Introduction to the 2009 edition

William Millar's classic book *Plastering Plain and Decorative* is universally referred to as the 'Plasterer's Bible'. It was first published in 1897 and was clearly a great success, with a second edition following two years later in 1899 and a third edition in 1905 (a reprint of the first edition is also available from Donhead). In 1927 the publishers, B. T. Batsford Ltd, decided that it was time to republish Millar's *magnum opus*, and that the fourth edition should be revised and updated. William Millar had died more than twenty years before, so they asked George P. Bankart, an architect/craftsman and author, who had already written another book on plasterwork for them, to take on this task.

George Percy Bankart was an architect highly influenced by the Arts and Crafts movement, who had chosen to work as a decorative craftsman. Arts and Crafts was, at least initially, an English movement dedicated to the idea that architecture could be inspired by a revival of traditional building crafts and materials. It started with the writings of John Ruskin and was driven by the ideas of William Morris. Although most people associate the movement with the late nineteenth and very early twentieth centuries, there were still many active Arts and Crafts architects and thinkers around in the 1920s.

Bankart was born in Leicester on 20 January 1866, and was a great friend of Ernest W. Gimson, another Leicester born architect, just over a year his elder. Both men studied and became architects, and shared a creative passion for the handicrafts. While Gimson's career included embroidery design, traditional chair-making and furniture design, as well as decorative modelled plasterwork, Bankart concentrated primarily on plasterwork. Their different activities were true to the ideas of the Arts and Crafts movement, and their designs reflect the movement’s interest in a return to nature.

Bankart’s career as an author started in 1909, with the publication of *The Art of The Plasterer* (B. T. Batsford Ltd). He seems to have taken a break from writing until the mid-1920s, when, together with his son G. Edward Bankart, he produced two books, *Modern Plasterwork Construction* (1926) and *Modern Plasterwork Design* (1927), both published by the Architectural Press. These were in drawing portfolio form, with large loose-leaf plates. It was also in 1927 that B. T. Batsford Ltd published the revised fourth edition of Millar’s *Plastering Plain and Decorative.*
One only has to look at the title page of the fourth edition to get an idea of Bankart's confidence and belief in the post-Victorian view of craft and design. He refers to this edition being revised and enlarged, even though it is actually shorter (347 pages compared to 604 pages in the first edition). He and the publishers clearly believed that bringing it up to date with added knowledge and information, along with the removal of (in his view) immaterial parts, had actually increased the scope of the book. The fourth edition has nineteen chapters, as opposed to twenty-one in the first, but more significantly one can sense the change in attitudes and understanding as George Bankart picks out and patches in paragraphs and chapters around William Millar's original work.

Reading the first edition of the book gives a real sense of the way Mr Millar, a Victorian plasterer, thought about and understood the skills of his trade. At times his writing style may seem to ramble slightly, but this adds to the feeling of being in conversation with him. The fourth edition carries on this conversation, but with George Bankart adding his 'voice' as he implores us to engage with the importance of craftsmanship. He obviously has a deep respect for William Millar, but is keen to highlight the shortcomings he saw in the move towards mass-production (symbolised by the Victorian ceiling rose), and wants to explain not only how the craft had been in the past but also how it could be developed in the future.

There would be little merit in trying to describe or analyse all the changes made in the fourth edition, but we hope that by highlighting a few we can give some insights into the differences between the two editions.

Chapter I, on the history of plasterwork, was originally written by George Robinson. It has been edited very slightly and more illustrations have been added, but still retains subjective views and prejudices from the first edition, including negative remarks about the Adam brothers and the 'death' of hand modelling. Chapter II (moved from Chapter XVI in the original), was originally entitled *Foreign Plasterwork* and has been renamed *Eastern and Continental Plasterwork*, possibly reflecting a slightly more enlightened view of the rest of the world!

The next three new chapters, on lime-stucco, modern plasterwork and modelling in relief, are pure Bankart, and give a real sense of his passion and interest in hand modelled plasterwork. He uses them to illustrate and explain his commitment to Arts and Crafts ideals.

Chapter VI is on tools (moved from Chapter XXI in the original), and has additional illustrations and notes. This is followed by two chapters on materials, all brought up to date with more photos and drawings. As one reads on it becomes clear that, while still retaining much of Millar's text and illustrations
without alteration, Bankart has inserted sections into the original chapters to make them more contemporary. He assumes less background knowledge from his readers and adds further explanation where he believes it will help plasterers and others who want to understand the mechanics of plastering.

A good example of this is in Chapter XV, where a description headed *Renovating Old Ceilings* (page 243), which comes from the first edition, is then followed by a new section called *For Renovating Old Ceilings* (pages 243 and 244), which gives a detailed description of how to save an old ceiling using plaster and scrim to reinforce it from above. The chapter ends with an illustration (page 272) showing how this method works, and a further treatise (page 273) on saving historic decorative plaster.

In this same chapter there is an illustration (page 249) entitled 'Typical Victorian Centre Flower "Horrors" in Plaster'. Bankart does not hide his disdain for Victorian ceiling roses, or the period they represent. While understanding his plea, we need to remember that his views on design and production, although heartfelt and challenging, are as much a reflection of his time as the ceiling roses are of the nineteenth century. His views on 'mass-production' and the importance of 'hand craft' are pertinent to current debates about sustainability, but we should bear in mind that 'beauty is in the eye of the beholder' and that the passage of time can also give value to objects.

Chapter XI, *Exterior Plastering and Sgraffito*, is another completely new chapter added by Bankart. This method of decoration (also spelt Scraffito) involves applying contrasting layers of coloured plaster to a moistened surface, and then scratching away parts of the top layer to produce an outline pattern or drawing. The art of sgraffito (early examples of which can be found in Bavaria and Italy) was introduced into Britain during the late nineteenth century, and this chapter reflects the enthusiasm in the early twentieth century for this technique.

Bankart continues to update the content right through to the penultimate two chapters on *Compositions* (XVII and XVIII). This encompasses gesso, papier-mâché, carton-pierre, and an assortment of other products, and can be a very useful research reference when faced with the repair of such materials. Knowing that alternative, and sometimes novel, materials were used in decorative plasterwork from the latter part of the eighteenth century onwards is important. If, for example, decorative features have been formed using a glue binder they may be more susceptible to damp than plaster (and even become 'soggy' to the touch), but may simply solidify again once the ceiling or wall dries out. Unfortunately if the glue stays damp too long, it may encourage or sustain mould growth.
The last chapter, on quantities, weights and recipes, contains fascinating practical information on proportions and sizing of materials, including the coverage achieved using different plasters. There are explanations of the measures used, but as many are no longer in common usage it can be difficult to immediately translate them into modern terms. The description of the wide palette of materials that was available to plasterers at the time is a salutary reminder of how limited our own knowledge really is. We can only hope that the republishing of this book will begin to inspire a revived interest in the techniques and tricks of the trade that have been forgotten. There is a brief entry on ‘Wages’ (page 321), which reflects on the shortage of skilled plasterers in the 1920s, due to the First World War. Fortunately for Bankart, he did not know of things to come, with another World War and the subsequent de-skilling of the plastering trade.

The book finishes with an Appendix, outlining developments in American plastering, which offers some fascinating insights. This includes descriptions of new techniques and alternative materials, including a surprising reference to plasterboard (page 333). We are also told about the use of brightly coloured external stucco, developed by a Mr O. A. Malone of the Californian Stucco Products Co, which is referred to as ‘Jazz plaster’, much loved by Hollywood film stars. This is the beginning of the Art Deco movement, which started in Paris in 1925.

Sadly George Bankart, who seems to have been intrigued by the idea of coloured external stuccos, did not live to see the spread of this new fashion. He died in Welwyn Garden City, England, two years later in 1929, aged 63. His life was dedicated to promoting the ideals of craftsmanship and his legacy can clearly be seen in his books. The Arts and Crafts movement owes a great deal to a man who sought to develop and encourage the art of the plasterer.

At the time of writing this introduction, Jeff Orton is in America visiting the American College of the Building Arts in Charleston. He has been discussing Plastering Plain & Decorative with the students, and it seems particularly appropriate to conclude with their observations on the fourth edition. Their comments reflect on the challenges we face on both sides of the Atlantic.

At a time when speed of production takes precedent over quality of craftsmanship, mass-produced, pre-fabricated building materials have become the standard of current building practices in the United States. This has resulted in a sharp decline of artisans in our country. We, the plaster students of the American College of the Building Arts in Charleston, South Carolina, have a unique opportunity to revive the traditional building methods of the past. William Millar’s writing on the
trade provides us with an invaluable resource for guidance and inspiration. Millar not only specifies the proper techniques of plastering, but in the revised fourth edition George Bankart exhorts students to self-expression and artistic exploration. In the chapter *Modelling and Design in Relief* (page 74), he encourages students to develop their desire to create decoration and ornamentation:

*By studying old work and Nature at the same time - by absorbing inspiration from both, by uniting that knowledge of both in developing our own ideas with good taste, judgement, simplicity of arrangement, variation, industry, and practice, the student must surely acquire and cultivate the art of decorative design for himself ...But he must be content to learn.*

We are grateful to the students Cody Donahue, Michael Lauer and Bethany Costilow for their thoughts and observations. For more information on the American College of the Building Arts visit [www.buildingartscollege.us](http://www.buildingartscollege.us)

Jeff Orton & Tim Ratcliffe  
(February 2009)

*Jeff Orton (Plasterer) C.R.P., A.P.C., M.P.C.G.*

Jeff Orton served a full plastering apprenticeship from 1963 to 1968 with a traditional family firm, and gained a ‘First Class’ in the Craft level City and Guilds, followed by a ‘Distinction’ in the Advanced Craft City and Guilds Final Examination. He is registered with the Worshipful Company of Plaisterers (CRP) and is also an Associate of the Worshipful Company of Plaisterers (APC). In 1981 he attended the San Servolo Architectural Conservation Course for Craftsmen in Venice. He is a member and past chairman of the Plasterers Craft Guild, and is currently a committee member of the Building Limes Forum. Following twenty years repairing and reinstating plasterwork in historic buildings, for the National Trust, English Heritage, etc, as well as private clients, he is now involved with the NHTG (National Heritage Training Group) and is committed to raising standards and encouraging a better understanding of traditional plastering skills.

