

No. 38.

**Guide to the
Art of Illuminating on
Vellum and Paper**

**GEORGE ASHDOWN AUDSLEY,
LL.D.**

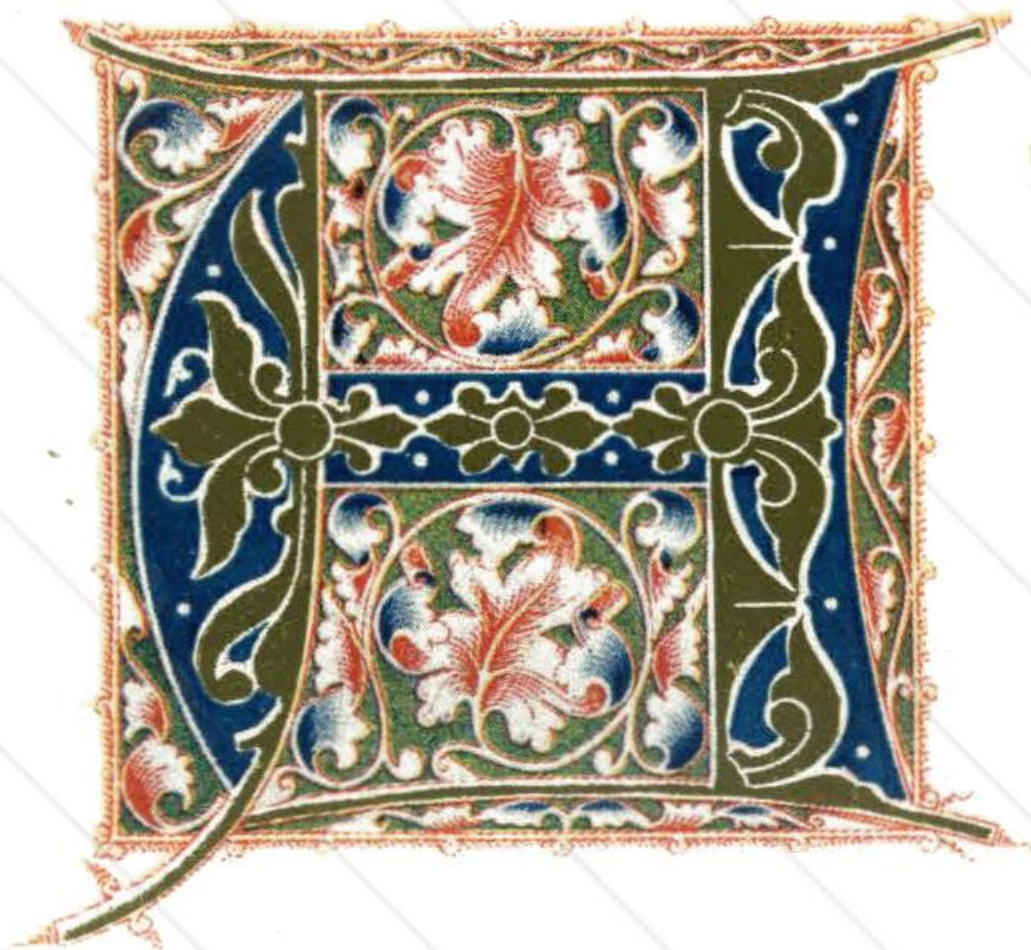
SECOND EDITION

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GEORGE ROWNEY & CO.**

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Guide to the Art of Illuminating.

PLATE XIV.



Guide to the rt of lluminating on Vellum and Paper.

By GEORGE ASHDOWN AUDSLEY, LL.D.,
ARCHITECT,

AUTHOR OF THE ILLUMINATED "SERMON ON THE MOUNT";
"HANDBOOK OF CHRISTIAN SYMBOLISM"; "OUTLINES OF ORNAMENT IN ALL STYLES";
"POLYCHROMATIC DECORATION AS APPLIED TO BUILDINGS IN THE MEDIÆVAL STYLES";
"THE PRACTICAL DECORATOR"; "THE ART OF CHROMO-LITHOGRAPHY";
"THE ORNAMENTAL ARTS OF JAPAN"; "TASTE *versus* FASHIONABLE COLOURS";
AND SEVERAL OTHER WORKS ON ART.

ILLUSTRATED BY
SIXTEEN PLATES AND SEVERAL DRAWINGS
IN THE TEXT.

SECOND EDITION.

GEORGE ROWNEY & Co.,
ARTISTS' COLOURMEN AND PENCIL MAKERS,
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PROEM.



