetre has ever shown itself.

The objections to the employment of fresco in London, on account of the smoke, have been numerous, Professor Hess, of Munich, having been consulted on this subject, remarked that "if frescos were painted in the open air in London, *the rain would be the best picture-cleaner:*" a forcible mode of expressing the professor's opinion, that sound frescos may be freely washed, without injury to the colours. Mr. Barker, of Bath, writes: "To cleanse fresco from smoke, I know of no mode so simple and efficacious as washing the surface with pure water and soft sponge." In Genoa frescos are cleaned with vinegar, so as to look as fresh as when first painted.

Carlo Maratti used the light clear wine of the country in cleaning the frescos in the Vatican, and restored them very well. Some have water, with a small portion of vinegar mixed with it, for the purpose. Warm water, with a small proportion of oxgall, is an excellent detergent, and would clean frescos as well, or better than the vehicles just mentioned.* The cleaning of

* These effects of our English climate, however, cannot yet be correctly estimated in these matters, from the scarcity of subjects

frescos, therefore, does not offer any particular difficulties; the great object after, or rather indeed before, they are painted, is to secure their permanency, by the various modes already mentioned in the proper construction of the walls with appropriate and good materials. And it may be proved that fresco is a very durable mode of painting, equal, or, as some assert, superior, to any other in this respect.

Many causes, it is true, may contribute to injure or destroy such paintings; but damp is by far their greatest enemy, it is both insidious and active; it ascends through the walls from the soil, and on the other hand, descends from dilapidated or ill-constructed roofs.

In Venice, where the houses mostly stand in the water, the external plastering commonly drops off to the height of twenty feet. And in other Italian cities, the damp arising from the soil, obliterates the mural pictures to the height of six, seven, or eight feet from the ground. And the old insufficient roof over the Duomo, at Parma, no doubt has contributed to the injuries which have visited Correggio's once-splendid frescos in that edifice. Some of Allori's frescos at Florence, though on a six-inch brick wall, have lately been destroyed by plastering the back of the wall. The

upon which to form a correct judgment. About the middle of the last century, some frescos were executed at West Wycomb Park (Buckinghamshire) by Joseph Borgnis, a Milanese, under the auspices of Francis Lord Le Despenser. The paintings are exposed to the open air, yet those in the east portico, and south colonnade, and loggia, are in general remarkably well preserved. Those in the west portico have suffered considerably from some unexplained cause; the east portico is an agreeable example of the union of fresco painting with architecture. In the soffit is a copy of Guido's "Aurora."

paintings on the vaulted ceilings in the library at Siena were ruined by some workmen who mixed mortar above them. We have already noticed the destruction of a fresco, by Barthelemi, in the Louvre, by damp. In the same building (the lower rooms), are some frescos by *Romanelli*,* which have stood very well for nearly two centuries. It would be tiresome to carry on this description of the dilapidations which neglect has occasioned; but there is a still worse feature in this business, it is, that "many fine works have been irretrievably injured by the populace, even those by Raffaelle, in the lower loggia of the Vatican, have suffered by wanton mischief, likewise the paintings in churches and in cloisters have also been equally ill treated." For, as Mr. Wilson truly remarks, "it is quite a mistake to suppose that the natives of Italy are exempt from this mischievous disposition, which is sufficiently proved by the extensive injuries inflicted by them on many precious monuments of art in that country." Smoke has been often mentioned as a very dangerous agent of ruin to frescos, but its effects can be, and have been, entirely removed.

SECTION V.

TIME NECESSARY FOR THE EXECUTION OF FRESCOS.

By this mode of expression we do not mean the mere operation of painting on the wall, what we do mean is, the whole scheme and invention of a series of frescos should not only be settled, but all the large drawings made by the time the building shall be ready;

* Romanelli was a pupil of the Bolognese school.

for in that case the work may advance rapidly. Supposing our present buildings to be ready in six or seven years from this time. Cornelius stated at the time he visited this country, two years since, that the drawings should then have been begun. The German artists, though very expert in drawing, always take some years to prepare their cartoons. Cornelius's cartoon for the Ludwig-Kirche, at Munich, was executed at Rome, he went thither for that express purpose. This is the rational way of going about matters of so serious a nature as composing subjects from history or poetry, worthy of being rendered permanent for centuries in fresco or encaustic painting. And every one will admit the justness of the view expressed by the secretary to the commission, which is, that "if Westminster Hall, or any other building already in existence, is to be adorned with frescos, the wall should be prepared with the first rough coat of mortar at once; for this ought to be on the wall, if possible, some years before it receive the final preparation immediately before painting, unless very old lime should be used in the first instance; but even in that case, six or twelve months should elapse before it is painted on, that it may have ample time to harden."

THE TIME OCCUPIED BY THE ITALIAN MASTERS IN PAINTING FRESCOS.

It is not difficult in examining some frescos, to ascertain how much time has been occupied in painting them. In some examples the joinings, by means of which this calculation can be made, are quite visible, in others they are either so well executed, or are so con-

cealed by the use of distemper, that it is very difficult to trace them.

It is evident that the old masters painted with great rapidity, and this fact may be judged of readily by an inspection of their paintings, from which we find that many of those large and important works were executed in a month or six weeks.

The " Incendio del Borgo" in the Stanze, seems, from the junctions of the successive patches of the intonaco, to have been painted in about forty days; the group of the young man carrying his father, has been executed in three days.

The exquisite group of the Graces in the Farnasina, by Raffaelle, has been painted at most in five days. The Cupid, and the head of the Grace with her back to the spectator, have occupied one day; the back and part of the lower limbs of the latter figure another.

In this day's work the rest of the leg may have been noticed. There appears to be a joining across the knee: there was certainly one across the neck, both these joinings do not follow outlines, but are in parts of the figure which are in shadow. It is of course better, as already has been observed, to cut by outlines, but this is not always possible, especially in very large figures. The Germans prefer cutting across a broad light when circumstances compel the artist to make a joining where there is no outline.

The graceful composition, called the Galatea, also in the Farnasina, has been entirely executed in eleven or twelve days; the head and body of the principal figure have been painted in one day.

These examples will be sufficient to show the ample

manipulative powers, which those superior artists possessed, and which cannot be attained without very great practice, nor even with that indispensable requisite, unless the artist is thoroughly grounded in a knowledge of the human figure, not merely as it appears superficially, but also as to its anatomical arrangements, so well, as to be able to produce a bold, firm, and fine outline, whether direct, or foreshortened, without embarrassing his design with double and treble lines, which always betray either a bad system of education, or a want of clear perceptions in the mind of the designer of what is right, and it must be kept in remembrance, that although fresco admits of the design being studied to any extent in cartoons, yet in its ultimate execution it is not an art by any means calculated for the hesitating and timid. It requires, as before stated, a grand and correct style of drawing, a broad and simple treatment in light and shade, harmonious colouring, an eye steadily fixed on the whole effect, together with a firm, energetic, and rapid hand.

But we would by all means caution the artists, who may seriously engage in this elevated branch of their profession, not to be carried away or influenced by the showy but meritricious fantasies and practices which were adopted by some very eminent fresco painters, even when that art was in its best time. We have already noticed the fine principles of colour in the admirable frescos by Paul Veronese, at the Villa Mazer; but, as Mr. Wilson truly states, "his taste in design, is open to criticism." In that villa, P. Veronese has everywhere done away with the intentions of the architect, and has so painted the walls and ceilings, that the spectator may conceive he is looking out

upon the country, or up to the heavens, whilst this attempt at illusion is, by the windows in the room, shown to be a mere fallacy.

Such extravagant conceits were carried to great lengths by the later artists of the Italian schools; vaulted ceilings of churches, halls and *salons* were frequently painted with perspectives of the most sumptuous edifices, under which you were to believe you were standing! and to aid the puerile deception, masses of clouds and parts of figures were brought down by express plastering, below the real cornices and mouldings of the apartments. Even Domenichino fell into such very dull and unworthy vagaries.

With respect to the attempt to do away with the real surface of ceilings by perspective appearances, a practice so much abused in the decline of art, in which the representation of an immeasurable space overhead, with violent foreshortening, was considered with so much favour, that even Correggio in his cupolas has fallen into it: it must not be imagined that it was new in his time. There existed an early and very remarkable example in Rome by Melozzo da Forli, in which a foreshortened figure of Christ (in "the ascension"), "seemed," as Vasari tells us, "to pierce the roof." Michael Angelo never attempted these pictorial untruths. That great man's knowledge of the human figure, was immeasurably superior to that of almost any artist that the middle ages produced, except Raffaelle, Da Vinci, and one or two others; his power of foreshortening was transcendent; to his powerful hand and intellectual mind it presented no difficulty. But he preferred as did Raffaelle, the judicious and intelligible movement of figures, as if seen in action oppo-

site to the eye, and not above that organ. In the ceiling pictures of these two superior artists, the horizon is mostly introduced as it would be if the paintings were on the perpendicular wall.

But from the middle of the sixteenth century the principles as well as the traditions of elevated art had been declining. Then a race of painters sprang up, not "like giants from the earth," for though earthly enough, they were by no means giants in intellectual art; and they deluged immense surfaces with their crowded compositions, in the execution of which the peculiar and classic qualities of Fresco were useless, and of course it gradually became neglected; it required too much mind for the race of painters which came into practice down to the beginning of the seventeenth century, about which period, painting in oil had become common on walls, more especially in France, whither it had been introduced by some French pupils* of that gaudy theatrical painter, Joseph Arpino (a Neapolitan), whose flippant manners and florid style of painting, pleased exceedingly both the great and small vulgar of his day; but for a long time past no one seems to have been aware that such a painter ever lived. He was in fact the person under whom that wretched charlatan Verrio (who painted so much at Windsor Castle) acquired the sort of information he possessed, of ornamental painting. Vouet, who was certainly a man

* The chief of these students was Simon Vouet, who learned his knowledge of art from a man who had no just knowledge of the great masters, who never studied from nature, was an inveterate mannerist, because he drew his figures from recollection, and had a free execution, which pleased *the million*; but his paintings now are not sought after.

of very good talents, brought back the *theatrical* (not *dramatic*) style of his master, which being a new fashion, was greatly encouraged, and consequently produced the most unhappy effects upon the style and cultivation of the arts in France, and from which the artists have but recently succeeded in disengaging themselves. But when it was in vogue, this mode of painting was considered as most favourable for displaying the effects of foreshortening, perspective, and colour (such as it was), by which means were produced grand scenic pieces differing from those of the theatres, only by a better attention to forms, and a more careful execution. On this condition of the *bathos* pictorial, Mr. Eastlake very kindly remarks that "we have no right to consider modern artists responsible for this practice, it is to be dated from those painters who first lost sight of the conditions which regulate the style of painting when that art is applied to architecture."

There has been much inquiry and discussion upon the very important circumstance of unity of purpose and consistency of style, and in this investigation both Italian, French, and German authorities have been extensively consulted; into that matter, however, it does not make any part of our duty to enter, especially as the question of general harmony between the purposes of the edifice and the style of decoration as to subjects, arrangement, and treatment, are evidently well understood by those who are managing this national concern: we shall therefore close this part of our work by an extract (bearing directly on the point) from Mr. Eastlake's observations upon this part of the subject: viz.—

"From the foregoing considerations and examples, it

appears that, whether the decoration of a wall or ceiling consist of one or many paintings, the treatment should have reference to the whole extent of that wall or ceiling; and that, consequently, if the compartments be small, that circumstance does not of itself involve the necessity of a corresponding style; hence the dimensions of the figures are not always referable to the size of the compartments, but are rather calculated for the distance from which the whole, or a considerable portion of the decorated surface, can be viewed conveniently, and the usual consequence is, that little space remains in the pictures for the background. The cartoons of Raffaelle may, in general, be considered as models in this respect, the tapestries for which they were designed having been, to all intents, permanent mural decorations. It may here be further remarked, that when the figures, differing in size from those in the principal compartments, are introduced among the architectural embellishments, they are often painted in chiaro-oscuro, or imitation of bronze, gold, or some such material; or, if imitative of nature, the subjects are supposed to be on tapestries. Such portions thus profess to be works of art, and the difference of size, as compared with that of the figures in the principal compositions, involves no inconsistency. Such, with occasional exceptions, examples of which have been before noticed, was the practice of the Italian painters."

CHAPTER X.

SECTION I.

EFFECTS OF STAINED GLASS ON FRESCO.