*Tim Ratcliffe (Architect) B.A., DipArch, A.A.B.C.*

Tim Ratcliffe was awarded a ‘Lethaby’ travelling scholarship by the Society for the Protection of Ancient Buildings (SPAB) in 1987 and has also worked as a labourer for a number of specialist plastering and conservation contractors. He worked for two architectural firms specialising in historic building work (Rodney Melville & Partners and Donald Insall Associates) before setting up in practice with his wife, Jan, in 2000. Based in Oswestry, they work and give advice on churches, houses, castles and old industrial buildings in the Midlands and North Wales.
PLASTERING
PLAIN & DECORATIVE
ENGLISH DECORATIVE PLASTERWORK
OF THE RENAISSANCE

A Review of its Design during the Period from 1500 to 1800

BY

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AUTHOR OF "ENGLISH FURNITURE AND DECORATION," ETC.

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By GEORGE P. BANKART
Architect and Decorative Craftsman


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EDITOR’S PREFACE

In revising this volume for the Fourth Edition, whilst fully appreciating and cherishing the Author’s wide experience and teaching as a practical plasterer and skilled mechanic, it has been endeavoured, as far as possible, to condense, to clarify, and to rearrange the text and illustrations into a more useful and portable form, at the same time limiting the pages strictly to the Art and Craft of the Plasterer.

New chapters have been added on “Stucco-Duro” or “Lime-Stucco Plasterwork,” “Modelling and Design in Relief,” and “Modern Plasterwork in England.”

The illustrations have been revised and many new ones added in a manner that it is hoped may prove interesting and serviceable.

For plasterwork generally, as an art and as a craft, technically and historically, great importance is attached to the Historical Account (Chap. I.), which every plasterer is urged to read, study, and remember to his advantage.

Since Mr Millar first penned the text of “Plastering Plain and Decorative,” methods of building have undergone considerable change, affecting both design and construction. Architecture has reawakened to new life, inspired to some extent by the traditions of the past, whilst combining and developing new methods of construction with materials convenient to present-day use.

Mr Millar happened to live and work mostly during a period of transition, when plastering was a mechanical trade and not a decorative art. “Ornamental” plastering of a kind was done, and in profusion, but the design and modelling of plaster ornament at that time held little of the traditional decorative spirit of the past, and was misdirected so far as true decorative qualities were concerned.

Fibrous plaster casting from moulds in this country involved much labour in its earlier days in comparison with the process as worked at the present time. Plaster casting was then more extensively done from moulds of wax, or from plaster reverse moulds combined with inserted wax moulding pieces for enrichments.

Of late years, also, there has been a great increase in the number and variety of patent materials of all kinds, especially slabs for use on partitions, for wall coverings, etc. Though these are not strictly plastering, they are so nearly allied to the craft that a brief description of some principal varieties, with other special recent materials, is necessarily included.
EDITOR'S PREFACE

Experience and competition have produced change of methods, simplified processes, and a saving of time. For these reasons some of the processes described in detail and generally practised in the Author's life-time have gone out of use and given place to simpler and cheaper methods and materials. Since the latter part of Queen Victoria's reign the true quality of plaster as a decorative material has been better recognised and appreciated for its granular nature and its soft qualities of light and shade. The technical qualities of sixteenth and seventeenth century work have been studied and realised and the principles applied to modern circumstances in modern ways.

The technical qualities of modelling and working various materials and the poetry of pattern-making have been more closely studied and applied to a better development of the processes of manufacture.

The hope, expressed by the Author in his original preface, that he might help to spread a knowledge of methods and a greater appreciation of and desire for a wider use and revival of his favourite art and craft, has been amply and fully justified and realised by thousands of his fellow-craftsmen; and it is further hoped that this edition will bring the usefulness of the volume up to date, more particularly with reference to the development of the Art of plastering which, as differing from the purely mechanical aspect of the trade, has until recent years received less encouragement and attention than it deserves from public and craftsmen alike.

GEORGE BANKART

LONDON, March 1927.
NOTE OF ACKNOWLEDGMENT

The greater part of the illustrations are reproduced from the Editor's and Publishers' collection of plaster photographs, the majority of which have been taken expressly by Messrs Lewis & Randall Limited, Birmingham. Most of the diagrams of mouldings, etc., have been specially drawn by the Editor and Mr G. E. Bankart.

Plates XV, b, XV, c, and XVII, c are from "Old Halls and Manor Houses in Yorkshire," by Louis Ambler, F.R.I.B.A., and Figs. 30 and 31 are from drawings by Sydney R. Jones in "Old Manor Houses," by Jones and Ditchfield. The subjects on Plate XXXIV are from the late R. Phené Spiers's "Architecture, East and West," and photographs by the late W. Galsworthy Davie appear on Plates XV, a, XVII, a, XVII, b, LXXXVI, a, XCIV, c.

Messrs G. Jackson & Sons must be cordially thanked for kindly placing at our disposal designs of Adam motives—reproduced on Plates XXX, XXXA, and CXXII—of which they possess the original boxwood moulds.

Mynheer Martinus Nijhoff, publisher, of The Hague, has kindly allowed the reproduction of the old Belgian interiors shown on Plates XXXIX, b, and XL-XLII, from his publication "Old Interiors in Belgium," by Sluyterman; and to the kindness of Mr Edward Hudson of Country Life is due the inclusion of the photographs of interiors illustrated on Plates LXXIV and LXXVI, c. Plates XX, a, LII, b, and LII, c, are from photographs by Messrs Valentine & Sons, of Dundee, reproduced by their permission, and Plate LVII, b is from a photograph of Messrs Bedford, Lemere, & Co., London.

To Messrs Morris & Co. is due the inclusion of Plate LXXX, d and Fig. 28, designs for fabrics by William Morris; and Mr Archibald Thorburn and Messrs Longmans, Green, & Co., his publishers, must be thanked for the reproduction of LXXVIII, e (the Heron), from "British Birds," Vol. II., and LXXXIX, b, from "The Naturalist's Sketch Book."

Photographs of subjects from the Victoria and Albert Museum, South Kensington, are shown in Plates LXXXI, a, LXXXIV, a, XCV, a, CI, c, and CXVI-CXIX, by kind permission of the Board of Education; and acknowledgment must be made to the authorities of the British Museum for Plates XCI, a and XCVIII, from the William Twopeny Collection; Plate XCVI, b from "The Sculptures of the Parthenon"; and Plate XCVII, consisting of reliefs in the Assyrian Collection.

The andirons designed by the late Ernest W Gimson (Plate LXXXIII, a and b) are reproduced by the sanction of Mrs Gimson, from the "Gimson Memorial Volume."
NOTE OF ACKNOWLEDGMENT

The Editor would like to thank various architects and fellow-craftsmen, especially Sir R. Lorimer, Messrs Joseph Armitage, Arthur Glover, George Jack, T. Stallybrass, and Heywood Sumner, for contributing examples of their work.

He is indebted to many manufacturers for permission to include valuable practical material relating to their specialities and processes. The brief Appendix on "Recent Developments in American Plastering" is due to the interest and energy of Mr George Cole, plasterer, of Alhambra, California, who has supplied a large quantity of interesting material, of which we wish it had been practicable to make a more extended use. In addition, we must thank the manufacturers concerned: Mr O. A. Malone, President of the California Stucco Co.; the Plasterers' Association of Southern California for their Standard Plastering Specification; the Portland Cement Association of Chicago for the Specification of Portland Cement Stucco; the Nephi Plaster Manufacturing Co. of Utah for the Directions for Plastering; and the United States Gypsum Co., Chicago, for the Notes on Oriental Stucco. Mr Cole has obtained permission for the inclusion of the Table of American Estimating Plastering Costs. To the Goldblatt Tool Co., of Kansas City, U.S.A., is due the illustration of their tools, which appears on Plate CIII, b.
A PREFATORY NOTE

Mr Millar has asked me to say for him that which he finds somewhat difficult to say for himself, and I think the simplest way of doing this will be to explain in the fewest possible words how and why we made each other's acquaintance, and what came of it. Mr Millar came to a lecture I gave at the Society of Arts on "Decorative Plasterwork," a subject in which I felt much interest, and one on which I had previously written and spoken. Shortly afterwards he sought me, telling me of his craftwork and of his proposed book on plastering, upon which he had then been long engaged. For this he asked for such literary help as I could give him. I found in him a craftsman who delighted in his craft, and one who, whilst yet in his prentice days, finding that, unlike most other handicrafts, plastering had no text-book or manual, set before himself the ambition of writing one. Following his father's wholesome advice (himself a plasterer and a descendant of a long line of plasterers), he set himself to "learn his trade first"; but whilst doing this he kept collecting facts and laying the foundation of the work he has at length achieved. Fortunately he had what is becoming in these versatile days the rare advantage of a rigorous apprenticeship, and bettered his instruction by learning more and working through the United Kingdom, even extending the sphere of his labour to Paris. Keeping his eyes open, he acquired a very extended knowledge of the direct ways of his trade, and taking notes of all the processes he came in contact with, he accumulated an extensive craft knowledge in the byways of it. These he extended by well-directed reading, and better still by observation and reasoning upon what he learnt; inventing new methods, trying new materials, viewing both sides of the questions of the trade, now as workman and now as master, until he thoroughly fitted himself for the task he never lost sight of, and about 1880 commenced formulating his book. And now troubles came upon him—ill-health, misfortune, domestic afflictions, and last of all a fire, which not only bereft him of house and home, but burnt his treasured manuscripts and drawings and all he had written for his book. But Mr Millar, like a true Scot, without repining at the inevitable, set to work again, rewrote his manuscript and remade his drawings. Even yet an envious fate pursued him, for after making arrangements for their publication, and after they had been for many months in the hands of his intended publisher, that gentleman failed, without having made any progress with the production of the book.