IN the year 1861 the first work from our pen on the subject of the present treatise was published by MESSRS. GEORGE ROWNEY & COMPANY, entitled "Guide to the Art of Illuminating and Missal Painting." How that work was received by the Press may be gathered from the following extract from the *Athenæum* of November 30, 1861 :

"The last of the above-named books [manuals on Illuminating] is of a very different stamp from that of its companions, being really what it professes to be—a practical and sensibly written little manual, such as the student may profitably use. It is not given to everyone, as the above examples show, to compile intelligently even a History of the Art of Illuminating, still less to write a series of practical instructions for its study. The Messrs. Audsley have done both."

The work above mentioned, after having run through twenty editions, has long been out of print; and an entirely new work on the same subject is now called for, illustrated by a series of photo-engravings direct from original Middle-age manuscripts, and other plates of alphabets, etc., of a much greater excellence than any that appeared in the earlier "Guide."

vi.

PROEM.

All the text has been specially written with the view of making both the historical and practical sections of the treatise as full and instructive as possible, and we venture to think that the student will find in the present "Guide" everything necessary to direct his study and practice of the beautiful and fascinating Art of Illuminating.

G. A. A.

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PART I.

The Art of Illuminating during the Early and Middle Ages.

WHILE the present Treatise is essentially a Guide to the practice of the Art of Illumination, it is desirable, by way of an introduction, that it should provide a brief review of the Art as it obtained during the great periods in which it flourished in several countries of Europe. The student should at the outset make himself conversant, to as great an extent as possible, with the history of the art; and acquire a knowledge of the peculiarities of the various styles or schools of illumination which were developed at different periods and in different centres. A careful review and study of these, assisted by a personal examination of such original examples as may be seen in the libraries of the British and the Victoria and Albert Museums, cannot fail to deeply interest the student, and enable him to approach the practice of the art in an intelligent and consistent manner, and to conduct his practical essays in paths that are likely to lead to highly satisfactory results. It is essential that he should know the leading characteristics of the several more interesting and beautiful styles of illumination, so that he may not only have a concrete aim in his own designs, but be able to avoid a mixture of practically conflicting treatments or details belonging to diverse schools or periods, which would, if associated, produce work lacking in the all-essential elements of unity and artistic consistency. Notwithstanding all desirable restrictions, the student will, as he gains more and more knowledge and experience, find ample scope for originality of treatment; for, in the exercise of his designing powers, he will doubtless be guided by what old works of acknowledged excellence have taught him.

B

We may close these few introductory remarks by giving a definition of the terms *illumination* and *illuminator*. The latter term was certainly employed in the early part of the twelfth century, for Ordericus Vitalis, in his Ecclesiastical History, mentions a certain monk as “*praecipuus scriptor et librorum illuminator*.” Ordericus wrote during the first half of the twelfth century. In this case the individual alluded to was both a scribe and an illuminator; but during the best periods of the arts of writing and illuminating, the scribe and the illuminator were commonly distinct persons; that this should be the case can easily be understood. We know that the art of the illuminator continued to be practiced to a considerable extent after the invention of printing, when the press supplanted the labors of the scribe. The term *illumination* is exclusively and correctly employed in art nomenclature to designate the more or less elaborate ornamentation of the pages of books, and especially those written on vellum. Illumination has been aptly described as the “lighting up” of a lettered page of a book; which lighting up is essentially of a decorative character, executed with brilliant colours and burnished gold, by hand. Illumination either forms a part of the text of the page, so far, at least, as the insertion of initial and capital letters extend; or it assumes the forms of borders or framework inclosing the text, or miniatures which may be introduced to illustrate the work. It must be understood that mere illustration, however richly and beautifully it may be executed, does not in itself constitute illumination, while the absence of miniatures in no way interferes with legitimate illumination, indeed, many of the finest illuminated pages in existence contain no miniatures.

In the necessity for the use of the primary and other brilliant colours and gold and silver, true illumination is closely allied to the art of heraldic blazon; and in many middle-age manuscripts we find both arts combined in the ornamentation of their pages.

In a necessarily small treatise like the present, it is only possible to give the merest outline of the history of the art of illuminating, and a very brief description of the leading characteristics of the more artistic and interesting schools of the art which have existed, alluding especially to the styles of design and colouring found in representative manuscripts. The student who desires to go more deeply into these subjects must consult the several

important illustrated works that have been published on the art; and, what is still more desirable, he should, as we have already advised, lose no opportunity of examining and carefully studying the drawing, colouring, and gilding of such original illuminated manuscripts as are open to view, or are available for his inspection, in libraries, notably those of the British and the Victoria and Albert Museums.

Early and Byzantine Illumination.