On this subject it is necessary to make some remarks, and to state a few facts, which may have the effect of settling, so far as they will go, the differences of opinion which exist with regard to the fitness or unfitness of this brilliant class of ornamental painting to be employed in a building, of which the walls are painted with frescos, and strong opinions of an adverse nature have been expressed on this point by some travellers, whilst others, who, we believe, have generally looked at the subject with less prejudice and more intelligence, have expressed themselves in its favour.

That the arts of "painting" and "staining glass"—for they are very distinct operations—have existed from very remote periods, we need not inform our enlightened readers; but the application of these arts to the decoration of religious or other edifices, is not traceable farther back than the middle of the ninth century, or perhaps a few years after the time of Charlemagne;*

* This emperor died A.D. 809.

for it must be observed that, had this very agreeable mode of decoration been known in his day, that great encourager of the arts would unquestionably have called it into active existence to ornament the numerous places of worship which he founded. The same observations apply to the popes Adrian I. and Leo III.,* the worthy contemporaries of Charles the Great in ideas of magnificence connected with the arts; for, when Leo III. built the celebrated church of St. John de Lateran,† he directed that the windows should be glazed with *coloured glass*, for the art of communicating two or three simple flat colours to glass had long been known. Painting, or staining subjects on glass, was quite another affair; and of these operations, none of the poets or historians of that epoch take the least notice, which could hardly have been the case, had this style of ornament then existed.

The earliest painted or stained glass window recorded, we believe, was one mentioned in the chronicles of St. Benignus's Abbey at Dijon, about the middle of the eleventh century. The writer states that when he wrote, there still existed in that monastery *a very ancient* glass window, on which was represented the martyrdom of St. Paschasia, and also that the said window had been removed from the *old* to the *new* church, as restored by Charles the Bald.‡

Here, then, we have a direct testimony to show that historical subjects have been represented on glass, either stained or painted, for nearly one thousand years; and

* Both these ecclesiastical princes died before the close of the eighth century.

† *Fenestras de absida ex vitro diversis coloribus conclusit* (Anastatius).

‡ Grandson of Charlemagne, treacherously poisoned A.D. 877.

all that time, except in the British isles since about 1554, stained and painted windows have been, in numerous instances, the companions of fresco painting. For, since the early persecution under the pagan emperors, it has not yet been asserted that *there was a time* when the interiors of churches and other public buildings *were not ornamented* with paintings of one sort or other: the extensive catalogue of those edifices which we possess, would only fatigue our readers; but those cathedrals and abbey churches were spread throughout Italy, Spain, England, France, Germany, &c. The cathedrals of Canterbury, York, Chartres, Cologne, and the abbey of Fountains, St. Denis, Cluny, &c., were richly adorned with mural paintings, and lighted by large windows of stained glass, which combination of chromatic power appears in every instance to have been in harmony together. No doubt these arrangements must have been made under the direction of judgment and good taste; for otherwise there would, in some cases, have been failures as to the harmony and unity of purpose, two very important objects in the construction and decoration of public or private edifices.

Of more modern instances, the upper church at Assisi* is an example; it is a Gothic,† or rather pointed

* Here are, painted in fresco, several by Cimabue, and some of Giotto's best works—his vows of St. Francis, &c.

† Dr. Cornelius has referred to this ancient church to show how stained glass windows and frescos may be combined. And with respect to the question of difficulty in painting frescos upon Gothic ceilings, that experienced artist is quite of opinion that there does not exist any unusual difficulty in adapting paintings to the compartments of Gothic architecture; and Mr. Eastlake further observes, very truly, that all ceiling painting is difficult to contrive and execute; but no Gothic roof, assuming the groining to be simple, could present such difficulties as those which Michael Angelo had to con-

arch, structure of the thirteenth century, in which all the windows, save one, are painted or stained glass, not covered entirely, but having parts left for the admission of pure light; otherwise, from the construction of the church, there would not be sufficient light for the service. In the church of St. Vincent de Paul at Paris, now nearly completed, the windows to light the paintings are to be partly coloured, the remainder to be entirely coloured.

At Saronno, near Milan, there are two small frescos by Luini, with a coloured circular window between. The pictures are lighted by a window on one side, and could not be seen at all but for the exclusion of pure light by the coloured glass in the centre window.

Mr. Wilson's communications are very valuable on this question:

"In St. Patrizio, at Bologna, there is an entire altar-piece under a window filled with richly-stained glass; the picture is well lighted from an opposite window; but had the window over it been of white glass, it would have been impossible to see the picture, which is very dark. The sun happened to shine through the rich hues of the windows above, and I observed here," says the professor, "what I had previously remarked at Saronno, that the picture did not suffer in consequence."

tend with in the angles of the Sistine chapel (the architecture of which is not Gothic). There the figures are painted on a projecting ridge, formed by the meeting of two curves. The celebrated foreshortened figure of Haman is painted on such a surface. A portion of the ceiling in one of the stanze of the Vatican presents similar difficulties. The more florid style of Gothic may be allowed to be unfit for mural painting on a large scale, its surfaces being so crowded with ornamental paneling, that little space remains for pictures.

In the cathedral at Munich, the windows are coloured to a certain height, and, although the effect is far from pleasing considered in itself, yet it is very useful as regards the pictures in the church, as the light is brought from above in a very advantageous manner.

Where the light is good and sufficient, every window in a room with paintings may have a certain portion of stained glass in it, provided pure light be not altogether excluded. It may be urged, as an objection, that coloured rays will be thrown on frescos when the sun shines, but white rays are quite as objectionable; and, besides, frescos never should be placed where the sun can shine strong upon them, as, *like other pictures, they fade sooner or later under its influence.* Coloured glass, in such a case, might be an advantage, and the inconvenience from coloured rays would be temporary.

But there is another high and interesting authority for associating the power of stained glass windows to mural paintings, without taking into account the architectural style of the building; for Vasari informs us, in his biography of "William of Marseilles," that at the time Raffaelle was at work upon the frescos in the stanze of the Vatican, "William, the glass painter," was enriching the windows with figures of angels supporting the papal arms, which were those of Julius II. and Leo X.

SECTION II.

DESCRIPTIONS OF PAINTINGS IN FRESCO BY DIFFERENT MASTERS.

In these descriptions, which were prepared by Professor Wilson from notes made at the time, no classification as to the date of the pictures was thought requi-

site. The notes are chiefly confined to practical details; and we add them for the information which they may afford of the good and bad methods of each master, and the consequences of the various modes of manipulation.

TITIAN.

The St. Christopher on the wall of a back staircase of the ducal palace (Venice) is very rich in colour, but there is no tone in it that has not been gained by means of the usual fresco colours. This picture has been painted with great rapidity, apparently in two days, as there are traces of joining in one place only; the outline has first been marked in carelessly with the point without any cartoon, and the artist has altered it considerably as he painted. In some places, parts of the drapery have been put in without any previous outline; the background has been rubbed in at the same time with the figure, and is very slight and careless. Titian has hatched over a great part of this picture. The intonaco, which is about three-sixteenths of an inch in thickness, has fallen off in some places, which shows that it was spread on the brick wall without a previous plastering.

There are some others by this master at Padua, but they are compounds of fresco and oil painting, rapid, careless, and slight, harmonious in colour; some of the heads are fine, but though called frescos, they look like ineffective oil pictures.

PORDENONE.

In St. Rocco, at Venice, some of his works are remarkable for a washy, slovenly appearance; the plaster is uneven, and the joinings are clumsily managed.

In the Santa Maria, in Campagna (Piacenza), there are some very interesting pictures by Pordenone in fresco; one of these, which has much merit, would have been in perfect preservation, if the lower part had not been wantonly scraped off the wall. Its remains display, in the flesh tints, a clearness, brilliancy, and pearly quality, which, perhaps, has never been excelled. The taste as to the drawing resembles that of Correggio, but more correct; all the heads are excellent. The great dome of the church, the spandrils, and soffits of the arches, and large wall spaces, are painted by the same masterly hand; here the force of colour seems carried as far as possible; and in that in the chapel of St. Catherine, the success with which the aerial perspective is sustained, is surprising. The forms are noble and finely drawn; some of the female figures are graceful and beautiful.

The effect of colour is produced by Pordenone's remarkable glazing process. Whatever that was, there is first a full body of colour, in which the marks of the brush are seen, leaving deep furrows; over all, a quantity of warm glazing is laid on most unsparingly; it may be seen filling the markings of the brush, and the articulation of the fingers, nails, &c., are made out in it, in hands which are drawn with great vigour.

The mode of painting is as permanent as fresco, but the pictures have not the luminous quality of fresco; neither can they be viewed as successful applications of paintings to architecture.

PAUL VERONESE.

The pictures by this artist in the church of St. Sebastian, at Venice, are entirely obliterated by damp,

and those at the ducal palace have faded so, as to be nearly invisible, as have likewise those at Castel Franco, and this artist is the only one whose works have occasionally decayed in this remarkable manner; but in the Villa Mazer, near Biadine, he has left works, which exceed in some respects his paintings in oil, and place him in a high position as a fresco painter.

The Villa Mazer belonged to Mannini, last of the Venetian doges. In it are eight rooms painted in fresco, by Paul Veronese. These paintings are in perfect preservation, save one which has received some injury from damp. The greatest care has been taken in the construction of the arched ceilings on the under surface, of which laths of poplar are nailed, and on them the plaster is laid for the intonaco.

In these frescos all the qualities in colour are found that are common in his oil pictures, and in some parts with superior brilliancy. These frescos are chiefly distinguished by great clearness of effect, but are too slightly executed, the draperies seem rather washed in than painted, still they show great mastery in the manipulation. The heads are very carefully painted, and parts of the flesh seem to be perfection, the extremities are indifferently treated, the lights are much loaded, and a little free and effective hatching has been introduced.

But Paul has displayed much bad taste in the arrangement, he has quite neglected architectural propriety of design, in other respects these works are worthy of attentive study. The blue colour has come off in those parts where it was laid on when the mortar was dry, in the parts where it was laid on the wet plaster, it has adhered well.

There are some remarkable landscapes of this artist here, and they display much ability.

TINTORETTO.

Some frescos on the ceiling of the "Sala del Quatro Porte," in the ducal palace at Venice, by this artist, are in good preservation, and are remarkable for richness and depth of colour.

LUINI.

Of many frescos in the Brera, at Milan, the most important are those by Luini, which are of a very fine quality, they are mostly painted thinly, and with freedom, but although they have evidently been done with rapidity, they display great mastery in drawing. There appears much less labour than in his oil pictures, yet the frescos bear to these last, a great resemblance. There is not any attempt to gain depth, which was an object with the Venetian painters. In some he has attained power, on perhaps a better principle than we find in the frescos of Titian and others of that school. There is no confusion of tones, but that distinctness, which is so essential to the effect of frescos, is preserved. The execution is light and playful, quite unlike that of the present German school, which is comparatively heavy and laboured.

It appears that Luini has executed a figure the size of life in one day. His painting may be compared with that of Rubens: it is juicy, transparent, and clear. There are also portions which resemble the execution of the antique decorative paintings seen in Pompeii and elsewhere. Thus, outlines are often indicated with some dark warm colour, hatching is occasionally

used, and dark touches in the shadows are put in freely; richness is obtained by transparency.

In St. Maurizio (Milan) there are several frescos by Luini, many of them are in his finest manner, in some of them he rivals Titian in power and harmony of colouring. This great artist exhibits far higher powers in fresco than in oil painting; in the former, he is noble, dignified, and free, showing a conception of beauty in his female heads that perhaps has never been surpassed.

The frescos at St. Maurizio would have been in fine order had it not been for the barbarous hand of man; *for the blue colour has been scraped off for the value of the ultramarine*, and *the gold also*, with which parts were touched. Here we have another strong proof of the barbarous state of the Italian population, and of their utter contempt for works of high art.

At Saronno and Lugano, the best works of Luini are to be seen.

GUERCINO.

In the cathedral of Piacenza there are some very excellent frescos by this artist. He treats his subjects in too picturesque a manner to gain much elevation, but in these works he has certainly risen beyond himself, he appears as usual a great master of light and shade, is powerful in his tones, and delicate in his reflected lights, and in these qualities he is as perfect in fresco as in oil painting.

RAZZI.