The present publisher having undertaken to bring his book before the
PREFATORY NOTE

world, Mr Millar has carefully gone through the manuscript again, altering it, adding to it, and bringing it quite up to date. As for me, I have simply revised it for the press, in fulfilment of a promise I made long ago, finding, however, no alteration needed in the technical portion. Rarely have I made anything beyond verbal alteration, and that as small as possible, leaving Mr Millar to describe in his own language the processes he is so thoroughly familiar with. For the historical résumé he had accumulated an immense amount of matter, from which I have freely drawn, supplementing it by other information learned from my own studies, and chronologically arranging both; but the value of the work is entirely due to his own labours, and I heartily congratulate him on its final achievement after such arduous struggles. I wish it all the success his perseverance deserves and its thoroughness should command, and I trust that such success may encourage other craftsmen to write their own “shop knowledge” as intelligently and intelligibly as Mr Millar has here done that of plasterwork. To his own craft it is a life’s legacy; to the younger members it will be an invaluable text-book; to the elder ones, a permanent pleasure. To my own profession, and to all others interested in so useful and so decorative a pursuit, it will prove a lasting book of constant reference.

GEO. T ROBINSON.

LONDON, 20th February 1897.
AUTHOR'S PREFACE

THAT this book may help to spread a knowledge of methods of working in plaster, a greater appreciation of and desire for its wider use and revival, is my earnest wish. Should this be realised, my reward will be in the consciousness that I have been the means of forwarding the study of my favourite art and craft.

WILLIAM MILLAR.
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CHAPTER I

PLASTERWORK GENERALLY: A GLIMPSE OF ITS HISTORY

By G. T. Robinson, F.S.A.


Plastering is one of the earliest instances of man's power of inductive reasoning, for when men built they plastered: at first, like the birds and the beavers, with mud, but they soon found out a more lasting and more comfortable method, and the earliest efforts of civilisation were directed to plastering. The inquiry into it takes us back to the dawn of social life, until its origin becomes mythic and prehistoric. Into that dim, obscure period we cannot penetrate far enough to see clearly, but the most distant glimpses we can obtain into it show us that man had very early attained almost to perfection in compounding material for plastering. In fact, so far as we yet know, some of the earliest plastering which has remained to us excels, in its scientific composition, that which we use at the present day, telling of ages of experimental attempts. The Pyramids of Egypt contain plasterwork executed at least 4,000 years ago (some antiquaries, indeed, say a much longer period), and this, where wilful violence has not disturbed it, still exists, in perfection outvying in durability the very rock it covers, where this is not protected by its shield of plaster. Dr Flinders Petrie, in his "Pyramids and Temples of Gizeh," shows us how serviceable and intelligent a co-operator with the painter, the sculptor, and the architect was the plasterer of those early days, and that to his care and skill we owe almost all we know of the history of these distant times and their art. Indeed the plasterer's very tools do yet remain to us, showing that the technical processes then were the same we now use, for there are in Dr Petrie's collection at University College, London, hand floats which in design, shape, and purpose are precisely those which we use to-day. Even our newest invention of canvas plaster was well known then, and by it were made the masks which yet preserve on the mummy cases the lineaments of their occupants.

The plaster used by the Egyptians for their finest work was derived from burnt gypsum, and was therefore exactly the same as our "plaster of Paris." Its base was of lime stucco, which, when used on partitions, was laid on reeds laced together with
PLASTERING—PLAIN AND DECORATIVE

cords, for lathing, and Mr Millar, who has examined a fragment in Dr Petrie's collection, finds it practically "three coat work," about three-quarters of an inch thick, haired, and finished just as we do now.

Plaster moulds and cast slabs exist, but there does not appear any evidence of piece moulding, nor does any evidence of the use of modelled work in plaster exist. That some process of indurating plaster was thus early known is evidenced by the plaster pavement at Tel-el-Amarna, which is elaborately painted. This floor is laid on brick; the first coat is of rough lime stucco about 1 in. thick, and the finishing coat of well-haired plaster about one-eighth inch thick, very smooth and fine, and showing evidence of trowelling, the setting out lines for the painting being formed by a struck cord before the surface was set, and the painting done on fresco. It is about 60 by 20, and formed the floor of the principal room of the harem of King Amenhotep IV, about 1,400 years before Christ, that is, between 3,000 and 4,000 years ago. Long before this, plastering of fine quality existed in Egypt, and so long as its civilisation continued it aided the comfort of the dwellings of its people and the beauty of its temples.

Nor was it merely for its beauty and comfort that plasterwork was used. Even then its sanitary value was recognised, and the directions given in Leviticus xiv. 42-48, which was probably written about 100 years before this date, show that the knowledge of its antiseptic qualities was widely spread, and the practice of it regarded as a religious duty.

Unfortunately there is no direct evidence that the adjacent Assyrian powers of Nineveh and Babylon used plasterwork. Possibly the fine clay brought down by the rivers of the Euphrates and the Tigris sufficed for all their purposes. Their records are in it; their illustrations on the sculptured walls of their palaces are in stone, their painting is glazed on their bricks, and for them there seems to have been but little need for plasterwork; nor do we find until the rise of Grecian art anything relating to our subject.

Very early in Greek architecture we find the use of plaster, and in this case a true lime stucco of most exquisite composition, thin, fine, and white. Some has been found at Mycenæ. We know that it existed in perfection in Greece about 500 years before the Christian era. With this the temples were covered externally, and internally where they were not built of marble and in some cases where they were. This fine stucco was often used as a ground on which to paint their decorative ornament, but not unfrequently left quite plain in its larger masses, and some of it remains in very fair preservation even to this day. The Temple of Apollo at Basse, built of yellow sandstone about 470 B.C., has on its columns the remains of a fine white stucco.

Pavements of thick hard plaster, stained, of various colours, were common in the Greek temples. One of these, that of the Temple of Jupiter Panhellenius at Ægina, built about 570 B.C., is described by Cockerell as existing in the early part of this century, in good condition, though the temple itself was destroyed; and I have seen at Agrigentum, plastering existing in perfect state though scarcely thicker than an egg-shell, on the sheltered parts of a temple built at least 300 years before our era, whilst the unprotected stone was weather-worn and decayed.

What care the ancient Greeks bestowed on their stucco may be inferred from Pliny's statement that in the temple at Elis about 450 B.C., Panænus, the nephew of Phidias, used for the groundwork of his picture "stucco mixed with milk and saffron, and polished with spittle rubbed on by the ball of the thumb, and," says he, "it still retains the odour of saffron." Lysippus, the first of the Greek "realists" in sculpture, was the first we hear of who took casts of the faces of living sitters about 300 B.C., so the art of plaster casting must have advanced a good deal by that time, as he made presents of copies to his friends. Afterwards we read of many sculptors who sent small plaster
(a) A Bacchic Scene in Stucco-duro, from a Vaulted Ceiling in a Roman House in the Garden of the Villa Farnesina.

(b) Stucco Decoration, Great Baths of Pompeii. (First Century A.D.)
models of their works to friends. These were, however, probably carved in the plaster rather than cast.

Whether the Greeks used stucco for modelling is a somewhat doubtful point amongst antiquarians. From certain passages in classic writers I am induced to think they did. Pausanias, who describes the temple at Stymphalus, an almost deserted and ruined city when he visited it about 130 A.D., describes the ceiling of the Temple of the Stymphalides, built about 400 B.C., as being “either of stucco or carved wood,” he could not decide which, but his very doubt would imply that stucco or wood were equally common. Now this ceiling was ornamented with panels and figures of the harpies—omens of evil, half woman and half bird, with outspread wings. He also mentions a statue of Bacchus in “coloured stucco.” Of course, these are not definite proofs of early Greek stucco modelling, but as the city of Stymphalus had decayed and become depopulated before 200 B.C., there is certainly presumptive evidence of the ancient practice of the art. Again, figures of unburnt earth are mentioned in contradistinction to those of terra-cotta, and sundry other allusions to plastic work occur which lead to the opinion that quite early in Greek art this mode of using plaster began. At any rate, we know that it was early introduced into Grecia Magna—the earliest Southern Italian colony of the Greeks; and as colonists invariably preserve the customs and traditions of their fatherland even long after they have fallen into disuse in their native home, we can have no reasonable doubt but this art was imported rather than invented by them. Thence it spread to the Etruscans of Middle Italy, a cognate people to the Southern Greeks, by whom both plain and modelled stucco was largely used.

The practical Etruscan element firstly constructed the roads and the sewers, and gave health to Rome. The Latins added to their territory until it embraced half of Europe, giving wealth to Rome, and not till the luxury and comfort thus created did the artistic element of the Greek come in, giving beauty to Rome, and the day of decorative plasterwork approached its noontide glory, making Rome the attraction of the world. The absorption of Greece as a Roman province took place B.C. 145, and the loot of it began, giving an enormous impetus to Roman art. Thousands of statues were brought to Rome, and to be deemed a connoisseur in things artistic or a patron of the arts became the fashionable ambition. But it was not until the century just preceding the Christian era that it became especially noteworthy. Of course, there is hardly anything left to us of the very early plasterwork of Rome. The constant search for some new thing was inimical to the old. Old structures were pulled down to make way for new, which in their turn gave way to newer, and until the age of Augustus we have but little of the early work left. Strabo, who visited Rome about this time, complains of the destruction caused by “the numerous fires, and continued pulling down of houses rendered necessary, for even pulling down and rebuilding in order to gratify the taste is but voluntary ruin”; and Augustus, who boasted that “he found Rome of brick and left it of marble,” in replacing the brick with marble destroyed the plasterwork. How that plasterwork was wrought we shall learn more from Vitruvius, who wrote his book on architecture about 16 B.C., and dedicated it to the emperor, “in order to explain the rules and limits of Art as a standard by which to test the merits of the buildings he had erected or might erect.”