There seems to be every reason to believe that an art devoted to the adornment of manuscripts, which had some resemblance to what we now understand by the term illumination, was practiced at a very early period, but, with the exception of a papyrus, preserved in the Louvre, at Paris, no example of the art of a time prior to the Christian era is known to exist. In this papyrus are representations of funeral ceremonies, rendered in colours and gold. The exact date of this work is not known, but it certainly belongs to a period long before our era: it is the earliest work of the class of which there is any known record. There are no existing manuscripts which were executed prior to the sixth century that contain purely ornamental embellishments, miniatures or figure drawings and beautiful writing alone appearing on their pages. Perhaps the earliest existing manuscript in which ornamentation is associated with the figure work is that known as the "Vienna Dioscorides," executed in the opening years of the sixth century. This manuscript is preserved in the Imperial Library, Vienna.

It was in the reign of Justinian, 527-565, and consequent on the immense art-vitality that attended the building and lavish decoration and adornment of his wonderful church of Sta. Sophia, that the art of illumination may be considered to have had its foundations firmly established, while they had been to some extent laid before artists were called from all desirable quarters to decorate and complete the church. As Mr. J. W. Bradley correctly remarks: "When Justinian, years before, wrote to thank the eastern-born pope Hormisdas for his zeal in suppressing the Eutychian and Manichean heresies, he had sent him a present of a large Book of the Gospels, decorated in the richest style of

Græco-Roman art. And now the Gospel books became richer still, although tablets of beaten gold set with precious gems had formed the covers of that costly present. Such art had now become fashionable, and was encouraged by the most lavish patronage. Artists could afford to send for their materials to the far East, and throughout the southern shores of Europe. Minium of peerless brilliancy was brought from India and Spain, lapis lazuli from Persia and Bokhara. The famous Byzantine gold ink was manufactured at home from the purest Oriental gold. Illumination, as restored with all these fresh advantages of example and wealth, became practically almost a new art. In the bygone days of Constantine and Theodosius the great features of calligraphy had been gold and silver inks, and vellum finely stained with rose or scarlet or purple dye. Under Justinian the precious inks were still continued, but far richer ornamentation than the staining of the vellum was added. Those Persian decorators whom the liberality of Justinian had attracted to Byzantium speedily stimulated the large fraternity of Greek calligraphists to unheard of efforts in imitation of the splendid furnishings of the new edifices. Books of luxury began to reflect with no sparing fidelity the gorgeous features of arcade and cupola; and the jewelled tympanum with golden background was transferred to the Gospel-book, the sacred History, and Homiliarium."

It is true, and worthy of the student's careful attention, as the writer above-quoted points out, "that the art both in miniatures and ornaments is always a direct mirror of its contemporary architecture, and indirectly of the minor ancillary arts which happen to be practised at the time. Even transient or merely fashionable usages are often recorded in the pages of MSS. Again, whilst we make use of dates given us by political history, and of the limits of geographical areas, we need never be far wrong in our estimate if we can attach to the illumination the style of architecture practised in the locality of its production, and especially if we can decipher such minor embellishments as local and contemporary taste have made the momentary fashion. At one time it is the architecture itself, with its columns, capitals, arches, and friezes that is the subject of the background or border decoration; at another, utensils and furniture; at another, objects of personal adornment. During the central Gothic period almost all the ornament was obtained from the field, the garden, or the forest."

Illuminated manuscripts executed at Constantinople prior to and during the reign of Justinian are extremely few, and unsatisfactory as exponents of the higher art of that period. This is doubtless owing to the almost total destruction of the library founded by Constantine (330-337), added to by his successors, and still more added to by Justinian. This ruthless destruction took place at the command of Leo the Iconoclast (717-741), who condemned to the flames all the books that contained sacred portraiture or religious figure-subjects which might encourage idolatry. It is believed that about fifty thousand manuscripts so adorned were destroyed; and doubtless these comprised the finest works then existing. The only books that were spared were probably those which contained ornamental designs only, or no ornamentation of any description. Notwithstanding the restrictions imposed by Leo, which chiefly affected the miniaturists, the art of illuminating proper continued to be practised, that is, along purely ornamental lines. It is proper to remark that up to the time of Basil I., the Macedonian (867-886), the style of illumination which obtained in the Eastern Empire was based on Roman art and developed under local Greek influence; while, during the reign of Basil, Byzantine art threw off Roman traditions and assumed a new and peculiarly set character, under severe restrictions then imposed by the Greek Church—restrictions which govern iconographic art in that Church to-day.