The remarkable fresco of Christ tied to the column, painted by Razzi, is still in the gallery at Siena. This

artist has inducted at once his subject on the wet intonaco with a few lines, trusting to the mastery of his pencil in this picture, which although carelessly outlined, is painted with the most touching expressions of grief and suffering; the body which has scarcely been drawn on the surface work, is finely executed, is soft, fleshy, and true to nature. The artist seems to have painted with a good body of colour, the lights are pure flesh tints, the half tints are of the greenish hue, usually seen in Sienese pictures, the shadows are of a warmish tone, the whole figure has been painted in one day, and after laying it in, in the manner above described, he appears to have glazed the whole with terra rosa, (the plaster still being moist), thus giving richness and warmth, using less or more colour as requisite, varying his touch to suit his forms. He appears also in finishing, to have strengthened his outline parts with a warm brown, and to have thrown a little of the same colour into the darker parts of his shadows to give clearness to his reflected lights. By this skilful management, he succeeded in obtaining richness and warmth, and the clearness he sought for. His drawing shows more carelessness than want of power, and he approaches Raffaelle and Luini in representations of female beauty.

There are some frescos by Beccafumi, in a hall of the Palazzo della Republica, in Siena, which although in a mannered style, display all the soft mellow treatment that can be attained in oil painting.

SECTION III.

OF ORNAMENTAL FRESCOS.

In the Loggia of the Vatican, the mode of conducting

works of this description was, in the small panels with arabesques, to lay in the tint of the ground with fresco, and then the ornaments were painted over this in distemper, no other process could be adopted. It is evidently impossible to paint delicate ornaments on a coloured ground in fresco; the bunches of fruit and flowers at the sides of the windows were carried as far as possible in fresco, the joinings are seen going right across at regular intervals; the ground was first laid in red, then the subject painted on it, and afterwards the blue background.

In drawing these ornaments, parts were pounced, parts were pricked, others were worked in with the stylus from a cartoon, geometrical lines were ruled off at once on the surface: these particulars are mentioned to show that these ornaments were begun in fresco; it also shows that each pilaster occupied eight days in painting. These panels provè that lime with marble-dust does not make a good intonaco, as the paint has entirely fallen off in some places; and the roughness of the places where this takes place, as compared with the surrounding parts, proves evidently that the marble-dust was not properly ground, for there can be no other reason why marble, if properly levigated, should not combine intimately with the prepared lime. It is only another of the numerous instances which prove what lazy and careless workmen the Italians are.

Mr. Wilson's opinion is, "that the whole preparation of these parts has been made to imitate the similar works in the baths of Titus, to which indeed they bear a very close resemblance. The arabesques have in like

manner been painted, no doubt, to imitate as closely as possible the loaded painting of the ancients; and these arabesques tend to prove that the old paintings of the same kind were not, in any respect, frescos."

With these opinions we quite agree, and we have already stated that the exposure to all manner of injurious influences which the ancient mural paintings just described have endured, is sufficiently conclusive of their not having been painted in fresco; what the vehicle was in which they were executed, is still an enigma. We believe that they were encaustic; this method of mural painting being at that time a great favourite amongst the Greeks, and "the Greek style" prevailing all through the taste of those works, it is reasonable, we think, to infer that a method so much in the artist's power and so permanent, would be that to which Grecian intelligence would have given the preference.

The above observations are respectfully submitted to the serious consideration of those intelligent minds which may have to decide upon the various questions relating to the most appropriate modes and materials in which mural and monumental painting should be erected in Great Britain.

COMPARATIVE DURABILITY OF CERTAIN COLOURS IN FRESCO.

On this very interesting and useful part of the art, we feel very fortunate at being enabled to give some extracts from a letter of S. A. Hart, Esq., R.A.,* who, when in Italy, devoted the greater portion of his time in examining with scrupulous attention fresco paintings in all their bearings, situations, and conditions.

* To Mr. Director Wilson, dated July, 1843.

In this valuable communication it will be seen that the earth colours stand best, whilst the blues,* which are often imperfectly-prepared mineral compositions, and the blacks (generally animal and vegetable substances), have faded.

Mr. Hart says, "Over the altar of Santa Croce, in the chapel of the Incoronata at Mantua, is a very fine fresco by Andrea di Mantegna, dated 1453, (the Virgin, Child, and St. Leonard,) painted on a ground laid upon scagliola, or a similar composition resembling stone, the picture is in perfect preservation, it has been removed hither from another church.

On entering the Camera de Cavalli, in the Palazzo del Te, I was struck with the great truth shown in the imitation of the horses, six in number; the natural size painted in this room, the two bays are nearly as perfect in preservation as could be desired, while the three white, and the remaining one, an iron-gray, have suffered much. One of the white horses is now indeed a mere shadow. All the warm colours here have stood, whilst the cold ones have faded. These are said to have been painted by the pupils of Julio Romano, from designs by their master. The same scholars are said to have painted the Camera di Psiche in oil, representing various subjects taken from Apuleius's fables; these, like the works similarly painted in oil, in Rome, by Sebastian del Piombo (at Santa Maria del Popolo, and St. Pietro in Montorio), are turned black and heavy, especially in the shadows; this re-

* This class of blues need no longer be seen on the palette of the fresco painter, as our readers may have seen in a previous chapter of this manual. The blacks also can now be obtained of a permanent quality.

mark cannot be applied to the subjects in this room beneath in fresco, in which not more than a certain amount of depth is indulged in, calculated to give space and light to the apartment.

The subject of the banquet prepared for the marriage of Psyche, is full of the nude, which though too red, and false in colour, and dense in the shadows, is yet a good example in one respect, showing how the warm tints endure, especially in the flesh, where ochres and deep reds are employed. The greens also in the vegetation or landscape remain, while the sky and mountainous distance have subsided into a heavy indigo tone, or light slate-colour.

The gigantic figure of Polyphemus is tolerably preserved, and is a fine example of finish on so large a scale.

In the Camera de Giganti, all the flesh tints are again best preserved, while the skies and water have faded to their usual blackish or slate colour, the yellows and greens are preserved. The intonaco is very thick, and is seen in large blisters ready to detach itself from the wall. The outlines of these gigantic figures, are boldly drawn with a point, and the execution exhibits great precision and finish. The joinings are cleverly managed.

In the fresco of the Ratto di Elena in the room called that of "The Siege of Troy" in the ducal palace at Mantua, the nitre has almost entirely eaten up the greens and blues: most of the other works in this chamber are in a similarly bad state, owing to the dampness, which it is said was occasioned by its roof having been stripped of its lead in the year 1630, thus exposing these works to the effects of rain and frost.

All the objects in which cool tints have been employed, have faded.

In Cremona the southern transept of the cathedral has frescos attributed to Giorgio Casselli, they are said to have been executed about the year 1301 (subjects from the Old Testament). They are more curious than fine in art, but interesting from the fact of their having lasted so well, especially considering the dampness of the city and its tendency to nitrous formations. Pordenone's large Crucifixion on the wall is powerful to heaviness, yet as an instance of manipulation on a large scale, is worthy of attention. A thick intonaco appears in parts, spread on a wall built of marble, the face being slightly roughened by a pointed instrument; similar but not so regular roughening I observed on the walls of some houses in Assisi, many portions of which had yet pictures adhering to them, and these must have been done at the latest by the school of Giotto.

The church of St. Sigismund, at Cremona, is literally covered with the works of the Brothers Campi. Several of the frescos bearing date 1566-77, are all vigorous and brilliant, and are perhaps some of the best that could be adduced in favour of the material; a green of an emerald tint, and a most vivid blue I have never before seen any equally well preserved, they are especially brilliant in an Ascension here by B. Gatto, a pupil of Correggio. Probably this church was built of better materials and on a drier soil, as the walls with their decorations, are in perfect preservation down to the pavement. These walls, on the outside towards the garden to the extent of six feet and a half from their bases, have a pavement of red burnt bricks laid

edgewise (herring-bone form). Was not this done probably to prevent an attraction of moisture to the walls from the vegetation outside? And may it not be partly owing to this precaution that the high state of preservation in which the pictures are (even down to the pavement) to be attributed?

Nothing can be more likely to have produced the desirable effect which Mr. Hart has pointed out than the very circumstances he mentions; namely, "the broad brick pavement intervening between the walls of the church and the adjacent soil." Such treatment of a public edifice is most judicious, as it must entirely cut off all chance of moisture being absorbed into the wall from the earth or vegetation, by capillary attraction—that insidious but unceasing foe to all pictures, whether mural or others.

In Brescia, the Street St. Corso del Teatro has the fronts of the second-floor story painted with a series of scriptural, mythological, and historical subjects, attributed to the Cavaliere Sabbatti. They have suffered very much, owing to their complete exposure to the weather; but here again the warm colours have remained, and in many portions are quite well preserved—many of the deep but brilliant lake tones are worthy of a Venetian.*

The sacristi of Santa Maria in Orgagno contains some beautiful studies, three half-figures in every compartment (of which there are fourteen) of Padri Bene-

* Mr. Solomon A. Hart, R.A., it should be stated, is himself, to a certain extent, a practical fresco painter. The author has seen this gentleman operating on two or three different days upon the moist intonaco, with the true fresco materials, upon portable frames latticed and well prepared for the purpose.

dettini ed Olivetani, all in white dresses, hooded, relieved on blue grounds, and in the most perfect condition. Eighteen lunettes contain each two portraits of popes who have been elected out of these orders. The blue grounds are relieved with gilding, they have stood perfectly. These are all by Moroni.

"I have constantly remarked in churches, that those works farthest removed from the ground have always endured best, and there is a strong proof of it in Verona in one of the earliest built churches (St. Nazario)." This remark still further confirms the fact that moisture ascends walls from the soil by capillary attraction.

"On the walls of the cloisters of St. Stefano, in Venice, unsheltered from sun or rain, are some remains of frescos, by Pordenone, those facing the west have stood the action of the sun's light wonderfully well, being now as deep and bright as one can imagine them to have been when first done. The shadows look a little gray and misty, whilst the blue back grounds on which the figures have been relieved, are either turned black or purple, or have disappeared, here the layers of mortar are thinly spread on a brick wall, and on the most exposed side, the west, have been but partially detached from the bricks. A female figure, in a rich red drapery, has astonishingly preserved its colour, a yellow and part of a green drapery have lasted equally well, while a purple is nearly gone, the paintings on the south side, where the intonaco is more damaged, have as usual retained more of the warm vigorous tones than of the cooler hues. The flesh tints of all these pictures are worthy of Titian or Giorgione."

SECTION IV.

METHODS OF DETACHING FRESCOS FROM WALLS.

This is an operation which has often been practised with success in Italy. With us, however, it cannot be at present an art of much importance, as we are not likely to have much occasion to use it for some time, except as may possibly happen, that some of the mural paintings of former ages may come to light from under the thick coats of lime-wash, where they have long been entombed by the pious zeal and bad taste of those public functionaries called "churchwardens." In the way of accident, however, there is no saying what may yet be discovered, and "it is," as Mr. Eastlake, observes, "desirable to make this process known, as in repairing churches and other buildings in England, many ancient paintings have been destroyed, from ignorance as to the means of removing them."

Mr. Ludwig Gruner* gives the following account of the manner in which he detached some frescos at Brescia, in 1829, at the convent of St. Eufemia, which was then undergoing repair, and the excellent frescos it contained, painted by Lattanzio Gambarra in the sixteenth century would have been destroyed, when Mr. Gruner succeeded, with the assistance of some Italians, in taking them off the wall.

The mode they adopted was first to clean the wall

* Mr. L. Gruner is now publishing an extensive work on the existing frescos of the various schools. The parts we have seen show that it is a work of great merit, and will be a valuable acquisition to our graphic collections.

properly, then to pass a strong glue over the surface-and by this means to fasten a sheet of fine calico on it. The calico, after having been pressed closely into all the irregularities of the wall, to cause a thorough adhesion all over the surface, was then covered with glue in like manner, and over it was laid and fastened similarly, common strong linen. In this state heat was applied, which caused the glue even on the fresco to sweat through the cloths, and thus the whole became incorporated. After this, a third layer of strong cloth was applied on a new coat of glue. The whole remained in this state two or three days, more or less, according to the temperature of the atmosphere, the superfluous cloth overlapping the edges of the painting was then cut off, so as to leave a sharp edge. The operation of stripping the wall commenced by rolling off the canvass or cloth, at the corners above and below, till at last the mere weight of the cloth and what adhered to it, assisted to detach the whole, and the wall behind appeared white, while every particle of colour remained attached to the cloth. This operation shows that the colours in fresco do not penetrate very deeply: the layer of pigment and lime, which was detached in this instance was extremely thin, for the outlines, and even the colours of masses were visible at the back of the cloths.