Now Vitruvius was a man who had travelled and seen much. He was with Julius Caesar as a military engineer in his African campaign in 46 B.C., or ten years after Caesar’s invasion of Britain. Afterwards he became a designer of military engines, what we should call head of the Ordnance Department, and also a civil engineer, persuading himself that he had a pretty taste in architecture, just as though he were an R.E. of to-day. Thus he had a practical and also an artistic training, and here is what he says on matters connected with plasterwork in Book VII, Chapter II.
On tempering lime for stucco: "This requires that the lime should be of the best quality, and tempered a long time before it is wanted for use; so that if any of it be not burnt enough, the length of time employed in slaking it may bring the whole mass to the same consistency." He then advises it to be chopped with iron hatchets, adding that "if the iron exhibits a glutinous substance adhering to it, it indicates the richness of the lime and the thorough slaking of it." For cradling out and for ceiling joists he recommends "the wood to be of cypress, olive, heart of oak, box, and juniper," as neither are liable to "rot or shrink." For lathing he specifies "Greek reeds bruised and tied with cords made from Spanish broom," or if these are not procurable, "marsh reeds tied with cords." On these a coat of lime and sand is laid, and an additional coat of sand is laid on to it. As it sets it is then polished with chalk or marble. This for ceilings. For plaster on walls he says: "The first coat on the walls is to be laid on as roughly as possible, and while drying, the sand coat spread thereon. When this work has dried, a second and a third coat is laid on. The sounder the sand coat is, the more durable the work will be. The coat of marble dust then follows, and this is to be so prepared that when used it does not stick to the trowel. Whilst the stucco is drying, another thin coat is to be laid on; this is to be well worked and rubbed, and then still another, finer than the last. Thus with three sand coats and the same number of marble dust coats the walls will be solid and not liable to crack." "The wall that is well covered with plaster and stucco, when well polished, not only shines, but reflects to the spectators the images falling on it. The plasterers of the Greeks not only make their stucco-work hard by adhering to these directions, but when the plaster is mixed, cause it to be beaten with wooden staves by a great number of men, and use it after this preparation. Hence some persons cutting slabs of plaster from ancient walls use them for tables and mirrors" (Chapter III).

You will see by these remarks the great care taken through every process, and how guarded the watchfulness over the selection of materials, and you will also note the retrospectiveness of Vitruvius's observation, how he felt that the work done before the frantic haste of his own time was the better; very much as we find now. Time is an ingredient in all good work, and its substitute difficult to find.

There are other "tips" contained in Chapter III which are worth extraction, as, for instance, his instructions on how to plaster damp walls. In such case he primarily suggests a cavity wall, with ventilation to ensure a thorough draught, and then plastering it with "potsherd mortar," or carefully covering the rough plaster with pitch, which is then to be "lime whited over," to ensure "the second coat of pounded potsherds adhering to it," when it may be finished as already described. Further, he refers to modelled plasterwork, which he says, "ought to be used with a regard to propriety," and gives certain hints for its appropriate use. Speaking of pavements "used in the Grecian winter rooms, which are not only economical but useful," he advises "the earth to be excavated about 2 ft. and a foundation of potsherds well rammed in," and then a "composition of pounded coals, lime, sand, and ashes is mixed up and spread thereover, ½ ft. in thickness, perfectly smooth and level. The surface then being rubbed with stone, it has the appearance of a black surface," "and the people, though barefoot, do not suffer from cold on this sort of pavement." Now all this bespeaks not only theoretical knowledge, but practical observation and experience, and was written nearly 2,000 years ago, from which you can surmise how far advanced practical plastering had then become. This written evidence is almost all we have of the work of Vitruvius's own time, for even of the time of Augustus hardly anything remains to us, as the great fire of Nero utterly destroyed the greater part of the city in the year A.D. 64, and almost the only authenticated piece of plasterwork done before or during his reign is the Tabula Iliaca, a bas-relief of the siege of Troy, still preserved in the Capitol Museum at Rome.
That this was modelled by Greek artists is proved by the fact that its inscriptions are all in Greek language, and by some it is considered to be of very much greater antiquity.

Plate III, a, shows a good example of the character of modelled stucco which prevailed about this period. This is a small portion of a large surface of plaster which was on a vault cut through in making the excavations for the canalisation of the Tiber at Rome. There were many compartments of various sizes, and the modelling is of an exquisite delicacy. Casts of these you can see in the Victoria and Albert Museum at Kensington, and some of the smaller cartouches are almost as fine as cameos. In the same valuable museum you will find a series of arched tiles of very bright red, on which small subjects have been modelled in stucco, forming a very pleasing and suggestive combination. These are from an Italo-Greek tomb, and of the early part of the first century. Of about the same date is the example given on Plates II and IV, b, from the vaulted ceiling of a tomb in the Via Latina at Rome, the walls of which are covered with some very delicately modelled arabesque ornament. Both these are evidently the work of Greek artists. The more Roman method is shown in Plate III, b, from the Great Baths of Pompeii, which must have been executed before the year 79 A.D., when the city was buried by the ashes thrown up in an eruption of Vesuvius, and with it perished the natural philosopher and historian, Pliny the elder, who tells us that “no builder should employ lime which had not been slaked at least three years,” “and that the Greeks used to grind their lime very fine,” and that they beat it with pestles of wood. The very eruption which destroyed Pompeii preserved it to us, for the light scoria which fell upon it covered up the most delicate work, and it is now a museum of decorative plasterwork and decorative art generally, for there stucco treatments abound. Not only did it decorate, but it preserved the fragile and inflammable structures by its fireproof coating. The ordinary plaster was evidently prepared according to the prescription of Vitruvius, the sand coating or arenatum he describes being here formed of decomposed lava or volcanic sand, the final coat laid on being very thin, less than one-sixteenth inch in the best work. When colour was used it was chiefly fresco, done whilst the plaster was moist. Sometimes the colour was even mixed with the plaster, and every variety of plastering skill was called into service—scagliola, gesso, sgraffitto, impressed and relieved work—for Pompeii was evidently a city of plasterwork; but I am afraid the “jerry-builder” was born before much of Pompeii was built, and then, as now, he relied upon the plasterer to cover up his iniquities.

There was more solid construction at Herculaneum, which was destroyed by the same volcanic eruption, but there, unfortunately, lava, hot and semi-fluid, was the overwhelming substance, and thus the more delicate fabrics perished. Of course, much of the work thus destroyed was of earlier a date than that of the catastrophe, though unfortunately we have no record of its technical history; as far, however, as classic times are concerned, plasterwork became an artistic aid, reflecting the general tendency of the times. During Constantine’s reign, on his transfer of the capital of the Empire to Constantinople, what little building was then done resulted in that Byzantine style of stiff, formal, plastic art which, though of archaeological value, presents nothing pertinent to the present subject. Julian, “the Apostate,” reverted from Christianity and became a pagan about 380 A.D. He had amongst his household gods a statue of Apollo, under the outstretched hand of which he daily bowed his head. Now this statue was of plaster (gypsum), but it was most probably scultpured in this material, rather than cast, as we find no traces of any replica, nor does any word equivalent to piece moulding occur in the language of this time. Henceforward very little was done throughout the Empire until a new Rome was founded, and for more than 1,000 years all relics of ornamental plasterwork were buried and wellnigh forgotten.
Materially, as a craft, it was debased; the old care in preparation had disappeared, and the drudgery of careless service replaced intelligent assistance to architecture and sculpture. As an art it was dead, buried under the ruins of the buildings it had adorned, and there we must leave it until we come to consider its resurrection.

There is, however, little doubt but that this Eastern removal of the Empire spread the art into the Far East, and it is probable that the over-enriched plasterwork of India, Persia, and other parts of the Indian Empires which are in question (a question we cannot yet enter fully into, owing to the very little knowledge we possess of their archaeology) is largely due to the dispersal thus effected. The Arabian and Moorish results of this were brought back to the western world by the Moors in the early part of the thirteenth century, to whom we owe the splendid plasterwork of the Alhambra (described in Chapter II).

During the Middle Ages plastering existed only as a craft, and its highest function was to prepare a surface to be painted on. Sometimes it was used as an external protection from the weather, but rarely was it employed for direct adornment. Sometimes small ornaments were carved in plaster of Paris, but it played no important part in decorative art, excepting, perhaps, as gesso, though this belonged rather to the painter than the plasterer; nor was it until the commencement of the Renaissance in Italy that it showed any symptoms of revival.

With the commencement of the fifteenth century, old learning and old arts began to be studied, literature leading the way, as it always does, and their study was enormously facilitated by the discovery of the art of printing, and the consequent multiplication of the copies of the lore heretofore locked up in old manuscripts. We can glean somewhat of what was the state of the plaster-worker's art at that time by glancing at some of the old recipes which have been handed down to us in the notebooks of the artists of that dawning time. Amongst the foremost of them was Cennino Cennini, a painter born about 1360, a pupil for twelve years of Agnoto Gaddi, of Florence (who died in 1378); towards the end of his long life Cennini wrote a book compiled from his notes of all recipes and directions for the conduct of all artistic processes known to him, and this book he finished on 31st July 1437—unfortunately dating it from "the debtors' prison at Florence." He also gives us directions "how to take casts from the face of man or woman," which is much the same as our modern process, and was doubtless that of Lysippus; but he quaintly remarks that "when you take the cast of a person of high rank such as a lord, a king, a pope, or an emperor, you should stir rose water into the plaster, but for other persons it is sufficient to use cold water from fountains, rivers, or wells." In taking a cast from this mould he advises the addition of a little pounded brick. In this there is as yet no reference to piece moulding, and it is very doubtful if these processes were then known. The nearest approach to such a suggestion is contained in the instructions "how to take a cast of the whole figure of a man." In such case you must let the person stand upright in a box, joined together lengthwise, which will reach as high as the chin. Let a thin copperplate be placed against the shoulders, beginning at the ear and reaching to the bottom of the case, and bind it with a cord to the naked person, so as not to injure or press into the flesh. Cut four copperplates like this and join them together like the edges of the case. Then grease the naked person, put him directly into the case, mix a large quantity of plaster with cold water, and take care to have an assistant with you; and while you pour plaster into the case in the front of the man, let the assistant fill the back part at the same time, so that it may be filled to the throat. Let the plaster rest until it be quite set and dry, then open the case, separate the edges of the case from the copper bands with chisels, and open it as you would a nut. Withdraw the naked person very gently, wash him quickly with clean water, for his flesh will be red as a rose. With regard to the face, you may
(a) Roman Stucco-duro Panel, now in the Victoria and Albert Museum.