Byzantine illuminations, and especially miniature paintings, are characterized by the lavish use of gold grounds, and the adoption of vivid colours of several shades, laid on in a good body, and boldly contrasted, producing highly effective ornamentation. In the production of shaded work, it appears that the darkest tint was laid on first, and the lighter tints were laid on it, and one over the other, until the high-lights were reached; these last were executed with very pale tints or pure white, or with a hatching of liquid gold. The successive coats of body-color led, of necessity, to an undesirable thickness, which, when applied on a gold ground (as in miniatures), was very liable to scale off. In the rendering of ornament, such as is known in work executed subsequent to Leo's Edict of 728, and during the Macedonian period, we find borders, more or less richly designed, initial letters, variously colored and outlined with gold, and in certain examples

formed of conventionalized or grotesque animals or birds, and foliated and other conventional designs, in color or line-work, associated with the text.

It is unnecessary to pass any further remarks on Byzantine illumination, for it is not likely that the student of to-day will attempt any work in the style. It is chiefly interesting on account of the influence it exercised on Western art. It seems certain that Byzantine manuscripts were brought from the East by Christian missionaries, and were keenly studied in the *scriptoria* of the western monasteries. It is recorded that St. Augustine, Archbishop of Canterbury (596-604), brought to this country some books beautifully ornamented. These books inspired native artists, and were the means of introducing into their illuminations styles of design and colouring which are to be traced to the influence of the Byzantine school.

Celtic and Anglo-Saxon Illumination.

Leaving the East, and directing our survey to our own part of Europe, we find that while Byzantine illumination had, perhaps, reached its highest development in its peculiar style, there was another altogether independent and perfectly dissimilar school of calligraphy and illumination followed in Ireland, which reached its culmination at the end of the sixth or the beginning of the seventh century. When and by whom the peculiar and wonderfully elaborate style of design and drawing that we know as Celtic or Early Irish was originated has never been discovered. It seems impossible to find any tentative steps that led up to it, but one must recognise, in the ordinary order of things, the probability of its having originated in, or been suggested by, some still earlier work—Roman in all likelihood—but the link between all known Roman art and the purest Celtic is extremely difficult to find, notwithstanding the suggestions of certain archæologists, who point to the scrolls, interlacements, knots, etc., which have been found in Roman ceramic and mosaic art.

Speaking of the early Christian art in Ireland, Prof. Westwood, in his "*Palæographia Sacra Pictoria*," correctly says "that at a period when the fine arts may be said to have been almost extinct in Italy and other parts of the continent—namely, from the fifth to the end of the eighth century—a style of art had been estab-

lished and cultivated in Ireland, absolutely distinct from that of all other parts of the civilized world. There is abundant evidence to prove that in the sixth and seventh centuries the art of ornamenting manuscripts of the sacred scriptures, and especially of the Gospels, had attained a perfection in Ireland almost marvellous, and which in after ages was adopted and initiated by the Continental Schools visited by the Irish missionaries." Another learned authority, Mr. John W. Bradley, speaking of early Irish MSS., remarks: "About the middle of the sixth century an Irish prince, one of the most illustrious of Irish saints, led a small band of zealous Christian workers across the sea from Donegal to the Isle of Hy or Iona. He was a descendant of Niall the Great, King of Ireland, and son of the O'Donnel of Tirconnel, but his name is not recorded, unless the appellation by which he is known as a missionary be really baptismal. He was called Columba, the Dove, or Columcille, the dove of the cell or monastery, in poetic allusion to his message of peace . . . The mission took place in 563. After a good deal of travelling from land to land, Columba eventually returned to his nest at Iona, where he died in 597. Meantime some of his companions were busy transcribing and ornamenting with their amazing calligraphic skill several copies of the Gospels, in imitation of others which are said to have existed in their original monastery of Durrow. There is even a tradition that Columba himself once transcribed a Psalter, and that one of the Gospel-books also among those executed at Iona in 590 was the work of his own hand. That Gospel-book, whether by the hand of Columba or not, is the starting point of extant Irish calligraphy. Though later than the traditional date it is not only the oldest, but it is the most wonderful of Irish MSS., perhaps of any MSS. whatever. Once seen it is never forgotten. It is in itself both the finest type and the completest monument of Celtic art is existence. The main features of the style—the band-work and knotted weaving—may be seen on the stone crosses remaining in various parts of Britain, but the pen-drawing of the MSS. exceeds the stone carving in accuracy, minuteness, and variety. The chief peculiarities of Celtic ornament consist:—1, in the entire absence of plant forms or foliages; 2, in the excessive intricacy and extreme minuteness and elaboration of the various patterns, which are mostly geometrical. They consist of inter-

laced wicker or ribbon work, diagonal and spiral lines, and strange, monstrous, or mythological beasts, half bird, half lizard, with enormously extended necks and tails, intertwining in almost inextricable knots."