The description just given, exemplifying the practice of a skilful Italian fresco painter, seems to confirm Professor Schnorr's (of Munich) opinion, that frescos thinly painted are least liable to change; but in many instances the surface of frescos, even by the older masters, is solidly painted. To transfer the painting again to cloth, in completing the operation above described,

another sort of glue is used, stronger than the first, and which resists moisture, it being necessary to detach the cloths first used by tepid water, after the back of the painting is fastened to its new bed.

The frescos, by Paul Veronese, in the Morosini villa, near Castel Franco, were removed by Count Balbi, of Venice, a few years since: the count had cloths fastened to the wall with a paste composed of beer and flour, and prepared, or as they term it, riveted, to the irregularities of the surface, by means of a hammer, composed of bristles, and rolled off in a manner similar to the former, but in all these methods there is some difference of opinion as to the use of a hollow cylindrical roller, on which in some instances the upper edge of the fresco, and cloth first detached are to be carefully fastened, and then rolled very slowly indeed, not more than two or three inches in a day, by strong simple machinery, down the face of the wall to the bottom of the intonaco, a movement that would occupy several weeks if the picture happened to be very large. The latter mode was we believe employed by Count Cicognara in some successful operation of this kind, in which he was engaged, and of which he published an account in the Anthologia of Firenze (1825). G Barrufaldi also published an essay on this subject at Venice, in 1834, but the latest work on that subject is that by Cenni, published at Bologna in 1840. In those works ample instructions are given on the subject of detaching mural pictures from walls. We have, however, given an account of the general course of operations in which the trials made were successful.

Having at length arrived at the close of our labours, so far as the methods and materials for mural painting

required elucidation; and it is hoped, in a manner sufficiently instructive to those for whose information the task was undertaken. It has been suggested that a memoir of the rise and progress of the Royal Commission on the fine arts would be a very acceptable termination as an Appendix to this manual, and one in perfect accordance with its main objects, and be at the same time an historical record of that very remarkable commission, which by its acts has called forth the latent powers of British genius in the grand style of pictorial composition.

In terminating the text of our subject, we feel it would be only an act of justice to mention with respect a class of tradesmen, upon whose good faith, integrity, and scientific skill, the permanency of every class of pictures, whether on walls, panel, or canvass, depends most essentially. On this subject, however, the Author, in common with the best judges in the profession, feels the most perfect confidence; and this feeling arises from the practical experience of nearly forty years; during which time he has not had any cause of complaint. And he is now given to understand that "the colourmen" are preparing for the artists every material used in Fresco and Encaustic painting.

APPENDIX.

SECTION I.

THE ROYAL COMMISSION ON THE FINE ARTS.

THIS commission was issued on the 22d day of November, 1841, by her Majesty Queen Victoria. The noblemen and gentlemen "authorized and appointed" by her most gracious Majesty to act, were, his Royal Highness Prince Albert, of Saxe Cobourg, &c. &c., President. Commissioners, the Lord Chancellor (Lord Lyndhurst). His Grace the Duke of Sutherland. The Marquis of Lansdowne. The Earls of Lincoln, Shrewsbury, and Aberdeen, Lord John Russell, Lord Francis Egerton. The Viscounts Palmerston and Melbourne, Lords Ashburton and Colborne. Charles Shaw Lefevre (Speaker of the House of Commons), Sir Robert Peel, Bart., M.P.; Sir James R. G. Graham, M.P.; Sir Robert H. Inglis, M.P.; and H. Galley Knight, M.P.; Benjamin Hawes, junior, M.P.; Henry Hallam, Samuel Rogers, George Vivian, M.P., and Thomas Wyse, M.P., Esqrs.

Having recorded the date of its appointment, the original list of commissioners, and the general object of this commission, we must now return to a period shortly antecedent to its nomination, to give a correct view of primary causes which led eventually to this very desirable result.

Our parliamentary readers will easily recollect that the immediate precursor of the Royal Commission, was the parliamentary (select) committee on the Fine Arts, appointed by the House of Commons in 1841, of which Benjamin Hawes, junior, M.P., was chairman.

This special commission carried on its investigations with a good deal of activity, and amongst the most prominent objects of its attention, was a project for adorning with paintings the walls of the new houses of Parliament at Westminster. The commission, however, had not yet matured any specific plan for that purpose; when the change of administration took place, the select committee was obliged to make up an unfinished report, in which mural paintings for the purpose mentioned were recommended, and its functions ceased with the dissolution of Parliament, which took place in July, 1841.

It was, as we have already stated, on the 22d of November of the same year, that the Royal Commission was appointed, and, amongst the commissioners selected, Mr. B. Hawes, jun., the chairman of the late select committee, was properly one of the number; for we have the best authority for saying, that Mr. Hawes was very favourable to the introduction of mural painting, as was also Mr. Wyse, another member of the former select committee. In these instances, as well as several others, which a perusal of the list will demonstrate, the Ministers of the Crown evidently acted upon broad, liberal, and just grounds, by recommending to the Crown noblemen and gentlemen of various colours in politics, but all of whom were known to be, more or less, conversant in the fine arts in Great Britain, and favourable to their further development upon a grand, intellectual scale; one calculated to call into active existence the long dormant powers of British graphic genius, and give it "ample scope and verge enough" to display its cultivated and richly varied powers of historical and poetical painting. The result

of the Cartoon competition has proved most satisfactorily that the artists are deserving of the confidence placed in them by the Royal Commissioners, and also of the grateful thanks of their country for the very strenuous exertions they made on that memorable occasion through very great difficulties, and which arose, in some measure, out of the limited period allowed for composing and executing works belonging to the highest class of art, of colossal dimensions, as compared with that ornamental class, which the general taste of the country encouraged, and which it was the artist's interest to cultivate assiduously.

Besides the judicious selection of the members composing this Commission, there was another step equally fortunate, we mean the selecting Prince Albert as its president—a prince whose love of the arts is accompanied by much good taste, judgment, and even practical skill of no ordinary kind, and whose unremitted attention to the duties of president would prove, if such evidence were wanted, the great affection which his Royal Highness bears to the Fine Arts in general, more especially to the higher classes of art in Great Britain.

The appointment of a secretary to the Commission was also marked by admirable judgment; and it is allowed on all hands that, to possess the qualifications requisite to the satisfactory fulfilment of the peculiar and onerous duties of that situation, few would be found so well endowed as Mr. Eastlake.

Equal discrimination to that just mentioned was displayed in the selection of the judges, to whom was delegated the arduous and responsible duty of examining and deciding upon the merits of the numerous candidates for distinction in this great contest for pictorial superiority. This board of judges consisted of six members, three of whom were amateurs, and three professional gentlemen. The three amateurs were—the Right Hon. Sir Robert Peel, Bart. (Prime Minister), the Marquis of Lansdowne, and Samuel Rogers, Esq.

The professional judges were—Sir Richard Westmacott, R.A., (sculptor,) Richard Cooke, and William Etty, Esqrs., historical painters, also Royal Academicians. It should be observed that this board was not formed until a few months before the competition cartoons were ready for examination.

The Royal Commission having held repeated meetings, generally twice a week, during the winter and spring of 1842, decided that there should be a competition of cartoon compositions,* the principal figures to be upon a scale the size of life, at least. These cartoons were directed to be sent into "a place hereafter to be appointed" (Westminster Hall was selected) "in the course of the first week in May, 1843."

The competition was at first confined to British subjects, as it ought to be; but this was altered soon after, and the second notice issued on the 22d July, 1842, besides enlarging the time for sending in the cartoons from the first week in May to the first week in June, also enlarged the class of competitors, by allowing foreigners practising to compete "who may have resided ten years or upwards in Great Britain."

The premiums announced in the first notice were—three of 300*l.* each, three of 200*l.* each, and five of 100*l.* each.

In May, 1843, the Cartoons began to arrive in the noble hall of Rufus,† and by the 7th of June, the last day for receiving them, not less than one hundred and forty compositions had been deposited within its ample area. These were speedily

* The size of the drawings to be not less than ten, or more than fifteen feet. The drawings to be executed in chalk, charcoal, or some such materials, but without colours. The subjects to be selected by the artists from the works of Spenser, Shakspeare, and Milton.

† This vast hall was built by William Rufus in 1098; Richard II. enlarged and repaired it in 1397; and it is upon record that this monarch entertained 10,000 persons in it during a Christmas festival. The hall is 239 feet long, 68 feet wide, and 90 feet in height.

arranged, catalogues made out and printed, and then the board of judges entered upon their important duties, when, after a close and patient investigation into the merits of the cartoons exhibited, they made their award on the 24th of June, just seventeen days after the last of the cartoons had been sent in.

During the investigation, the judges divided the works which they deemed most worthy of premiums into three classes, to suit those of the premiums; and having made their final arrangements, made the following declaration.

DECLARATION OF AWARD.

"The undersigned, who have been appointed to decide on the relative merits of the drawings in the present exhibition, beg leave to state that, notwithstanding the inferiority of certain performances—a consequence unavoidable in an open competition—a great portion of the works are, in their opinion, highly creditable to the country. The undersigned are the more desirous to express their opinion, since the number of premiums offered, however liberal, was found to be by no means equal to the number of approved productions."

This declaration was signed, *seriatim*, by all the judges, and their report was, of course, confirmed by the Royal Commission.

The following is a correct list of the successful competitors in this arduous trial of skill. We have arranged them alphabetically, as we have not heard that there were any gradations of merit, or right of precedence, specified in each class:

Candidates entitled to 300*l. premiums.*—Edward Armitage, Charles West Cope, and George Frederic Watts.

To 200*l. premiums.*—John Z. Bell, John Callcott Horsley, and Henry J. Townsend.

To 100*l. premiums.*—John Bridges, W. E. Frost, Edmond Thomas Parris, H. C. Selous, and Joseph Severn.

A few days after the above award had been made, the

exhibition was opened (3d of July) for a fortnight to the public, at the payment of 1*s.* each person; the sum thus received was about 1100*l.*, and of this sum her Majesty's Commissioners decided, with the consent of the Lords of the Treasury, that ten portions of 100*l.* each should be given as premiums to that number of candidates whom the judges should decide were most deserving next to those already rewarded. The award of additional premiums was as follows:

To Marshall Claxton, Edward Corbould, Henry Howard, R.A., Frank Howard, T. R. Pickersgill, E. V. Rippingille, Sir Wm. C. Ross, R.A., T. P. Stephenson, W. C. Thomas, and John Green Wall.

Mr. Armitage having begun and finished his cartoon in Paris, he was required to execute a second drawing in accordance with a condition in the first notice issued by her Majesty's Commissioners, which provided that "artists executing their cartoons abroad, should be required, if it appeared requisite, to execute an additional drawing in this country;" of course on a limited scale as to the number of figures; and in default of making such drawing, or, when drawn, if it should not be approved by the judges, then "in such case the premium awarded to such artist should not be paid."

Mr. Armitage accordingly did a drawing (a group of two male figures), the subject was one proposed by the commissioners; and in justice to Mr. Armitage, on whose fairness the voice of suspicion had not been idle, we feel it a duty to publish a verbatim copy of the report made on that drawing by the judges.*

"We, the undersigned, having inspected the second drawing above referred to, the subject of which was proposed by the commissioners, hereby declare that we are quite satisfied that the said cartoon, representing Cesar's first invasion of

* This drawing was not exhibited.

Britain, and the said drawing, are by the same hand, and that therefore the artist is justly entitled to receive the premium awarded to him." This paper was signed by the six judges, and the premium of three hundred pounds was accordingly paid to Mr. Armitage. It is to be hoped that the above declaration will remove the suspicion which arose in the public mind, of this artist having been greatly assisted in designing and executing the cartoon, by his master M. P. de la Roche.

After the first fortnight's exhibition, by which funds for the second set of premiums were realized, the public were admitted gratis for five days in each week from about the 20th of July to the 2d of September: during that period the Saturdays were not free days, for each person had to pay a shilling for being admitted. We have not heard the amount collected in this way, nor its application, it is probable it helped to defray the expenses of the exhibition, which were very considerable.

After the exhibition closed, a notice was published, directing the competitors to send for their cartoons in the following week; they accordingly removed some of the prize cartoons to the British artists' gallery, where they were exhibited for some time, the others were removed to the artists' studios.