(b) Stucco Vault, Tomb in the Via Latina, Rome.
(e) and (f) Early French Renaissance stucco decoration, from the Palace at Fontainebleau.
do that another time.” I do not expect a chance to cast from a living face would occur after such a process.

This may, I think, be taken as a merely theoretic instruction, showing more desire than facility, but is sufficient to show that piece moulding was not known to Cennini, if indeed practised by anyone at his time. In another recipe he gravely bids anyone wanting to take a cast of himself to spread a bed of wax about 9 in. deep on the dining-table and then lie down upon it, taking care not to disturb the mould when he gets up. From this mould he takes a plaster cast, and then carefully lies down on his other side and completes the mould!! Comment is unnecessary, and it is only from their negative value that these casting recipes of Cennini are worth remark, showing that the desire for such a process was greater than its achievement. The real utility of his recipes, in a positive direction, are those in which he treats of gesso and other painter’s usage of the plasterer’s material. Of lime stucco he says nothing, and all his remarks relate to plaster obtained from gypsum found at Bologna, or Volterra, whence comes that fine white translucent alabaster of which small figures, vases, and models of buildings are made to this day. A more practical recipe, and one relating to stucco, is found in the Marciana MS., which is preserved in the Library of St Mark at Venice, and was written about 1503.

This is headed as “tried by Master Jacopo de Monte St Savino, the Sculptor.” “Admirable stucco for making and modelling figures and for colouring them, and it resists water. Take of finely pounded travertine 5 lbs., and if you would have it finer and more delicate, take fine marble instead of travertine, and 2 lbs. of slaked lime, and stir and beat them well together like a fine paste, and execute what works you will with it, either by forming it with your hands, or in moulds, and dry it in the shade. And if you wish to colour it white, when the work is dry enough to be tolerably firm, but not quite dry, grind white lead with water in the same way as colours are ground, and the flour of sifted lime, and apply it with a brush, and it will be very white and will effectually resist water. And if you wish to colour it with other colours, let the work dry perfectly and then colour it; but these colours will not resist water like the white. If, then, you wish the colours to resist water, apply on the work the above-mentioned composition and paint with oil-colours.”

This brings down the notice of our subject to the period of Raphael and the great revival of stuccowork, before considering which we must first cast a backward glance at some evidences of pre-Raphaelite use of it. We have actual evidence of its use by Donatello, who practised it, and it is on record that he used pounded brick and glue with his stucco, and from this many of his stucchi pass as terra-cottas. No doubt his object was to avoid the risk and distortion by baking his clay model. There is a group of the “Entombment” over the sacristy door in the Church of St Antonio at Padua, which was formerly considered to be in terra-cotta, but is now proved to be of this brick-dust stucco. There are medallions of the Four Evangelists in true stucco in the sacristy of San Lorenzo at Florence. In the Victoria and Albert Museum there is a large stucco plaque with a low relief of the Virgin and Child, and many others are known. Now, Donatello died in 1466, proving that in the first half of the fifteenth century stucco was making progress. In the same museum there is a very fine relief of the Virgin and Child surrounded by angels, exhibiting very marked Gothic features in its accessories. This has the date 1430 attributed to it. There, too, you will find many busts of very excellent modelling and great technical skill, all done with the grey stucco. Indeed, there is plenty of evidence that with the advance of the revival of all the arts, stucco was yearning to take its wonted place beside them. Bramante, the chief architect of his day, was uncle to Raphael, and inspired his nephew with an enthusiastic love for architecture and archaeological research. He, Vasari tells us,
invented "a mixture of lime" with which to decorate the exterior of his houses with festoons and friezes of foliage, and one of his last works was the building, in 1513, of Raphael's own house, which was decorated with stucco made according to the recipe from the Marciana MS., Jacopo Sansovino being one of the stucco modellers there employed. Bramante died in 1514.

Other experimenters were at work in other parts of Italy, for the endeavour to revive the lost art of modelling in stucco was becoming general, and in Bologna Alfonso Lombardi had achieved a pre-eminent success in the renewed art. Not only did he model many portrait busts in stucco, and amongst them that of Emperor Charles V, which he did whilst the emperor was sitting to Titian for his portrait, but, aspiring to greater things, he executed a large group of the death of the Virgin in a very hard stucco, which was so admired by Michelangelo, himself a stucco-worker, that on seeing it he exclaimed, "If this stucco could only become marble, it would be bad for the antique statues." Lombardi modelled many other statues in Bologna which were larger than life, all executed in the grey lime stucco, and Cicognara styles his figure of Hercules as the finest colossal statue of the century. About the same time Andrea Verrochio really founded the art of piece moulding in Venice, and brought the casting of plaster to such a pitch of perfection that reproductions of ancient and modern works were easily obtainable, and thus formative art secured an impulse the movement of which still continues.

In 1509 Raphael came to Rome, and was in 1515 appointed by Leo X Director and Inspector of the search for the buried remains of Ancient Rome; and for this purpose determined, in 1518, to unearth the remains of the Golden House of Nero, then supposed to be the Baths of Titus, and which for 500 years had been buried under their own decay. Here was a great discovery and surprise. Not only were there found painted chambers, fostering the new growth of "grotesque" ornamentation, so-called from its abounding in the newly unearthed grottoes, but, more cherished than all else, abundance of modelled stucco decorations, which had survived still better their long entombment, astonishing Raphael and his attendant, Giovanni da Udine, by their hardness and brilliant whiteness. This discovery was most opportune, for the decoration of the Loggia of the Vatican (Plate XLV) was just then under consideration, and Udine set himself to work especially to find out the process and the manipulation. He says he made many experiments and reinvented the process; but as Raphael, who was not a Latin scholar, had just then had a special translation of Vitruvius into Italian made for his own study, I am disposed to think this also was exhumed about the same time. Be this as it may, the newly found stucco-duro became at once the rage. By his last testament Raphael left the completion of his decorative works to Giulio Romano and Gio. Francesco Penni, who, for the stucco portion of these, allied themselves with Giovanni da Udine, its reinventor, and continued the work at the Villa Madama, then being built for Cardinal de Medici, a cousin of Leo X, who succeeded him as Pope in 1523.

You can form an idea of what the modelled stucco here was (Plate LIX, a) by examining a very beautiful model of it which you will see in the Victoria and Albert Museum; but of the vastness of the villa and the richness of its surroundings it would, in a short notice, be impossible to give you an impression. Unfortunately it was partially ruined before it was completed, and suffered from the barbarities of the soldiers during the sack of Rome by the French in 1527. That drove Udine to Florence, where he was much employed by Cosimo de Medici and Michelangelo, but in his old age he returned to Rome, working to the last on the Loggia, on which, as a stucco-worker, he began, and where he died in 1564. He is buried in the Pantheon, close by the tomb of his loved master, Raphael, and, as says his
biographer Vasari, “we may believe they are now met together in eternal blessedness.”

Giulio Romano went in 1524 to Mantua to carry out work (Plate XLVI) for Duke Frederic Gonzaga, which Raphael had, before his death, promised to undertake, and there raised up an important school of stucco-workers, who we shall see influenced the whole of Western Europe. Pierino del Vaga, painter and sculptor, who was one of Raphael’s staff of stucco-workers, having begun life as a “hawk boy,” went to Genoa, where he founded a great school under the patronage of the Doira family, but returned to Rome when peace was restored, and worked on the Scala Regia and many of the principal rooms in the Vatican. Jacopo Sansovino, one of the first essayists of the new-found art, went to Venice, where he fostered it, making many statues and other large works, training up a large school there, and in it his most celebrated pupil, Alessandro Vittorio—a man to whom nothing was impossible. He was, in fact, too facile.

Some of his work in the Palazzo d’Albrizzi in Venice are evidences of his ingenious and daring skill. Of a less hazardous and more restrained character is the vaulted ceiling, shown on Plate VI, a, from the Ducal Palace at Venice, executed about 1570, but each example of his skill is wonderfully varied, and in all phases of decorative art he was an exuberant master.

The school which Udine had founded at Florence produced great results: Vasari, the biographer of so many artists, went there to work on the Pitti Palace in 1555. There are many grand ceilings in this same palace, with marvellous stuccowork designed either by Vasari or the architect Ammanato, and executed by the school Giovanni da Udine established. But the most interesting example of external work, as demonstrating the perfect composition of the material and its great durability, is shown in the present state of the pillars of the courtyard of the Palazzo Vecchio there. These were done in 1566 under Vasari’s direction, and as the names of good workmen are as worthy of record as are those of good designers, I, in praise of their honest and perfect workmanship, give them here. They are—Pietro Paulo Minocci, who afterwards settled in Parma, where he did much good work, of which some still exists; Ricciavelli da Volterra, who afterwards joined himself to Pierino del Vaga at Genoa and in Rome, and ultimately came to England; Sebastiano Tadda, whose relative Francesco was a noted worker in porphyry; and Leonardo Marignalli, of whom I have not been able to trace anything further. Their monument is in their work, which you will find on plaster in Florence, and which, after 500 years, hands down the record of their craft almost as sound as the day they did it. With what they did it demands particular attention, and by a fortunate accident we have in a notebook still preserved in the Bodleian Library at Oxford, kept by Pirro Ligorio, a joint architect and coadjutor with Michelangelo for St Peter’s at Rome, and which contains the exact recipe written just about this time: “Take,” says he, “3 parts of pounded Parian marble, easily got from among the ruins in Rome and from broken statues; add 1 part of lime which is to be perfectly slaked by letting it lie in a heap covered with pozzuolana and exposed to the sun and rain for at least a year. The lime is to be made from pure white marble, not from travertine, or any other stone which is full of holes and yellowish in tint; mix a day before with sufficient water on a tile floor. The first coat to be mixed with coarsely pounded and the finishing coat with finely pounded white marble.”