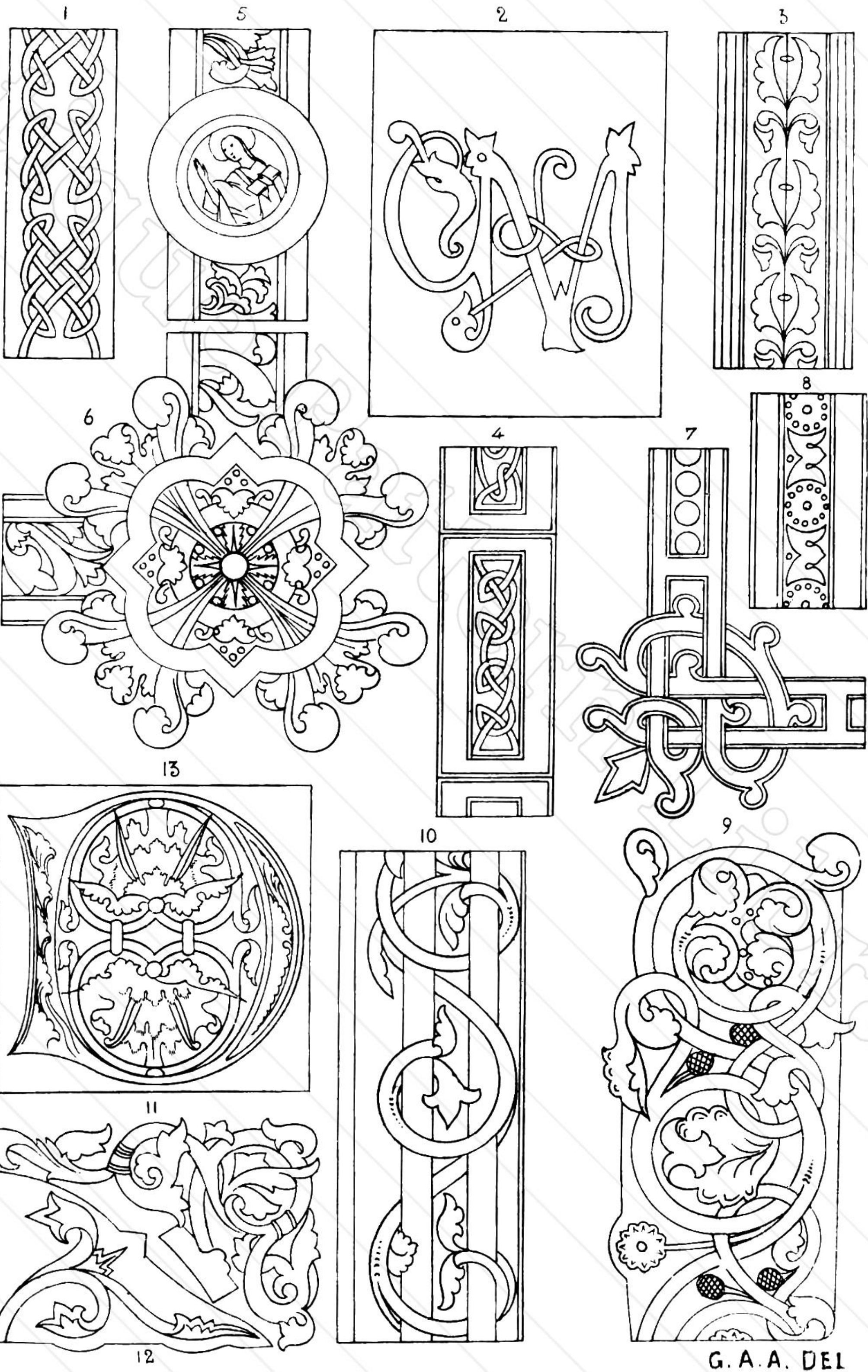
In this wonderful Gospel-book, now known as the Book of Kells, preserved in the Library of Trinity College, Dublin, manipulation of the pen has reached its highest known development. Few persons can gaze upon its wondrous richness and intricate detail without astonishment. While examining its almost bewildering pages we fully entered into those feelings which prompted Westwood to exclaim: "Ireland may justly be proud of the Book of Kells." In this venerable manuscript the first page is entirely devoted to, and covered with, intricate ornament. On the following page the opening letters are of great size, and the few words are written in letters varying from about half an inch to two inches in height. The letters are difficult, in some cases, to determine, owing to the strange and extremely fanciful shapes into which the Roman and Greek characters are distorted.*

The English illuminations which sprang from the Irish School may be best represented by the "Durham Book," the finest specimen of Anglo-Hibernian illumination in existence. This splendid MS. was illuminated on the Island of Lindisfarne, about the year A.D. 700. In it we may observe a great advance in the rendering of the human figure, while in the decorative portions we see an advance in the direction of harmony, and in connectedness and completeness of style and design.