During the whole time of exhibition, the Hall was crowded with visiters, whether on paying days or free days. The public excitement was very active upon this occasion, which appears to have roused up a strong national feeling in favour of efforts which displayed, in so unequivocal a light, the competency of the British mind to produce great intellectual works in the fine arts. It is said that 30,000 persons paid for admission, and much more than treble that number were admitted gratis: in fact that immense hall was crowded with company every day during eight hours that it continued open; but this crowd was orderly, and seemed most intently occupied in examining the various merits of the car-

toons; to any one fond of observing human nature, when collected in large masses, and under the influence of a new cause of surprise, the various expressions of countenance and language would have been highly agreeable; but to the philosophic mind it would have a still higher charm, a cause for deep reflection, to see the order that reigned amongst this dense mass of people, who did not seem to experience any inconvenience, except from the heat, which certainly was considerable. Opinions were of course given extensively but with great caution, and in an under tone, so that there you heard no noise, except a slight murmuring sound, which was by no means disagreeable. The people appeared to regard the works before them so intently that they generally appeared quite unconscious of every thing else; and it is when in that state, that natural actions and expressions escape as it were, and display themselves; and from these true indices the man of observation and reflection grounds to a certain extent, his opinions of the state of mind, of morals, and of manners, in a nation. It was therefore most gratifying to observe the decorum that prevailed there, throughout the whole of this memorable exhibition.

SECTION II.

NOTICES OF COMPETITIONS FOR SCULPTURE (BRONZE AND MARBLE).

Previous to opening the cartoon exhibition, The Royal Commission issued a notice (24th March, 1843) to invite a competition in works of sculpture in bronze and marble, "as various statues in bronze and marble of British sovereigns, and illustrious personages will be required for the decoration of the new palace at Westminster."

The specimens by each artist, not to exceed two, to be either prepared for the occasion, or selected from works done by him within five years from the date of this notice.

These works may be ideal, or portrait statues, or groups, but not *rilievi*, the subjects are left to the choice of the

artists. The dimensions are to be on the scale of an erect human figure, not less than three, nor more than six feet.

Models to be sent in during the first week in June, 1844; the place of exhibition not named.

Artists intending to exhibit, are to give notice thereof to Mr. Eastlake, R.A., on or before the 14th of March, 1844.

FOR CARVED WORK IN WOOD.

On the 16th of June following, the Commissioners issued a notice, inviting a competition in works of this description of art, to enable them to select proper persons to be employed on the new works at Westminster. The specimens are required to be designed in general accordance with the style of decoration adopted in the new palace, Westminster. Outlines in lithography, showing the dimensions of the principal door of the House of Lords may be obtained at the architect's office, New Palace-yard.

Competitors not to send more than two designs for an entire door, drawn on a scale of two inches to a foot, and one carved panel, or part of a panel and framework, not exceeding four feet in the longest dimensions, representing a part of such design in full proportion. The objects forming the details of decoration are left to the choice of each artist. The material of the carver's specimen is to be oak.

SPECIMENS OF STAINED GLASS.

On the same day with the above, her Majesty's Commissioners issued a notice, inviting a competition in this department. The specimens to be in accordance with the style of architecture and decoration of the new palace. Outlines in lithography, showing the dimensions of the windows, may be obtained at the architect's office in New Palace-yard. Exhibiters not to send more than two coloured designs for an entire window, drawn to the scale of two inches to a foot;

and one specimen of stained glass, not exceeding six feet in the longest dimensions (the parts in full proportion). The objects forming the details, may be figures or heraldic devices, relating to the royal families of England, or a union of the two, and may be accompanied by borders, diapered, legends, &c. Specimens to be sent in the first week in March, 1844, and in the above competition also. Notices of intending to exhibit must be sent to the secretary on or before the 1st of January, 1844.

The Royal Commissioners having stated that the exhibition of cartoons, which had taken place, afforded satisfactory evidence of the ability of many artists in these respects, did, on the 23d of July, 1843, issue an invitation to artists to send in specimens of frescos to be exhibited, that thereby the commissioners may select proper persons to be employed in decorating part of the palace at Westminster. These specimens are to be sent in on the first week in June.

But it is further stated, that other methods of painting may be free from a shining surface. The Commissioners, therefore, invite artists to send specimens of the methods in question* on the above conditions, except that the sizes are left to the choice of the exhibiters.

"The claims of candidates for employment in oil painting and other departments of the art, besides historical painting, will be duly considered."

On the same day (23d July, 1843) notice was given for a competition in arabesques and heraldic decorations for panels, friezes, &c., in colour and gold. The designs to be executed in tempera, oil, encaustic, or water colours; dimensions left to the artist; works to be sent in the first week in March.

On the same day notice was issued by the Commissioners

* This is quite enough to prove that the Commissioners are not, as it was supposed, disinclined to allow any other style than fresco to be adopted in the proposed decorations at Westminster.

for a competition in metal work for screens, railings, gates, &c., to which artists are invited to send designs and specimens suited to the style of the buildings. To be sent in the first week in March, 1844, to enable the Commissioners to select the most proper persons to be employed.

The materials and dimensions are left to the choice of the exhibiters.

All the above competitions can only be entered upon by British subjects, or foreigners who have actually resided ten years or upwards in the United Kingdom. Those artists who have determined to compete should not lose any time in communicating their intentions to the secretary, C. L. Eastlake, Esq., R.A., "who is empowered to give such other explanations as may be required relative to the terms of the notices issued by her Majesty's Commissioners."

DIMENSIONS OF THE HALLS AND GALLERIES TO BE DECORATED.

Westminster Hall is 239 feet long, 68 feet wide, and 90 feet high. The architect (Chas. Barry, R.A.) has suggested that the hall should be made the depository, as formerly, for all trophies obtained in wars with foreign nations. The trophies might be arranged above the paintings on the wall and in the roof, so as to produce a very striking and interesting effect.

There are to be twenty-six statues placed against the walls here, and it is suggested that they should be portraits of naval and military commanders; also that twenty pedestals, answering in position to the ribs of the roof, should form an avenue of thirty feet wide, to be surmounted by statues of the most celebrated statesmen, whose public services have been commemorated by monuments, &c.; and also for future statesmen whose services may be considered worthy of being so honoured.

The paintings on the walls, twenty-six in number, will be

each sixteen feet long by ten feet high, and will probably relate to the most splendid warlike achievements of English history. It is also suggested that the dormer windows should be considerably enlarged, which would throw additional light upon that beautiful piece of decorative carpentry (the roof) of the fourteenth century.

ST. STEPHEN'S HALL.

This hall will be 90 feet long, 30 feet wide, and 50 feet high. It will admit of 10 paintings, each 15 feet long and 10 high, which, it is suggested, should be commemorative of great domestic events in British history, and to be decorated with statues of celebrated British statesmen. In the upper part of the hall, 30 niches will be appropriated for distinguished men in the naval, military, and civil services.

THE CENTRAL HALL.

This is an octagon, 60 feet in diameter, and 50 feet high, with a groined stone ceiling, each side being occupied by windows and doorways; there is no place for paintings; but it contains ample room for sculpture. It is suggested that the central space of the pavement should be occupied by a statue of her present most gracious Majesty upon a rich pedestal of British marble, highly polished, and relieved in parts by gold and colour; and that the niches in the walls and screens might be filled with statues of her Majesty's ancestors, in chronological order, up to the time of the Heptarchy; also, in front of the eight clustered pillars, in the angles of the hall, might be placed, with good effect, sedent statues of some of the great lawgivers of antiquity.

THE VICTORIA GALLERY.

This gallery will be 130 feet long, 45 feet wide, and 50 feet high, with a flat ceiling; it will admit of both painting and sculpture. The paintings, 16 in number, may be 12

feet long by 10 feet high, and might properly be relative to some of the most remarkable royal pageants of British history; statues of her present most gracious Majesty might fill the central niches at the ends of the Hall. The other niches and pedestals between the paintings might be occupied with statues of her Majesty's ancestors. These statues might properly be of bronze, either partially or wholly gilt.

THE CORRIDORS OF ACCESS.

The principal of these will be 12 feet wide, with flat ceilings, they will generally be lighted by windows near the ceilings. The wall spaces, for pictorial purposes, may be about 2600 feet in length, by a height of about seven feet on the principal floor, 900 feet by seven feet on the one-pair floor, and 400 feet by seven feet on the two-pair floor. The paintings may be divided by massive architectural borders, &c.

THE HOUSE OF LORDS.

This house will be 93 feet long, 45 feet wide, and 50 feet high, with a flat panelled ceiling. The fittings and windows required for the business of this house will not admit of being decorated with paintings; but niches will be provided in which statues of royal personages may be placed. The throne will be enriched with colour and gilding, the lower lines emblazoned with cloth of gold and the royal arms.

THE HOUSE OF COMMONS.

The house will be 83 feet long, 63 feet wide, and 50 feet high, with a flat ceiling. It will be furnished in the same style, but with less enrichment than the Lords, but the window fittings and accommodations for business will not admit the addition of either paintings or sculpture.

There are other large rooms, the libraries, &c., where spaces will be found for paintings, but no estimate can yet

be formed as to the extent of surface; but from the foregoing sketch of the hall, &c., it must appear pretty evident that the new palace of Westminster will afford employment for several years to artists in every class of the decorative arts.

MONUMENTS TO EMINENT CIVILIANS.

This very interesting subject did not originally enter into the class of objects to which the attention of the Royal Commission upon the fine arts was directed; but in consequence of some questions which Mr. Hawes put to Sir Robert Peel in the House of Commons late last session respecting the propriety of publicly recognising the valuable labour of eminent civilians, it has now become one of the objects for the early investigation of that commission, as the following letter from the Premier to Mr. Eastlake, R.A. (the secretary), will show: it is as yet only an inchoate public document from its having arrived rather too late to be presented at the last meeting of her Majesty's Commissioners, but a copy has been sent to each of the commissioners, and by special favour the author has been allowed to copy one of them, viz.—

"Whitehall, August 17, 1843.

"Dear Sir,—A proposal was lately made in the House of Commons, that the Commissioners should be empowered by her Majesty to inquire into the best means of doing honour by public monuments in sculpture or painting, to be erected at the public expense, to the memory of men entitled to the gratitude of their country, by eminent, civil, literary, or scientific services. I was unwilling to devolve on the Commissioners a general inquiry of this nature, not immediately connected with the original object for which the commission was appointed, but I willingly undertook to recommend to her Majesty to give to the Commissioners

full authority to consider whether there is any portion of the edifices intended for the accommodation of the houses of Parliament, or of the buildings connected with that edifice, which could with advantage and propriety be allotted to the reception of monuments, such as those to whom I have before adverted, and to report their opinion to her Majesty, not only with regard to the particular site of such monuments, but in the event of an appropriate site, in connexion with the new houses of Parliament being recommended by the Commissioners, with regard to the principles generally, which should govern the selection of the names to be honoured by so distinguished a record of national gratitude, and to the best mode of combining the public acknowledgment of the eminent service with encouragement to the arts in this country. I am empowered by her Majesty to recommend the subject to the consideration of the Commissioners, and to give them her Majesty's full authority for entering upon it. I am, &c. &c.

(Signed) "ROBERT PEEL."

"C. L. Eastlake, Esq."

The above letter is so agreeably intelligible, that it requires no further explanation, and it also is one of the most pleasing documents relative to the fine arts in Great Britain that we have ever met with; in fact it does honour to all the parties concerned in this fine movement, which for the first time in this country—and upon a scale commensurate to the national mind, is about to consecrate the arts to the highest moral purposes as permanent records of those gifted men who have entitled themselves to the gratitude of their country "by eminent civil, literary, or scientific services." Our great naval and military men have long been honoured, and most justly, by monuments erected at the public charge to commemorate their noble achievements. The men of peaceful arts and avocations, whose various powers of intellect,

have, under Providence, so greatly assisted to make their country powerful, wealthy, and enlightened, by their unwearied, and sometimes unrewarded exertions, will have justice done to their memories, and thus the love of honest fame, "that last infirmity of noble minds," will be cherished and expanded for the further improvement of man's social condition.

We cannot close these pages without mentioning that there are now in progress, at Buckingham Palace, eight paintings in fresco, in semicircular compartments; they are by the following Royal Academicians: viz.—

Charles Robert Leslie, William Etty, Charles Lock Eastlake, Edwin H. Landseer, Clarkson Stanfield, Thomas Uwins, Daniel Maclise, and Sir William Ross.

The subjects are all from the Mask of Comus, and will have rich arabesque borders, painted in encaustic by Mr. Aglio, who is now engaged upon them, and who shows much skill in this style of decoration.