Now let us examine scientifically the rationale of all this. Firstly, the lime is pure carbonate of lime; it was naturally burnt with wood fuel, and consequently was free from all those sulphurous and other deleterious compounds inseparable from coal firing. The air-slaking of it prevented the too great absorption of carbonic acid which is obtained by the free use of water, and which rather retards than assists the setting of the stucco. Then the pulverisation of the unburnt mortar introduces a fine crystalline
substance into this identical chemical composition when as yet amorphous in structure. These minute crystals induce the formation of a general crystalline structure until the final and most permanent form of all mineral substance is achieved. Thus the wisdom of the ancients achieved that which is only just dawning on the modern world of science, and the as yet but partially understood question, why lime sets, is full of thought seed for scientific inquiry—seed for us to propagate and so to carry still further the lore and practice of the plasterer, and to cultivate it into fruitful knowledge. You will have remarked the absence of hair in any of these old formulæ; the rapidly induced crystallisation seems to have rendered this unnecessary, for the introduction of any animal substance into plaster is an unscientific error which these old plasterers avoided.

After this digression which these Florentine plasterers have brought about, let us return to Mantua, where we left Giulio Romano in 1524. He there did works in painting and stucco (Plate XLVI) which were renowned throughout Europe, and his school of stucco-workers achieved such a reputation that Francis I wrote to Duke Frederic Gonzaga, praying him to send him some young man able both as a painter and a stucco-worker to assist him in decorating his new palace at Fontainebleau. This was in 1536. After conference with Giulio Romano, the duke sent him Francesco Primaticcio, the son of a wealthy Bolognese merchant, whom a love of art had seduced from the ways of commerce. He gathered round him a large staff of modellers, of which he became superintendent, and together they, according to Vasari, "did the first stucchi ever executed in France." If the pure white stucco is meant, this was true, but there was in France a considerable attempt to model in the ordinary plaster before this, and many of the fine Gothic-hooded chimney-pieces in the chateaux are modelled in plaster on wooden cradling. At the Gros Horloge at Rouen there exists some well-modelled plaster, and there is evidence of the existence of a school of ornamental plaster workers in the valley of the Seine some years before Primaticcio's advent. At Fontainebleau, however, he did most noble figure work, much of it being considerably over life-size, such as you see in Plates V and VII, a; long graceful figures, which formed the canon for the sculptors of the French school of Goujon, Pilon, and their followers.

It is, of course, here impracticable to trace the varied course of plastering in France, but a few typical examples will enable the characteristic forms of the decoration to be grasped. Plates XLVIII and XLIX, in Chapter III, are of the Louis XIV style, and the usual enriched laurel leaf bands are shown in detail in Figs. 1 and 2. The Louis XV Rococo is represented by Figs. 3 and 4, from Versailles; the more restrained feeling of the Louis XVI appears in Plates VII, h, VIII, and IX, while the classic Empire is exemplified in Plate X.

Fig. 1.—Enriched Moulding, Gallery of Apollo, The Louvre, Paris. (Louis XIV Style.)
(a) **Stucco Ceiling, the Ducal Palace, Venice.** (A. Vittoria, 1570.)

(b) **Nonsuch Palace, Surrey.** From the engraving by A. Hoefnagel.
(a) STUCCO DECORATION, PALACE OF FONTAINEBLEAU.  
(Primaticcio, 1536.)

(b) LOUIS XVI CEILING, DIPLOMATIC SALON, THE ADMIRALTY, PARIS.
Wall Decoration, Hotel de Mme. de Boissae, Bordeaux.
(Louis XVI Style.)
Of course, if Francis I would thus emulate the arts of Italy in their then most fashionable phase, his great rival, our Henry VIII, could not be outdone by him. Already Cardinal Wolsey was busy fostering the Renaissance in England, and Henry sent, through his ambassadors, for those who could outvie the Italians in the service of the French king. By these means he collected many artists of renown. Amongst these were Luca and Bartholomew Penni, brothers of that Giovanni Francesco Penni whom Raphael left fellow-executor with Giulio Romano. Luca, who preferred painting to plastering, did not stay long here, but deserted the king and went to join Primaticcio in France, for plasterers who could model in stucco were the subject of much diplomatic correspondence in those days. Bartholomew was here at any rate until 1539, as records of payment to him are recorded in that year. Gerome of Trevisa, who, Vasari tells us, “made many ingenious devices and one honourable house for the king’s use,” came, and was so much admired by King Henry VIII that he gave him a stipend of 400 crowns a year. He was killed at the siege of Boulogne in 1544. Nicholas of Modena left Primaticcio, from whom he was receiving 20 livres a month, and came to help us. There was also Toto del Nunziato, whom the old account books call Anthony Toto and who was a wax modeller at Florence, whence “sundry merchants carried him off to England, where he made all manner of works for the king, and particularly the principal palace.” Now this principal palace was that of Nonsuch (Plate VI, δ), which was so-called because it had no equal; it was built at Cheam, between Sutton and Epsom, but unfortunately not a vestige of it now exists. It was a very large and sumptuous pile, containing two quadrangles, and built in the half-timbered style, then prevalent in England; it was never quite finished before the king’s death, but existed for more than a century, sufficiently long for record of plasterers’ work to have been taken by those who admired it.

The Duke of Saxe-Weimar, who saw it in 1613, tells us that “the labours of Hercules were set forth on the king’s side, the queen’s side exhibiting all kinds of heathen stories with naked female figures”; and John Evelyn, who saw it in 1665, says: “I took an exact view of the plaster statues and bas-relievos inserted between the puncheons of the outside walls of the court, which must have been the work of some...
celebrated Italian. I much admired how it had lasted so well and entire from the
time of Henry VIII, exposed as they are to the air, and pity it is they are not taken
out and placed in some dry place—a gallery would much become them. They are

![Figure 3](image)

**Fig. 3.—Ceiling, The Medal Saloon, Versailles. (Louis XV Style.)**

mezzo-reliefs the size of life. The story is of heathen gods, emblems, and compart­
ments.” You may form some idea of them by turning to the illustration of Primaticcio’s
work at Fontainebleau. Unfortunately we had not the white marble here to mix with
the lime, so we could not obtain the crystalline quality that preserved the old Italian
stucco. We learn from a manuscript note by P. le Neve that “it was done with rye
dough very costly.” This would dry very slowly and give toughness to the stucco
Fig. 4.—Versailles, Ceiling of the Queen's Bedroom.
whilst being modelled. The writer tried it and found it pleasant to work with, and it
dries a beautiful old ivory colour. Having thus brought the classic art of modelling
in stucco into the English Renaissance, it will be well to pause awhile and take a brief
backward glance at what English plastering was before the advent of this new fashion.

What the state of plaster working was before the Romans, under Julius Caesar,
came, we have no knowledge. We know that the ancient Britons used houses built of
hurdles plastered inside and out with mud—the old “wattle and daub,” in fact, much
of which is still done in the West of England. Of course the Romans brought their
arts with them, and during their 400 years’ stay introduced the arts and luxuries of the
capital, as the numerous ruins of their buildings show. The Anglo-Saxons plastered
many of their buildings inside and out, as the illumination in their MSS., and some
evidences of actual work, including perhaps the plasterwork on Anglo-Saxon masonry
at the Church of Avebury in Wilts, demonstrate. The Normans were a highly skilled
and civilised people, but we have no written records of how they plastered; that they
did so is proved by existing pictures showing painted walls of great richness, which
could only be done on a finely wrought field. All this was, of course, the ordinary
lime stucco, for the use of “plaster of Paris” or calcined gypsum was unknown in this
country until the time of Henry II, who, on a visit to Paris in 1254, so admired the
superior whiteness and fineness of the walls that he introduced it here. But plaster
or lime stucco was as yet in England only considered as a structural necessity and
not as a decorative adjunct. That its fireproof qualities and sanitary influence
were known is shown by the edict of King John, who, after the great fire which
destroyed the timber-built London Bridge in 1212, issued an edict that “all shops
on the Thames should be plastered and whitewashed within and without. All
houses which till now are covered with reed or rush, let them be plastered within eight
days, and let those which shall not be plastered within that time be demolished by the
aldermen and lawful men of the venue (overseers). And let all houses in which brewing
or baking is done be plastered within and without, that they may be safe from fire.”

At Clare, in Suffolk, is an old house (Plate XII, a), with some very fine plasterwork
modelled in relief, with figures and scroll-work, formerly stated to be fifteenth century,
but undoubtedly much later. In 1519, Hormann, in his “Vulgaria,” says: “Some
men will have their walls plastered, some pargeted and white limed, some rough cast,
some pricked, some wrought with plaster of Paris.” In fact, the plasterer’s and
pargeter’s art and craft had now become of such importance that it was formed into
a separate Guild and Company in London in 1501 by Henry VII, who granted them
“the right to search and try and make and exercise due search as well, in, upon, and
of all manner of stuff, touching and concerning the art and mystery of pargeters,
commonly called plaisterers, and upon all work and workmen in the same art.”

However, in the Middle Ages occasional use was made of plaster beyond the plain
coating of walls, of which mediæval builders were very fond. This may be seen in
the two vaults at Chester Cathedral (Plate XI). Bishop West’s Chapel at Ely has a
deep-ribbed ceiling slightly Renaissance in feeling, elaborately mitred, without bosses
(Plate XI, c).