In addition to what has been already described, we may state that in the illuminations of both the Irish and Anglo-Hibernian Schools we may observe the following features and peculiarities.

* On this subject Mr. Bradley remarks: "In the Book of Kells, six pages are taken up with the words, *Liber generationis Christi*, in the way of combinations, monograms, or inclavings of the letters, the X P I., or monogram of Christ forming the subject of the entire last page. This page is the very climax and culmination of all calligraphic art. It has never been equalled for variety, intricacy, and unflinching dexterity of execution; but its taste and pattern are more than half barbaric. The letters are, however, of a bold and even elegant form, sometimes quaintly varied but always pictorial, and ingeniously combined. The page commencing St. Mark's Gospel is very beautiful; plaited-work, spirals, birds, and animals forming part of the ornamentation . . . The penman, however barbarous his taste, as regards the forms of animals and the details of his patterns, had an uncommon sense of balance and a true feeling for the treatment of surface decoration. Here are delicacy, judgment, precision, and no little display of perhaps his greatest gift, imagination. The exquisite proportion between the intricate masses and the broad plain borders, and the finer distribution of the narrow bands, is most wonderful."

PLATE I.



G. A. A. DEL

Antique Pattern Library

The large initials have their members filled in with intricate interlaced ribbon-work, mostly in white on a black ground, though colours are sometimes introduced. The borders are also enriched in a similar manner. Examples of this work are given, in outline, in Figs. 1 and 4 on Plate I. Complex masses of a somewhat confused style of decoration, peculiar to Celtic art, generally occupy the ground within the letters. This decorative material is chiefly formed by two or more opening spiral lines starting from a point, and sweeping into minor volutes formed by other lines, the interstices being filled in with colour. In certain examples the panels within the letters, and sometimes the letters themselves, are filled up with a great variety of lacertine animals, reptiles, and birds, attenuated in a grotesque manner, with their tails and tongues extended into long ribbons, and entwined among their legs and bodies. Intricate and beautifully executed spiral lines and animals' heads terminate projecting parts. Diaper patterns are introduced, formed of intertwining animals and birds several times repeated. The human figure when introduced is of a symbolic character: it is essentially conventional, being treated as simple ornament, and rendered in a symmetrical and purely decorative fashion. It is difficult to account for this practically barbaric drawing of the figure amidst such marvellous pen-work and faultless design as these manuscripts display.

Around the initials, borders, and the text are placed a countless number of small red dots: and the text itself, contiguous to the great capitals, is often rendered decorative by being grounded with colour and ornamented with the characteristic beasts, birds, and ribbon-work.

The colours found in the Celtic illuminations are often harmoniously grouped. We find red, sometimes full in tone and often paled with white, yellow, violet, and green, usually paled. Gold is never met with. Black is liberally used.*

Of illuminated manuscripts of the Anglo-Saxon School one may be mentioned in the words of Professor Westwood: "The Royal Manuscript preserved in the British Museum (marked 1 E 6) must be esteemed one of the most precious monuments of early Anglo-Saxon calligraphy and illumination which have

* The student interested in Celtic illumination should study Westwood's valuable work: "Facsimiles of the Miniatures and Ornaments of Anglo-Saxon and Irish Manuscripts." London, 1868.

come down to our times. Its noble size (18 inches by 14), the clearness of the writing, united with the circumstance that several of its leaves are stained with a very dark purple colour, might lead almost to the presumption that this was the identical copy of the gospels which St. Wilfred presented to the Church of York, and which his biographer, Eddius, described as a thing almost miraculous. From an inscription on the fly-leaf, in a hand about 500 years old, the volume appears to have belonged to the Monastery of St. Augustin, at Canterbury." We may remark that in the manuscript alluded to, colour is largely introduced on the purple grounds, and with a truly wonderful effect. In Fig. 2, Plate I, are shown three letters from this manuscript, which are curious and interesting, showing the manner in which letters were sometimes designed and entwined during the reign of the Anglo-Saxon school of calligraphy. The letters in question are QUI, the first half of the Latin word QUIDEM.

A very magnificent Psalter, written throughout in gold upon purple vellum (if it may not be considered the finest in England), is now preserved in the Bodleian Library, at Oxford. Writing in gold was not, however, confined to purple manuscripts, for there are several examples of it on white vellum. There is a fine specimen in the Harleian Collection (No. 3788), British Museum.