Six of the works are finished, the other two will not be completed for some time longer. Their dimensions average about six feet long by about $2\frac{1}{2}$ feet in height.

We much regret our not having had an opportunity of looking into that valuable addition to our works on early British art. Mr. Gage Rokewood's historical account of "The Painted Chamber" in the late House of Lords, we have however the best authority for saying that it proves satisfactorily the existence of an English school of art in the thirteenth and fourteenth centuries. The researches of the late Mr. Adam Lee, in St. Stephen's chapel and other parts of the old palace, are very strongly corroborative of the same interesting discovery.

CONCLUSION.

THE time is now arrived when we must terminate the pages of our "Manual;" and in doing so, the author requests to be allowed the liberty of placing before his readers (and he does it at the request of some eminent artists) the opinions of one who, not an artist,* felt all the love and respect for "the arts that embellish society" which it is possible for the most gifted practitioner to feel for the noble, the bland, and the graceful productions of the pencil or the chisel. And although his destiny was cast in a path far removed from that of the elegant arts, yet he never suffered the sternness of his avocations to weaken the affection he bore to the Muses, especially those of poetry and painting. Indeed his love of these arts was ardent, sincere, and unchanging. And here, it may be said, is another strong proof that the severer occupations of the learned professions, and political science, do not necessarily prevent men of good taste from admiring the arts, and practically promoting their best interests. Of this truth, we have a remarkable corroboration in our present first minister of the Crown.

Having offered an apology, which the author hopes will be sufficient for the occasion, he now places the essay before his readers, and shall respectfully submit to their decision.

ON THE INFLUENCE OF THE FINE ARTS.—WRITTEN IN 1820.

"The Arts that embellish society are the offspring of luxury; they grow out of that opulence which purchases pleasure through an incessant desire for novelty. It is the nature of man to be unhappy without excitement. The savage finds it in the pursuits that are necessary for his existence; the

* The late John Sydney Taylor, A.M., Barrister-at-Law, &c., considered by his contemporaries as one of the most elegant and powerful amongst the moral and political writers of the present century.

circumstances in which he is placed make him enthusiastic in search of a livelihood; his existence is poetic. The wild, uncultivated scenes of Nature which he is accustomed to traverse, his dangers, his enterprises, and his athletic exercises, all tend to stimulate his stern sensibilities, and to give a vigorous impulse to the ordinary occupations of his life.

"Not so the artisan in a civilized community; he is cut off from Nature; the fountain of his most healthful sensations is dried up; his sedentary, monotonous toil produces relaxation and infirmity: he is apt to become inert, sullen, and querulous, and too often has recourse to debauching gratifications, in order to procure that excitement which is so much the darling object of human pursuit.

"But that state of society which condemns a great number of human beings to the unwholesome drudgery of manufactures, heaps the means of sumptuous indolence on the heads of others. The latter have leisure and wealth, both are expended upon variety of indulgences; but the want of serious and grave occupation makes pleasure lose much of its enjoyable nature, while its name still preserves a fascination over the mind. If, then, all pleasures which grow out of luxury were gross and sensual, wherever society was luxurious there would be only depravity and enervation. But there are other sources of gratification, which are unknown to a state of nature, and scarcely heard of in the moderate prosperity of a country; which grow up and flourish in times of affluence, and give to riches a wholesome direction in the encouragement of the works of art; which preserve the memory of virtue and the fire of genius, and shed a beautiful lustre upon the highest state of literary civilization. These works render the union of the pleasures of the *sense* and *intellect* complete, and fling round art and nature the roseate bands of a delighted companionship. They define the sentiments of grace and elegance, wherever their influence is known and acknowledged; they divert the mind

from sensual pursuits by the exquisite powers of persuasion, when the austere rebuke of wisdom might only hurry to the precipice; and they lead it by flowery paths to innocent instruction and refined recreation. They make tangible to our senses the purest essence of ideal beauty—they develop the heroic soul—they give form and symmetry and breathing animation to the lifeless mass, and realize the Grecian miracle, by touching the creation of their hands with fire from heaven: can their influence be truly felt, and the passions not ameliorated, and the mind not improved? It is impossible. To them it belongs to captivate the senses while conveying generous instruction to the soul; to elevate the feelings while deeply gratifying the desire of enjoyment, and to blend with the most renovative indulgence the exciting power of 'love and rapture, of poetic joy and inspiration.'

"Wherever the arts are cultivated with success, they almost imperceptibly educate the general taste, and make politeness of mind keep pace with refinement of manners. They are to a highly commercial and opulent state of society, what chivalry was to the feudal system—they wear down its asperities, correct its selfishness, relieve the sternness of its action, enliven the dulness of its repose, and mitigate the fierceness of its enjoyments.

"In them, also, exists the real bond between what is most graceful in the female character and the classical accomplishments of the manly mind. In their elysium, both sexes may gather of the tree of knowledge, without losing their distinctive character. To shine in letters or science, woman must be content to surrender her peculiar powers of fascination; she must cease to lead the loves and graces in her train, when she keeps company with Quintilian over the midnight lamp, or dims the lustre of her eye upon the glasses of Newton, spoils the sweetness of her temper over Tertullian and theology, or sacrifices her bloom in the laboratory of Davy. But whatever she has beautiful, bland, and attractive

in herself, is heightened and unfolded by her acquaintance with the arts; not indeed with their intricate erudition, but with their graceful practice. She imbibes from them true ideas of elegance and beauty; these amiable exteriors remind her of all that is pure, tender, delicate, and engaging. In their atmosphere the bloom of her mind expands and blossoms with the most enchanting richness; and her natural graces, too short-lived in themselves, are endued with that charm of cultivation which never dies.

"When the Arts are well understood, fashion cannot be so monstrous or fantastic as where they exert no salutary dominion over the fond love of variety. The source of excellence in art being a judicious observation of Nature, and a right perception of her principles of symmetry and beauty, a closer adherence to Nature will mark the fashions of society, polished by their ascendancy, than can distinguish the habits of people without the sphere of their influence. Hence the barbaric nations, where there is much wealth, never expend it in such a way as proves they have any notion of the pleasures of refinement. They delight in a hoarding and cumbrous magnificence; they are solicitous to dazzle with profusion, rather than please by propriety; they endeavour to attract admiration through the vulgar passion of astonishment, which is in a moment excited, and as suddenly expires, rather than create a rational respect by consulting for the praise of enlightened opinion.

"But in the classic ground of taste, how admirably is wealth employed for rational improvement! what a new and beautiful creation does it raise! the memory of which cannot perish with the vicissitudes of states, the ruins of which cannot be buried in the dust that buries power and wealth and military glory. Where now is the gorgeous dominion of Xerxes, glittering with the jewels and gold of a hundred tributary nations! Scattered on the plains of Marathon, buried in the waves of the Hellespont, forgotten and unregretted!

But where the arts and eloquent fame of Greece? Surviving in her statues, exciting admiration even in her ruined palaces and temples; and where the barbarian or time has triumphed, history has saved them from oblivion, and consecrated them to an affectionate and perpetual remembrance. Thus Persia had luxury without the Arts, and with her empire perished all her greatness. But the Arts of Greece made her luxury open a new field to genius; and though her power has died, her empire over opinion is immortal."

Vide "Selections from the writings of the late J. Sydney Taylor, A.M., Barrister-at-Law," &c. &c. 1843.

THE END.

C. WHITING, BEAUFORT HOUSE, STRAND.

SEPTEMBER, 1843.

WORKS

PUBLISHED BY

CHAPMAN AND HALL,

186, STRAND.

Two volumes, post octavo, price 21s.

THE IRISH SKETCH-BOOK.

BY MR. M. A. TITMARSH.

WITH NUMEROUS ENGRAVINGS ON WOOD.

FROM THE AUTHOR'S DESIGNS.

"Michael Angelo Titmarsh is precisely the writer who should sketch Ireland as it is. In the volumes now before us, he has caught the very characteristics of the clime, and his narrative runs on amidst sunshine and tears, alternating between gay and grave, with a never-failing interest, which leaves one no chance, having once opened the book, but to read it to its very last page—ay, and to profit by it, too. The pencil sketches of Titmarsh are extremely clever, and set off to advantage the peasantry, and the cars and the primitive waggons, and the little children he met with."—*Morn. Chronicle.*

"One of the most valuable books of travelling Sketches that has been published for many a day; and, excepting 'Inglis,' it presents the best idea of Ireland and the Irish that we have met with. Not that it contains any elaborate disquisitions on politics, religion, anarchy, or distress, or any deep proposals for their remedy; but the reader has set before him as graphic a picture of Irish manners, character, and modes of living, as if he himself had made the tour of Mr. Titmarsh. * * * Taken as a whole, the book is capital."—*Spectator.*

"A ramble through Ireland, in which everything is taken as it comes—character and wit are in all the drawings. We think the book uncommonly clever, humorous, and kindly."—*Examiner.*

"Evidently the work of a man of acute observation, of warm sympathies, and of excellent humour."—*Ainsworth's Magazine.*

AGENTS.—EDINBURGH: J. MENZIES. GLASGOW: A. RUTHERGLEN.
DUBLIN: JOHN CUMMING.—S. J. MACHEN.

WORKS OF MR. CHARLES DICKENS.

Nos. I. to VIII., to be completed in Twenty Monthly Numbers, price One Shilling each,

THE LIFE AND ADVENTURES OF

MARTIN CHUZZLEWIT.

ILLUSTRATED BY PHIZ.

In two volumes, post 8vo, price 1l. 1s.,

AMERICAN NOTES

FOR GENERAL CIRCULATION.

Fourth Edition.

In one volume, price 13s. cloth,

BARNABY RUDGE;

A TALE OF THE RIOTS OF 'EIGHTY.

With Seventy-eight Illustrations,

BY G. CATTERMOLE AND H. K. BROWNE.

In one volume, price 13s. cloth,

THE

OLD CURIOSITY SHOP.

WITH

Seventy-Five Illustrations,

BY G. CATTERMOLE AND H. K. BROWNE.

In one volume 8vo, price 1l. 1s. cloth,

SKETCHES BY "BOZ."

A New Edition.

WITH FORTY ILLUSTRATIONS, BY GEORGE CRUIKSHANK.

In one volume 8vo, price 1l. 1s. cloth,

THE PICKWICK PAPERS.

WITH

FORTY-THREE ILLUSTRATIONS, BY "PHIZ."

In three volumes, post 8vo, price 25s. cloth,

OLIVER TWIST.

WITH

FORTY-TWO ILLUSTRATIONS, BY GEORGE CRUIKSHANK.

In one volume 8vo, price 1l. 1s. cloth,

NICHOLAS NICKLEBY.

WITH

FORTY ILLUSTRATIONS, BY "PHIZ."

PORTRAIT OF MR. DICKENS.

ENGRAVED BY FINDEN, FROM A PAINTING BY DANIEL MACLISE, R.A.

Price—In quarto, plain paper, 1s.; folio, India paper, 2s.

WORKS OF MR. THOMAS CARLYLE.

JUST PUBLISHED,

In one volume post octavo, price 10*s.* 6*d. cloth,*

PAST AND PRESENT.

Ernſt iſt das Leben.

SCHILLER.

"Enriched with passages more stamped with rugged energy, strong original feeling, exquisite gentleness, surpassing beauty and tenderness—passages more graphic and picturesque, and at the same time substantial, significant, and of the good old Saxon homeliness and purity, than any other living man could have written. * * * It is the book of a sincere man—of a man terribly in earnest."—*Examiner.*

In one volume small 8*vo, price* 9*s. cloth,*

LECTURES

ON

HEROES AND HERO WORSHIP.

Second Edition.

In one volume crown 8*vo, price* 5*s. cloth,*

CHARTISM.

"It never smokes but there is fire."

OLD PROVERB.

Second Edition.

In three volumes small 8*vo, price* 1*l.* 5*s. cloth,*

THE FRENCH REVOLUTION:

A HISTORY.

VOL. I.—THE BASTILLE.
VOL. II.—THE CONSTITUTION.
VOL. III.—THE GUILLOTINE.

Second Edition.

In three vols. small 8*vo, price* 18*s. cloth,*

TRANSLATION

OF

GOETHE'S WILHELM MEISTER;

CONTAINING

Meister's Apprenticeship and Meister's Travels.

SECOND EDITION, REVISED.

In five volumes small 8*vo, price* 1*l.* 15*s. cloth,*

CRITICAL AND MISCELLANEOUS ESSAYS.

Second Edition.