It is noteworthy that here pargeters are “commonly called plaisterers,” but in
earlier times plasterers were commonly called pargeters. Parging was then plastering,
and I am inclined to think that when the larger surfaces of the walls admitted the use
of the “rule” and the “float,” the distinction began. We still parge a chimney-flue,

1 This charter, having been frequently renewed with varying powers, still exists, but the only
trade function the Company now performs is the granting of £25 annually to the successful
candidates in the examinations conducted by the City and Guilds of London for Technical
Examination.
EMPIRE DECORATION IN THE SALON, HOTEL DE GRAMMONT, PARIS.
(a) House at Clare, Suffolk. (Mid-Seventeenth Century.)
(Details on Plate XCI)

(b) Part of Frieze, Presence Chamber, Hardwick Hall.
(a) Stucco-duro Frieze, Ruins of Old Hardwick Hall.

(b) Part of Frieze, Presence Chamber, Hardwick Hall.
Fig. 5.—The Drawing-room, Westwood Hall, Yorkshire.
in which neither rule nor float can be used, but only the trowel. In the old timber-framed houses the want of truth in the carpentry compelled the plaster to be laid with the trowel, hence we say they are pargeted, not plastered, and the modelling which so frequently enriched them was done with the trowel, and still bears the name of pargetry. We have thus seen how the taste of the time was prepared for the introduction of the plasterers who worked in the Italian mode introduced by Henry VIII. These kept continually coming until the death of their royal master, and having found the way here remained for many years after. Thus we have a De Rudolfi here in 1550, who was most probably a relative of Bartholomew Rudolfi, who worked in Venice and Padua, where he married the youngest daughter of Tiziano Minio, also a stucco-worker. She likewise prosecuted the art, and is the only female stucco-worker I have met with any account of. Rudolfi and his wife took service with Sigismund II, King of Poland, leaving their only (?) son here. Leonardo Ricciarelli, one of those who worked at the Palazzo Vecchio at Florence, came here in 1570, and Luca Romano, who had worked with Primaticcio at Fontainebleau, came here after Primaticcio's death, and I have found his name as employed in England in 1586.

Fig. 5A.—The Drawing-room, Winton House, Haddingtonshire. (J. Baillie del.)
(a) The Drawing-room, Wakehurst Place, Sussex.

(b) Baildon Hall, Yorkshire.

(c) Lees Hall, Thornhill, Yorkshire.
(a) Bishop King's House, Oxford.

(b) St Peter's Hospital, Bristol.
(a) and (b)
Panels, Speke Hall, Lancashire.

(c) Hawksworth Hall, Yorkshire.
Two Ceilings, Moray House, Canongate, Edinburgh.
(a) The Drawing-room, Glamis Castle, Scotland.

(b) The Staircase, Holyrood Palace, Edinburgh.
(a) SPARROW'S HOUSE, IPSWICH.

(b) 135 FISHPOOL STREET, ST ALBANS.
(a) Lees Court, Kent. Now destroyed.

(b) The Hall, Coleshill, Berkshire.
(a) The Staircase Lantern.

(δ) Ceiling of a Small Room.
Ashburnham House, Westminster.
(a) Botolph Lane, City of London. Now Demolished.

(b) Cumberland House, Pall Mall. Now Demolished. (M. Brettingham.)
(a) St Clement Danes, Strand, London.

(b) St Mildred, Bread Street, London.
The English plasterers quickly learned the operative lessons these Italians taught, though they never learned the skill of their arts of design; nor indeed was this necessary. The exigencies of English houses were different from those of Italian palaces, so they fitted their work for its purpose—that of covering a flat ceiling in a room of moderate height with a suitable plastered decoration. That this lesson was early learned is shown by some notes we have of the career of Charles Williams, the first English plasterer of whom we have any record as a practiser of the new art. He wrote in 1547 to Sir John Thynne, then engaged in building his house at Longleat, in Wiltshire, offering his services in supplying internal decorations upon “the Italian fashion”; and among the papers at Longleat are two letters from Sir William Cavendish and his wife (Bess of Hardwick), begging from Sir John the use of this “cunning playsterer,” to do work for them at Hardwick Hall. There is but little doubt the fragment of the frieze (Plate XIII, a) still remaining on the wall of the old house is his handiwork. If so, the “Italian fashion” he wrote of is more applicable to the handicraft than the design, and it is not improbable that the great frieze representing a stag hunt which yet adorns the Presence Chamber (Plates XII, b, XIII, b, LII, a, b, c) was executed by those who had studied under his direction. During the short and troubled reigns of Edward VI and of Queen Mary, when England was in the throes of the internecine strife of politics and religion, but little decorative work was done, nor until the long and more prosperous time of Queen Elizabeth did the English plasterer have the opportunity of showing his prowess.

He had not attempted to vie with the more artistically educated foreigners, but had evolved for himself an especial decoration of his own, based in some degree on the familiar groining which had strengthened and ornamented the stone roofs with which he was familiar. The ceiling of the bay window in the Banqueting Hall, Hampton Court, may be said to have been the foundation of the radiating pendentive system of ceiling which followed and developed in many ways during the next century. Geometric rather than freehand designs were his first essays. These at first consisted of interlacing squares, having radial ribs from their intersecting points, and as he grew bolder in his work these radial ribs became arched, and from their junction depended a pendant more or less ornamental, such as you may see copied, in the Victoria and Albert Museum, from a ceiling at Sizergh Hall, Westmorland, where you will find it in conjunction with fine Renaissance inlaid woodwork. These ceilings sometimes had colour and gilding, and Edmund Spenser sings in his “Visions of Bellay” of halls where

“Gold was the parget, and the ceiling bright
Did shine all scaly with great plates of gold,”

and the plasterer and the painter were united, not only in their work, but in their person—so much so, indeed, that the elder Company of the Painter-stainers was compelled to appeal to the Parliament in the latter years of the queen’s reign to restrain the plasterers from using oil-colours, and they were ultimately, after considerable discussion during two Parliaments, confined to the use of distemper painting only. But it was not the encroachment of the Plasterers’ Company by painting alone which depleted the trade of the painter-stainers. The purity of the white stucco then introduced, and the decline of the mediaeval sense of colour in favour of this white homogeneous purity, had its effect also, and this was enforced by the richness of the plastering introduced.

Generally, the regular early Renaissance ceiling (Plates XIV-XIX, Figs. 6-10) had close-set interlacing ribs forming geometrical patterns, the panels or angles often set with birds, animals, floral or abstract devices. Often the rib itself holds a little
Fig. 6.—The Old Library, Bramshill, Hants.

Fig. 7.—King James’s Bedroom, Knole, Kent.
Fig. 8.—Plaster Frieze in the Great Chamber, Aston Hall, Birmingham.

Fig. 9.—The Great Chamber, Aston Hall, Birmingham. (W. Niven del.)
Fig. 10.—Examples of Typical Elizabethan and Jacobean Plaster Mouldings. (G. E. Bankart del.)
delicately modelled band of ornament, as in Plates XVI and XVIII, a. Pendants hang sometimes from salient points, as in Plate XVII, c. The whole effect is rich and lively, but it is not often that we find modelled floral ornament of the quality seen in the panels at Speke (Plates XVII, a and b, LXXXVI, a, LXXXVII, c). The later strapwork and larger panels of Jacobean times are seen at Aston Hall (Fig. 9), and typical early Renaissance mouldings in Fig. 10. The geometric arrangement was not always confined to straight lines. Curvilinear, interlacing, and knotted forms were introduced, as at Wakehurst (Plate XV, a). As the art grew, even the geometric basis was abandoned, and a free adaptation of scroll-work of very large dimension was adopted (Plate XVIII, a). The ceiling was not sufficient for the plasterer, but his art encroached on the walls, and a deep frieze, filled with relief ornament of figure work and emblems, extended itself between the wainscot and the main cornice, as at Aston Hall (Fig. 8) and Crewe Hall (now demolished), where some of the friezes were nearly 6 ft. deep, and the Hardwick Hall example, before quoted, is 11 ft. deep.

External walls were sometimes covered with pargetry, like the cottage at St Albans (Plate XXI, b); and the string-courses, cornices, and other external architectural features were covered with plaster—in fact, there is hardly a single county in England or Wales which does not yet retain the evidence of the artistic powers of the plasterer. Some places, notably the older towns, once commercial centres but now somewhat decayed in wealth, have by that absence of growth preserved much of their wonted glory for us, such as Yarmouth, which abounds with rich plasterwork of the character you will see on Plate XIV.

The early years of James I were very fruitful ones to the plasterer, and in Bramshill House, Hampshire, built in 1603, there are several ceilings, one of which is shown in Fig. 6. One of the largest mansions of this time is Audley End, Essex, where many rooms exhibit a very varied design. This house was built by Thomas Howard, Earl of Suffolk, between 1603 and 1616. One ceiling with modelled groups of fish gives its name to the "Fish Room." One room has a singularly convoluted pattern, with wrought pendants at the principal points. This design was a favourite, for there are several versions of it existing, as at Charlton, Wilts., and Lyme, Cheshire (Plate XVIII, b), helping to prove that these ornamental plasterers travelled from place to place, taking their patterns with them. But the triumphant example of the plasterer's work here is found in the library, a large room 60 ft. by 30 ft. There is a variety of detail throughout the whole, no formal repetition, but a rhythmic balance is maintained, giving it emphasis and a cadence, and I know of no other ceiling of this date so pure and so restrained. A much richer one, though not so graceful, is found in the state bedroom of Brentford House. Of the external modelled work done at this time, it may suffice to mention the fine old house at Maidstone, which bears upon it the date of 1611. Bishop King's House at Oxford, 1620, the George Inn at Audley End, Sparrow's House, Ipswich (Plate XXI, a), and abundant instances exist to prove its popularity.

In Scotland, English patterns seem to have been appropriated, for they all belong to this epoch, and there does not appear to be any evidence of a national growth in Scotland, such as exists in England.