On the Continent, during the reign of the greatest patron of the illuminator's art, Charlemagne, and under his fostering care, illuminating made considerable advance. In the works of what may be called his School we may observe traces of Classic art treatment: it may, therefore, be inferred that the love for Roman art, which, in the order of things, could not have altogether died out, must have exercised a decided influence in the *scriptoria* of the period. Hence it comes that we find the acanthus, or modified forms of it, introduced in the manuscripts of this School. Mr. Bradley concisely describes the characteristics of the Carolingian illuminations thus: "The specific characteristic of Carolingian illumination consists in the initial letters. These are productions of the highest decorative skill, directed by artistic taste and culture. Founded on a plan derived from antique motives, the designs comprise the heads of snakes, birds, dogs, lions, and dragons, involved with intricate interlacements

of Celtic or Germanic invention. Executed in gold and silver, with red outlines or marginal dots, and enriched with beautiful foliages on delicately coloured grounds, chiefly violet or deep purple, these letters are often of an enormous size, and thus are strikingly magnificent in appearance. Another feature somewhat less emphatic is the doctrinal symbolism never quite absent from any mediaeval illumination, and shown here, more especially in the tetramorphic figures of the Evangelists and the famous Fountain of Life, with its beautiful accompaniment of living creatures." Respecting the ornament and colouring of the illuminations of this period the following additional particulars will both interest and instruct the student.

In the characteristic work of this style of illuminating, "much of the purely calligraphic detail of Celtic illumination is made use of, combined with accessories from ivories, cameos, etc., of Byzantine or antique origin. The sculptures of Romanesque architecture imitated in the leaf-work and borders. Gold and silver employed profusely both in ornament and lettering. Very large initials and intricate monograms introduced in the titles, with symbolic figures and sacred vessels, etc., used as parts of the decoration. The vellum sometimes purple-stained. The pen still the chief instrument, but the Italian or Byzantine mode of painting also used, except in the mode of applying gold, both in miniature and ornament. Bands of body-colour used as grounds on which letters and ornaments in gold and silver are placed. Colours: those used in Byzantine miniatures applied with a similar medium. They are violet, purple, blue, scarlet, green, and yellow. The flesh-painting is dark, but not executed on gold grounds, as in Byzantine work. The gold when used is laid on afterwards with the pen or brush."

During the ninth century many manuscripts were executed, worthy monuments of the limner's art. Great beauty is to be observed in the border-work of this period, the ornamental designs of which show a departure from the earlier interlaced character. A very simple example is given in outline in Fig. 3, Plate I, just sufficient to indicate the direction in which the new ornament was developed.

We now enter on the consideration of the illuminator's art as practised in England during the tenth century, and especially that which evidently originated and was brought to so great a

degree of excellence in the *scriptoria* at Winchester. The earliest known example of illumination executed at Winchester is the Golden Charter of King Edgar, preserved in the British Museum, the date of which is the year 966 (Cott. MSS. Vesp. A viii.). At this time, and doubtless at Winchester, was executed the superb illuminated manuscript known as the Benedictional of Aethelwold, now in the library of the Duke of Devonshire. The chief characteristics of the Winchester style, as fully represented by the chief illuminations of the Benedictional, are practically confined to the borders which form complete frames to the miniatures and certain lettering. They are usually formed of massive parallel gold bars, boldly outlined with black, with corner and centre ornaments of geometrical forms—circular, quadrangular, and cusped—in and about which, and filling the border panelling, are somewhat gracefully-disposed conventional leafage, executed in outline and variously colored. The nature of this foliage, in which the absence of stemwork is noteworthy, clearly indicates its origin in the stiff sculptured ornament of Romanesque architecture, and the illuminations of Carolingian MSS. In Fig. 6, Plate I, is given an outline drawing of a corner-piece from the beautiful Benedictional of Archbishop Robert, preserved in the Public Library at Rouen, which clearly shows the character and artistic disposition of this class of foliage. This Benedictional is also of the Winchester school, and of the same period as that of Aethelwold. Miniatures were sometimes introduced in the central medallions, as indicated in Fig. 5, from the Gospels of King Cnut. The initial letters which are contained within the bordering above described are still large and rich, and the interlaced feature is retained about their extremities. The colours employed are for the most part bright and of considerable body; red, green, and yellow being most commonly introduced. The foliage is rendered in varied colours, chiefly paled red or rose-colour, green, and blue.

Eleventh and Twelfth-Century Illumination.