*** The principal contents of these volumes are:—Jean Paul Friedrich Richter; State of German Literature; Werner; Goethe's Helena; Goethe; Burns; Heyne; German Playwrights; Voltaire; Novalis; Signs of the Times; Jean Paul Friedrich Richter again; On History; Schiller; The Nibellungen Lied; Early German Literature; Taylor's Historic Survey of German Poetry; Characteristics; Johnson; Death of Goethe; Goethe's Works; Diderot; On History again; Count Cagliostro; Corn Law Rhymes; The Diamond Necklace; Mirabeau; French Parliamentary History; Walter Scott.

The Foreign Library.

A SERIES OF TRANSLATIONS OF

POPULAR AND INTERESTING FOREIGN WORKS,

To be Published as soon as possible after their Appearance on the Continent.

"The project of a *Foreign Library* we thought in the first instance very highly of, and are particularly glad to observe its confirmed success. The books have been well chosen, and without an exception well translated."—*Examiner.*

In one volume octavo, price 11*s. cloth,*

AUSTRIA.

By J. G. KOHL.

COMPRISING

VIENNA, PRAGUE, HUNGARY, BOHEMIA, THE DANUBE, GALICIA, STYRIA, MORAVIA, BUKOVINO, AND THE MILITARY FRONTIER.

PART VIII., *price* 5*s.*,

SCHLOSSER'S HISTORY OF THE EIGHTEENTH CENTURY,

PART THE FIRST.

TRANSLATED BY DAVID DAVISON, M.A.

UNDER THE IMMEDIATE SUPERINTENDENCE OF THE AUTHOR.

The Literary portion of the History will appear first, and form Four Parts, or Two Volumes, octavo, with an entirely new Introduction by the Author, and with a Preface and Notes by the Translator.

In one volume octavo, price 10*s. cloth,*

CELEBRATED CRIMES.

By ALEXANDER DUMAS.

CONTAINING

THE BORGIAS—THE COUNTESS OF SAINT GERAN—JOAN OF NAPLES—NISIDA—THE MARCHIONESS OF BRINVILLIERS—THE CENCI—THE MARCHIONESS DE GANGES—KARL LUDWIG SAND—VANINKA—URBAN GRANDIER.

"Dumas' book is very striking. The Tragedy of Truth—the serious side of what is called the Romance of Real Life—had never such startling illustration as this remarkable book affords. Its capital constructive art is only a less admirable feature than its perfect and close fidelity of detail. What a story is that of the Marchioness de Ganges!"—*Examiner.*

The Foreign Library—(continued.)

In one volume octavo, price 11*s. cloth,*

LIFE IN MEXICO.

By MADAME CALDERON DE LA BARCA.

WITH A PREFACE BY W. H. PRESCOTT,

AUTHOR OF "THE HISTORY OF FERDINAND AND ISABELLA OF SPAIN."

"Madame Calderon's book has all the natural liveliness and tact and readiness of remark, which are sure to distinguish the first production of a clever woman. * * * Never was traveller better qualified for such a task in such a country, as far as physical resources, courage, and curiosity could go. A more genuine book in air, as well as reality, it would be difficult to find."—*Edinburgh Review.*

"Here the wife of a Spanish Ambassador permits the publication of Journals written in a land hitherto unvisited by any one gifted with so keen an eye and so pleasant a pen."—*Athenæum.*

"Madame Calderon has a great advantage in her position, which secured access to every house in the capital. Besides this, her observation is excellent, and her style uncommonly spirited, lively, and amusing."—*Examiner.*

With a Map, in one volume octavo, price 11*s. cloth,*

RUSSIA.

By J. G. KOHL.

COMPRISING

St. Petersburgh.	Odessa.	The Steppes.
Moscow.	The German Provinces	The Crimea, and the
Kharkoff.	on the Baltic.	Interior of the Country.
Riga.		

"This book gives the clearest insight into Russian habits, manners, and general statistics, of any work on the subject which we have hitherto consulted. Though sometimes minute, M. Kohl is never tedious, because he always manages to combine, with the most trifling matter, allusions or comparisons that make it interesting, from the vivid manner in which it is conveyed to the reader's mind. The English translator's task has also been most creditably executed. * * * The edition before us is that of the 'Foreign Library;' and looking at it as an earnest of what is to follow, the Foreign Library—intended to consist of translations of the best Continental works—deserves the heartiest support, to which excellent print and remarkable cheapness strongly recommend it."—*Chambers' Edinburgh Journal,* Jan. 28.

In the Press,

SCHLOSSER'S HISTORY OF THE EIGHTEENTH CENTURY.

PART THE SECOND.

☞ *Other Works are in Preparation.*

UNDER THE IMMEDIATE SUPERINTENDENCE OF THE COUNCIL OF THE GOVERNMENT SCHOOL OF DESIGN AT SOMERSET HOUSE.

Publishing every alternate Month, price 3s. 6d.

A DRAWING-BOOK;

CONTAINING

Elementary Instructions in Drawing,

AND

ILLUSTRATING THE PRINCIPLES OF DESIGN AS APPLIED TO ORNAMENTAL ART.

The various Parts of this Work will embrace the course of instruction in Drawing and the Art of Design at the Government School; and the Council have arranged that it shall be sold at a price little exceeding the cost of production, so that, as far as possible, it may come within the reach of all classes of persons desirous of instruction in Drawing and the Art of Design.

THE FIRST PART

Is to be devoted to elementary instruction, and will exhibit a course of Outline Drawing (including both geometrical and free-hand drawing) and Shadowing, illustrated by numerous examples, as well modern as ancient, so as to form a complete course of instruction in ornamental design, preliminary to drawing from Nature.

THE SECOND PART

Will contain Examples illustrative of the Principles of Design, and also Designs applicable to particular branches of Manufacture. It is intended that each Part should be accompanied by an explanation of the figures, and also directions as to the mode of teaching, so that the work may be used in schools, or by persons intending to learn without the assistance of a master.

Nos. I. to V., each containing Fifteen Sheets of Examples and descriptive Letter-press, comprise the course of Outline Drawing.

Nos. VI. and VII. contain Examples of Shadowing.

UNDER THE SUPERINTENDENCE OF THE SOCIETY FOR THE DIFFUSION OF USEFUL KNOWLEDGE.

Complete, in cloth, price 10s.; or in Nine Numbers, price 1s. each,

THE HORSE:

Its History, Races, Structure, Diseases, and Treatment.

By W. YOUATT.

Re-written, and brought down to the present state of Veterinary Science.

WITH A TREATISE ON DRAUGHT.

A NEW AND ENLARGED EDITION,

With an entirely new set of Cuts, Drawn by HARVEY.

In Seven Numbers, price 7s. 6d. each containing three Plates 26¼ inches by 19.

A SERIES OF

DIAGRAMS,

ILLUSTRATING THE PRINCIPLES OF MECHANICS, AND THEIR PRACTICAL APPLICATION.

Drawn on Stone by HENRY CHAPMAN, and printed in Colours by C. F. CHEFFINS.

This Series of Plates will, it is conceived, be extremely useful to classes in which Civil Engineering is taught, and to those who are seeking for instruction in mechanical drawing, as the Diagrams are drawn to a scale, and with sufficient accuracy of detail to serve as working drawings.

CONTENTS:

	PLATE	
PART I. THE LEVER.	1.	The Balance.
	2.	Lever of the First order—Lever of the First and Second Order.
	3.	Stable Equilibrium—Unstable Equilibrium—Bent Levers.
PART II. THE LEVER, and WHEEL & AXLE.	4.	Transverse Section of a Fire Engine.
	5.	The Wheel and Axle—Differential Axle.
	6.	Capstan—Spring and Fusee.
PART III. WHEEL & AXLE.	7.	Toothed Gear.
	8.	Elevation of a Crane.
	9.	Friction Bands—Circular Saw, and Crank.
PART IV. THE PULLEY.	10.	Single Fixed Pulley—Single Moveable Pulley.
	11.	Compound Pulley—White's Pulley.
	12.	Showing application of Smeaton's Pulley.
PART V. INCLINED PLANE.	13.	Inclined Planes.
	14.	Apparatus for showing Pressure perpendicular to Plane—Wedge—Gib and Cotter—Wedge Break for Railway Carriages.
	15.	Elevation of a Tilt Hammer.
PART VI. THE SCREW.	16.	Principle of the Screw—Square Thread—Common or V Thread—Double Thread—Screw Power.
	17.	Endless Screw—Fly Press.
	18.	Standing Press—Differential Screw Press.
PART VII. MACHINES.	19.	Vertical Section of a Saw Frame.
	20.	Elevation of Shears for Cutting Iron.
	21.	An Eight-day Clock—General View, with Front Plate removed—Side View of Working Part and Dial Work—Front Plate, with Dial Work and Striking Part.

*** A small Volume, containing a Syllabus of Lectures on Mechanics, and embracing a full description of these Diagrams, is preparing for publication.

UNDER THE SUPERINTENDENCE OF THE

MAPS.

ONE HUNDRED AND ONE NUMBERS are now published at 1*s.* 6*d.* each Number, coloured, and 1*s.* plain. There are only wanting to complete the Series—TURKEY, general map—ARABIA (including the RED SEA and the PERSIAN GULF), and a GEOLOGICAL MAP OF ENGLAND. A full INDEX is preparing.

Already Published,

Price 6d. each sheet plain, or 9d. coloured.

	Maps.
The World, on the Gnomonic Projection	6
The World, on Mercator's Projection	2
The World in Hemispheres	2
The Islands in the Atlantic	1
The Islands in the Pacific	2
Principal Rivers in the World	1

EUROPE.

	Maps.
Europe, General Map	1
British Isles	1
England	5
Ditto (Canals and Railways)	1
Scotland	3
Ditto, General Map	1
Ireland	2
Ditto, General Map	1
France, in Departments	3
Ditto in Provinces	1
Netherlands	1
Switzerland	1
Italy	3
Ditto, General Map	1
Corsica, Sardinia, Malta, &c.	1
Spain	3
Portugal	1
Spain and Portugal	1
Germany	4
Ditto, General Map	1
Austrian Dominions	3
Poland	1
Denmark, Sweden, Norway, and Russia in Europe	11
Russia, General Map	1
Sweden, Norway, and Denmark, General Map	1
Turkey and Greece	3

ASIA.

	Maps.
Asia, General Map	1
Siberia and Chinese Tartary	1
Eastern Siberia	1
Western Siberia	1
Asia Minor	1
Syria	1
Palestine	1
Persia	1
Bokhara, Cabool, &c.	1
Empire of Japan	1
The Panjab, with part of Affghanistan, Delhi, &c.	1
India	11
Ditto, General Map	1
China and the Birman Empire	1
Eastern Islands, or Malay Archipelago	1
Islands in the Indian Ocean	1

AFRICA.

	Maps.
Africa, General Map	1
Egypt	1
Northern Africa	5
Western Africa	2
Southern ditto	1

AMERICA AND WEST INDIES.

	Maps.
British North America and United States	16
North America, General Map	1
West India Islands	2
South America	6
Ditto, General Map	1
Central America	2
Australia, General Map	1
New South Wales	1
Western Australia & Van Diemen's Land	1
New Zealand	1

SOCIETY FOR THE DIFFUSION OF USEFUL KNOWLEDGE.

MAPS—CONTINUED.

ANCIENT.

	Maps.
The World	2
Britain	2
Gaul	1
Spain and Portugal	1
Italy	3
Palestine	1
Syria	1
Macedonia, Thrace, &c.	1
Greece	2
Asia Minor	1
Persia	1
Egypt	1
North Africa	2
PLANS OF	
Rome	1
Pompeii	1
Athens	1
Syracuse	1

PLANS OF CITIES.

	Maps.
Amsterdam	1
Antwerp	1
Berlin	1
Birmingham	1
Bordeaux	1
Boston	1
Brussels	1
Calcutta	1
Constantinople	1
Copenhagen	1
Dresden	1
Dublin	1
Environs of Dublin	1
Edinburgh	1
Environs of Edinburgh	1
Frankfort	1
Florence	1
Geneva	1
Genoa	1
Hamburg	1
Lisbon	1
Liverpool	1
London	2
Environs of London	1
Madrid	1
Marseille	1
Milan	1
Moscow	1
Munich	1
Naples	1
Oporto	1
Paris	2
Environs of Paris	1
Parma	1
Petersburgh	1
Philadelphia	1
Rome	1
Stockholm	1
Toulon	1
Turin	1
Venice	2
Vienna	1
Warsaw	1
New York	1

Outline without the Names of Places, for Learners, 4d. each, viz.:—

	Maps.
World on Mercator's Projection	2
Turkey and Greece	3
Asia Minor	1
Persia	1
Egypt	1
Italy	3
France	1
Germany	1
Netherlands	1

THE STARS,

ON THE GNOMONIC PROJECTION.