Probably the earliest of these Scottish examples is that of Craigievar, Aberdeenshire, which dates from 1611, when the castle was purchased by William Forbes, who "having made much wealth by trading in Denmark," "he plastered it very curiously," adapting the usual pattern, common in many parts of England, to the arched and groined ceiling. Similar ceilings exist at Moray House, Edinburgh, two of which are shown on Plate XIX. Both of these examples show the ribs enriched with modelled ornament, and give excellent impressions of the effect of this treatment. A little later example of a
similar pattern comes from Winton House, Haddingtonshire, done about 1620 (Fig. 5A). The design and details of all these three are so similar that it is more than probable that they are all the work of the same school of plasterers, whether they be Scottish or English. At Pinkie House there are many plainer ceilings, partaking in form the character of those found in the houses pulled down in Lime Street,
London, proving that there was little or no difference between the two halves of the kingdom.

Under Charles I the old style of his father at first prevailed, and so late as the Survey of the Manor of Wimbledon in 1649 we read of a room in which "above the wainscot is a border of fret or parge work wrought; the ceiling is of the same fret or parge work"; and many of the older houses yet there remaining have good illustrations of this survival of the older character. Yet the advance in the study of Renaissance architecture under Charles I, greatly due to the influence of Inigo Jones, reduced this redundance of ornament, and ceilings of a plainer character, but still retaining the ribbed formation, prevailed. The revolution in style carried out in a few years may be appreciated by comparing the first examples of the later Renaissance (Plates I (Frontispiece), XXII, and XXV) with the Elizabethan work of Plate XIII et seq. The wide compartments and ornament concentrated into modelled bands and scrolls are seen at Forde Abbey, and also Coleshill (Plates I (Frontispiece) and XXII, a), the latter formerly ascribed to Inigo Jones, but now known to have been the work of Roger Pratt. Ashburnham House, Westminster (Plate XXIII), is also an early work by Inigo Jones or John Webb, and Lees Court, now burnt, a curious house of Louis XIII type (Plate XXII, a). The richer and more vigorous modelled ornament which came towards the end of the seventeenth century may be studied on Plates XXII, XXIV, LIII, and LV. Mouldings of this richest period (1670-1720) appear in Fig. 12. The unsettled state of the kingdom, and the Puritanic worship of plainness which set in and continued during the Commonwealth, were well nigh destructive to both, nor until the Restoration of Charles II was either enabled to revive.

Born of a French mother, passing his youth chiefly abroad, the king returned to his native country without any love for its national arts. The older or the wealthier families were requisitioned, and ruined during the past troubles by one side or the other, and not unfrequently by both, so there was but a mere tradition of the old art left, yet sufficient remained to resuscitate it in a new fashion. This was enhanced by Sir Christopher Wren's visit to Paris in 1665, where he particularly noticed the plasterwork done by Van Ostel and Anoldino, "plaisterers who perform admirable works at the Louvre," and refers to "the marble meal as the old and still the modern way of stuccowork in Italy." The art at this period adopted floral motives, and the illustration (Plate XX, b) is an excellent specimen of the plasterer's art of the time. This is from Holyrood Palace, where it forms the ceiling of the principal staircase, and is about 24 ft. square, consequently the figures in the angles representing Fame, Glory, Force, and Power are rather more than life-size. The floral wreathings are full of the most delicate and beautiful modelling. Two "English plasterers," Halbert and Dunserfield, are paid for this work in March 1679. In the Church of King Charles the Martyr at Tunbridge Wells is a very good ceiling with a large hemispherical dome, and an adjacent ceiling bears two dates, 1682 and 1690. These were done by John Weatherell and Henry Doogood, who were paid £190 for their work. Similar plasterwork, evidently by the same hands, was done at Groombridge Place, in the vicinity. Of course there is not much in London of the early part of Charles's time—the Great Fire destroyed the old, and the Great Plague arrested the new; but there is a very beautiful specimen in St Mildred's Church, Bread Street (Plate XXV, b). Once it had a band of cherubs circling round the foot of the dome, but these have been removed.

One of the most remarkable monuments of the plasterer's art in external work is "Sparrow's House," at Ipswich (Plate XXI, a). In the house itself there is very interesting internal plasterwork, together with some good work of earlier date, in an exterior court, but its chief effect is on the main front. Here we have coarse modelled groups of the four quarters of the globe, with their emblems, together with a large figure of
(a) THE DRAWING-ROOM, 20 MANSFIELD STREET, LONDON.
   (Robert Adam.)

(b) END OF THE DINING-ROOM, BOWOOD HOUSE, WILTS.
   (Robert Adam.)
Fig. 13.—Typical Georgian Plaster Mouldings. (G. E. Bankart del.)
Atlas bearing the globe itself. There are festoons of foliage, S. George and the Dragon, a grand escutcheon of the royal arms, processional and pastoral scenes, making this well-preserved house veritably a national monument; and Ipswich is worthy of a plasterer's pilgrimage, as he will find much other evidence of the past history of his art and craft in this old port.

French fashions, however, reigned supreme during the latter portion of the Stuart dynasty, and the influence of the style of Louis XIV made itself prominent not only on the ceilings, but on the walls, where raised plaster panels with ornamental heads and bases began to prevail.

The so-called Georgian style of the Palladian architects of the second third of the eighteenth century is seen in Plates XXIV, XXV, and LVII. Ribs are again shallower and ornament more formal and repetitive, if not of a cold type. For Georgian mouldings, see Fig. 13. Under French influence the ceilings became divested of other panelling than a broad margin surrounding it, filled with flowing ornament, and often with rounded or incurved angles; the cornice became of small importance, the frieze had disappeared, and a deep cove, plain or ornamental, replaced both. A good example exists at Drum House, Midlothian, where there is also an example of the later and richer form of this phase. The ceiling of St Martin's in the Fields, by Arturi and Bagutti for James Gibbs, is a banal example of decadent rococo, and contrasts unfavourably with the vigorous early native work at St Clement Danes (Plate XXV, a). Arturi and Bagutti were then the principal workers in modelled stucco in London, and were greatly employed by Gibbs, for whom they worked at Twickenham and at Cambridge; he deemed them "the best fretworkers" in England. At Cambridge they were assisted by Denston, a Derbyshire plasterer, who afterwards did much work of this character throughout the Midlands. The true French character of the rococo style will be found on Figs. 3 and 4, illustrating the ceilings of the queen's bed-chamber and the Salon de Medailles at Versailles. As the Louis XV style followed that of Louis XIV, a more flowing and less architectural distribution of ornament took place, and the plain field of the ceiling became a more important feature, the ornament being driven into the corners and in the centres, such as you will see in Plate XXVII, where are illustrated a ceiling called from the centre panel subject the "Dog and Heron" at York and a London rococo example. Other York ceilings of this type appear on Plate LVIII. In such as these the trophies and medallions, taken from the illustrations of such works as "La Fontaine's Fables" and other works of French origin, were frequently introduced in cast plaster, to the detriment of the plasterer's art, as the moulds were, like their subjects, imported also; nor were these the only cast portions, but the repetitive curves, "mutton chop bones," as they used to be called, were cast in sizes, and used to form the principal cartouches and leading lines, until their monotony called forth Isaac Ware's satire upon them, "A ceiling straggled over with arched lines and O, C's, and C's and tangled semicircles may please the light eye of the French, who seldom carry their observation further than a casual glance," and further tells us that "the French have furnished us with abundance of fanciful decorations for these purposes, little less barbarous than the Gothic." Chippendale, Lock, and even Batty Langley (Fig. 11) brought out books of designs for plasterers and carvers, setting a very reprehensible fashion, too much followed nowadays, by divorcing designs from craft, and by no means improving either. The plasterer's art thus became thoughtless and absurd, having no specific character of its own, and the dilettanti would have none of it. Simple purity became grateful to them because it was not ridiculous.

The very ruins of old Rome, which two centuries before had given such an impetus to the plasterer's art, led to its extinction, for about the middle of the eighteenth century there was a keen interest for the exhumation of the buried antiquities of Rome and
FIG. 14.—Designs by M. A. Pergolesi, 1768.
their study; and the publication of such works as Cameron's "Baths of the Romans," Ponce's "Bains de Titus," together with the host of works treating of Roman architecture, now had a transforming effect. In this process the Scotch Adam brothers were predominant. The Adam manner is a compost from several sources, and the four ceilings of Plates XXVIII and XXIX show its shallow relief and delicate "liney" classic ornaments, griffins, and figure panels. Plates XXX, XXXA, and CXXII give a collection of Adam ornamental motives from Messrs G. Jackson & Son's original moulds. Adam mouldings have been drawn on Fig. 15. Exceedingly pretty, the style pleased the public taste; their elements were simple and were easy to design; and being full of work they gratified their maker; and with here and there a cast cameo or a painting by Cipriani or Angelica Kauffmann, they were refined and delicate, such as you will find that from the Queen's room in Old Buckingham House; but very little work was left to the art of the plasterer. He chiefly cast the models another artist had made, for when his ornament became so monotonously repetitive there was no reason why he should model it separately. If you examine the ceilings from Pergolesi's design for a wall decoration (Fig. 14), you will at once see how small amount of variety there is in the elements of their composition. And now it is no longer the plasterer who adorns the house—it is the "compo man"—again an Italian—so that the race and the place which caused the resurrection of plaster modelling caused also its death.

It may be thought I have in this short sketch of the long history of "Plaster Work, Plain and Decorative," dwelt too much on the higher development of it, but you must recollect that the higher development brings up the lower with it, and that all rise alike, so that in getting the best of one you get the best of both. Therefore, as time and space preclude the writing of an exhaustive history, I have only roughly outlined some of the prominent features of its interesting past. The principal object of this chapter is to show what great artists have aforetime been the votaries of art in plasterwork, and to induce those of our own day to try and revive the higher ambitions of the craftsmen of an art and craft which has such an important history, to raise it again to its former eminence, and to be no longer content with covering the sins of the "jerry-builder" with a charitable but very plain coat of indifferent plaster.
examples of Compo Husks, Adam Style, from the Original Moulds.

Vase Motives, from the Original Adam Mouldings.

(Vide also Plate CXXII)
Typical Adam Ornamental Mouldings from Original Casts.
Fig. 15.—Typical Plaster Mouldings, Adam Period. (G. E. Bankart del.)