Six Maps, price 3*s.* plain; 6*s.* coloured.

THE STARS,

THE LARGE EDITION, edited by SIR J. W. LUBBOCK, in Six Maps, measuring 29 inches by 27 inches. Price 1*l.* 1*s.* coloured; 15*s.* plain.

UNDER THE SUPERINTENDENCE OF THE

In one volume, octavo, price 12*s., or in two volumes, price* 13*s. cloth.*

POLITICAL PHILOSOPHY.

By HENRY LORD BROUGHAM,

MEMBER OF THE NATIONAL INSTITUTE OF FRANCE, AND MEMBER OF THE ROYAL ACADEMY OF NAPLES.

PART THE FIRST.

CONTENTS.

In one vol. octavo, price 10*s. cloth,*

Dedicated, by Permission, to Her Majesty,

PART THE SECOND.

ON ARISTOCRATIC GOVERNMENTS.

CONTENTS.

There now only remain the subjects of Democracy and Mixed or Limited Monarchy to complete this branch of POLITICAL PHILOSOPHY, and to give the whole that belongs to the *Structure* of Government. Its *Functions*, comprising Political Economy, will follow.

SOCIETY FOR THE DIFFUSION OF USEFUL KNOWLEDGE.

A SCHOOL ATLAS;

COMPRISING

THE FOLLOWING SELECTION FROM MAPS OF THE SOCIETY.

MODERN.

World on Mercator's Projection. Two Maps.	Netherlands.	Asia.
North Pole.	Italy.	Syria.
Europe.	Spain and Portugal.	India.
England.	Germany.	Africa.
Scotland.	Denmark, Norway, and Sweden.	British North America.
Ireland.	Russia.	United States.
British Isles.	Turkey and Greece.	West Indies.
France.		South America.

ANCIENT.

World. Two Maps.	Greece, Macedonia, and Thrace. Three Maps.	Asia Minor.
Britain. Southern Portion.	Greek Archipelago.	Plan of Rome.
Gaul.	Egypt.	Athens.
Italy. Three Maps.	Palestine.	Syracuse.
Spain and Portugal.		

WITH A COPIOUS INDEX OF NAMES.

(In preparation.)

THE

LIBRARY OF USEFUL KNOWLEDGE.

I.—THE HISTORY OF GREEK LITERATURE, Vol. II., Parts 1 to 4.

II.—THE HISTORY OF ROME, Division II. (B. C. 390—A. D. 31), Part 4.

III.—THE HISTORY OF ROME, Division III. (Augustan Age), Price 2*s.* 6*d.*

One vol. 8*vo, price* 7*s.* 6*d. cloth,*

THE

HISTORY OF SWITZERLAND.

Illustrated by a Map, coloured.

One vol. 8*vo, with two Maps, price* 12*s. cloth,*

THE

GEOGRAPHY OF AMERICA AND THE WEST INDIES.

One vol. price 4*s. cloth,*

THE THEORY OF EQUATIONS.

BY THE REV. ROBERT MURPHY, A.M.

Price 1*s.* 6*d. in cloth,*

REPORT OF

THE STATE OF LITERARY, SCIENTIFIC, AND MECHANICS' INSTITUTIONS, 1841.

With a List of such Institutions, and a List of Lecturers.

In one volume foolscap octavo, price 9s.

THE ANNUAL BIOGRAPHY;

BEING

Lives of Eminent or Remarkable Persons

WHO HAVE DIED WITHIN THE YEAR 1842.

By CHARLES R. DODD, Esq.

Author of "The Peerage," "The Parliamentary Companion," "The Manual of Dignities," &c.

"The memoirs in the Annual Biography possess one characteristic among others, which will acquire for them much public favour, viz. that they are in no case reprints, but original lives, presenting new and often amusing views of the public characters whose careers have closed during the twelvemonth just completed. Though this is an Annual Obituary, it is by no means a lugubrious composition; on the contrary, it abounds with characteristic sketches, while the fulness and fidelity of the lives evince the author's candour and fairness of judgment, his knowledge of human nature, and his acquaintance with public men."—*Times*, 17*th Feb.* 1843.

GOETHE'S SECOND PART OF FAUST;

A Poetical Translation, line for line;

WITH PREFATORY ESSAY, AND COPIOUS NOTES AND REMARKS.

By JONATHAN BIRCH.

Complete, "on India paper," 2 vols., royal 8vo, cloth lettered, gilt edges, vol. I. 1*l.*; vol. II. 1*l.* 2*s.* On plain paper, vol. I. 16*s.*, vol. II. 18*s.*

The Plates in a detached form, without the descriptive lettering, Royal 8vo, in portfolio and lettered, 12*s.*

In one volume, cloth, gilt edges, price 6s.

SKETCHES OF YOUNG LADIES, YOUNG GENTLEMEN, AND YOUNG COUPLES.

With Eighteen Illustrations by Phiz.

In one volume, cloth, gilt edges, price 12s.

THE ARTIST;

OR,

YOUNG LADIES' INSTRUCTOR

IN ORNAMENTAL PAINTING, DRAWING, ETC.

CONSISTING OF LESSONS IN

GRECIAN PAINTING,	MEZZOTINTING,
JAPAN PAINTING,	TRANSFERRING,
ORIENTAL PAINTING,	INLAYING, &c.

By B. F. GANDEE, Teacher.

With Seventeen Illustrative Engravings.

In one vol., cloth, price 5s.

SONGS AND BALLADS.

BY SAMUEL LOVER.

These popular Lyrics, including the celebrated "Superstitions of Ireland," are now, for the first time, collected and revised by the Author.

In one volume, cloth, price 5s. 6d.,

CHESS FOR BEGINNERS,

IN

A SERIES OF PROGRESSIVE LESSONS;

Showing the most approved Methods of Beginning and Ending the Game, together with various Situations and Checkmates.

By WILLIAM LEWIS,

AUTHOR OF SEVERAL WORKS ON THE GAME.

With Twenty-four Diagrams, Printed in Colours.

Second Edition, corrected.

MAPS FOR RAILWAY TRAVELLERS.

ENGRAVED BY SIDNEY HALL.

On a Sheet, price 6d., or in a Case, price 9d. each,

Printed on Chapman's Patent Paper-Cloth,

POCKET COUNTY MAPS,

WITH ALL

THE RAILWAY STATIONS

CORRECTLY LAID DOWN.

And neatly Mounted in a Case this size.

LIST OF MAPS.

BEDFORDSHIRE
BERKSHIRE
BUCKINGHAMSHIRE
CAMBRIDGESHIRE
CHESHIRE
CORNWALL
CUMBERLAND
DERBYSHIRE
DEVONSHIRE
DORSETSHIRE
DURHAM
ENGLAND
ESSEX
GLOUCESTERSHIRE
HAMPSHIRE
HEREFORDSHIRE
HERTFORDSHIRE
HUNTINGDONSHIRE
ISLE OF WIGHT,
ISLES OF MAN, JERSEY, & GUERNSEY
KENT
LANCASHIRE
LEICESTERSHIRE
LINCOLNSHIRE
MIDDLESEX
MONMOUTHSHIRE
NORFOLK
NORTHAMPTONSHIRE
NORTHUMBERLAND
NOTTINGHAMSHIRE
OXFORDSHIRE
RUTLANDSHIRE
SHROPSHIRE
SOMERSETSHIRE
STAFFORDSHIRE
SUFFOLK
SURREY
SUSSEX
WARWICKSHIRE
WESTMORELAND
WILTSHIRE
WORCESTERSHIRE

Price 1*s.* 6*d. each, double the size of the above,*

YORKSHIRE, IRELAND, SCOTLAND, & WALES.

CHAPMAN AND HALL, 186, STRAND.

NEW TRAVELLING ATLAS.

Bound in roan with a tuck, price 16*s.*,

A POCKET TRAVELLING ATLAS

OF THE ENGLISH COUNTIES,

With all the Coach and Rail Roads accurately laid down and Coloured, corrected to the present time.

Engraved by Sidney Hall.

IN PREPARATION,

THE

PRINCIPLES AND THE PRACTICE OF ART.

BY J. D. HARDING,

AUTHOR OF "ELEMENTARY ART."

When the "ELEMENTARY ART" was published, the Author promised that it should be followed by another volume, which should carry out and complete a view of Art, founded on the closest observation and study of Nature. Many circumstances have, however, occurred to prevent him from executing his design until now.

In this, as in his former volume, the great object of the Author is practical utility, attainable only through a knowledge of Nature, and the rationale of Art. It has already been proved, that even the earliest steps in practice cannot be safely or usefully taken but by continual reference to Nature's laws; and these will be here shown in their more comprehensive, but equally practicable, operation, as well as the necessity of a perpetual recurrence to them, whether for the acquisition of power for ourselves, or for the appreciation of it in others.

The subjects theoretically and practically treated of, will be Beauty of Form, Imitation, Composition, Light and Shade, Effect, and Colour.

The Work will form a volume of the same size as "ELEMENTARY ART."

Subscribers' Names will be received by the AUTHOR, 4, Gordon Square, London University; by the PUBLISHERS, and the principal Book and Print Sellers.

IN PREPARATION.

THE BARONIAL HALLS,

Picturesque Edifices,

AND

ANCIENT CHURCHES OF ENGLAND.

FROM DRAWINGS

BY J. D. HARDING, W. MÜLLER, J. B. PYNE, &c. &c.

EXECUTED IN LITHOTINT BY MR. HARDING.

AND NUMEROUS ENGRAVINGS ON WOOD.

With Descriptive Letter-press

BY S. C. HALL, F.S.A.

The size of this Work will be Royal Quarto; and the mode of its production will be in all respects commensurate with the importance of the subject and the advanced state of the graphic and typographic arts. Each Part—of which one will be issued on the first of every alternate month—will contain Three Subjects of a large size, executed in LITHOTINT—the patent invention of Mr. Hullmandel—a method peculiarly suited to such a publication, as combining accuracy of detail with brilliant artistic effects, and having also the advantage of novelty.

The Lithotint Drawings will be entirely executed by Mr. HARDING, either from his own Sketches, or from those of other popular Artists, made exclusively for this Work.

Woodcuts, when desirable to elucidate the text or to convey accurate ideas of striking details, will be scattered through the letter-press, which will consist of Twelve pages,—sufficient, it is believed, to furnish all necessary information to the general reader.

☞ *A full Prospectus and Specimens of the Work will be issued in due course.*

THE FOREIGN QUARTERLY REVIEW,

No. LXII.,

Just Published, price Six Shillings.

CONTENTS :

No. LXI.

Immerman's New Münchhausen.—Schlosser's History of the Eighteenth Century.—The Poems of Herwegh.—Von Lang's Autobiography.—French Poetry and Translation.—A Hundred Days in Austria. By J. G. Kohl.—The Politics and the Verses of Lamartine.—Facts and Feelings from my Life. By Stefens.—English History and Character on the French Stage.—The Reminiscences of Arndt.—Balzac on the Newspapers of Paris.—Justus Moeser's Collected Works.—The Burgraves of the Rhine. By Victor Hugo.—The Comedies of Plautus.—Thieves' Literature of France.—The Answer of the American Press.

No. LX.

Hoffmeister on Schiller.—Gutzkow's Letters from Paris.—Socrates and the Sophists of Athens.—Balzac's 'Provincial Bachelor.'—The Countess Hahn Hahn's Travels.—Francesco Forti's Civil Institutes.—George Sand's 'Consuelo.'—The King of Saxony's Travels in Montenegro.—Alfred de Musset's 'White Thrush.' — Klopstock. — The Newspaper Press of France.—Chronological Tables of Literature: Poland.

In a small pocket volume, elegantly printed,

HOURS OF MEDITATION

AND

Devotional Reflection:

Upon various subjects connected with the Religious, Moral, and Social Duties of Life.

By H. ZSCHOKKE.

Translated from the German by James D. Haas.

The almost unparalleled admiration of the work from which this selection is made is sufficiently attested by the fact of its Continental sale having exceeded 200,000 copies.

[*In the Press.*]

BRADBURY AND EVANS, PRINTERS, WHITEFRIARS.