The Normans did very little to encourage the ornamental arts during the early years of their sovereignty in this country. While actively engaged in the erection of churches it was quite natural that a minor art, such as that of illuminating, should be some-

what neglected. But elsewhere works of considerable importance were executed in the twelfth century; and a school of design arose which led to the strong and beautiful branchwork, scrollwork, and the other artistic features of the illuminations of the twelfth century. Alluding to the typical manuscripts of this epoch, Mr. Bradley remarks: "They represent the style which, in the graceful pen-drawn branchwork, finished in various coloured inks and burnished gold, with the unerring accuracy once characteristic of Irish chirography, became the prevailing taste throughout the greater part of the eleventh and twelfth centuries both here and on the Continent." In this branchwork, foliage or conventionally-rendered leafage is but sparingly introduced, and is completely subordinate to the same. This subordination is characteristic of branchwork designs met with in German illuminations of the eleventh century; and presents a marked contrast to the practically stemless treatment of the conventional foliage which was developed in the *Winchester scriptoria* during the preceding century, already described, and as outlined in Fig. 6, Plate I. Modifications of earlier work are found in certain illuminations of the eleventh century, including a lingering taste of interlaced ornament and border designs. Examples are outlined in Figs. 7 and 8. In short, we may observe in the illuminations of this period details and artist treatments which culminated in the beautiful designs of the decorative illuminations of the twelfth century.

It is questionable if, judged from a purely decorative point of view, illumination ever surpassed the vigorous and masterly work of the finest twelfth-century artists, and to the illuminations of this remarkable period we would specially direct the student's observation and study, for they present work eminently suited for modern imitation. We may direct attention to the general treatment of the branchwork met with, of which outline copies are given in Figs. 9, 10, 11, and 12, Plate I.

In the originals, the coiling branches or stems are of different colours, shaded, and displayed on gold and grounds of contrasting colours. This polychromatic treatment is a pronounced characteristic of the period.

In these small examples, the predominance of the branchwork is clearly shown. In Fig. 9, the mode, very frequently to be observed, of terminating the spirals with a conventional flower or

leaf form is illustrated. The flower form alluded to frequently assumes rich and highly ornamental treatments, including very varied colouring, especially in work of the French school. A characteristic treatment is shown in the interior space of the initial D, outlined in Fig. 13.* In the accompanying illustration,



G.A.A. DEL.

in outline, from the page—BEATUS VIR—of a book of psalms and canticles, illuminated in Germany, the characteristic spiral stem

* It is in accordance with this style that we designed the border and initial of the Lord's Prayer, a greatly reduced copy of the outline drawing of which is given in Plate XVI.

or branchwork, its conventional terminals and central flower forms, and the introduction of interlaced work derived from the illuminations of the Celtic schools, are effectively shown. The use of animal heads in the terminals of the letter is worthy of notice. The page is executed in rich colours on a gold ground; the spiral and interlaced branchwork being shaded with hard-edged lines of body colours, in the manner described and illustrated, under the head of Styles of Colouring, in Part V, and illustrated in the small engraving there inserted.

In addition to the leafage which accompanies the characteristic branchwork of the twelfth century, we find in many of the grand initials human figures and both bird (or dragon) and beast forms cleverly and grotesquely introduced as elements of their designs. Perhaps no finer or more striking examples of this class of illumination can be found in English manuscripts than the beautiful initials which adorn the famed Bible preserved in Winchester Cathedral library, two of which are photographically reproduced in Plates II and III. These initials deserve most careful study, not only on account of their exquisite and varied leafage, characteristic of the most artistic illumination of the period, but also on account of the quaint and extremely ingenious manner in which the human figures and grotesque bird and beast forms contribute to the structure and ornamentation of the letters. The initial B in Plate II is singularly bold in treatment, displaying the characteristic use of the conventionally-rendered bird in the formation of the letter, and of human figures in its ornamentation. The designs of the outer terminals and the larger leaves within the letter are extremely interesting and suggestive: their several parts with their turn-overs presenting admirable opportunities for rich polychromatic treatment. The manner of the shading throughout is clearly indicated, and furnishes an admirable guide to the student.

The initial N (not clearly defined) on Plate III is a still more masterly piece of design and manipulation. Here, again, we find the ornamental bird (or dragon) forms, but not in this instance forming integral parts of the letter, unless, in conjunction with the very uncomfortable central figure, they are intended to indicate the diagonal member of the same. Three human figures are introduced, and one warrior in the compound form of half man, half dragon, occupying the lower portion of the letter. The

leafage throughout is of the highest decorative character and extremely beautiful; clearly showing, for the purpose of illuminating, the great superiority of conventional foliage over anything strictly natural.

This compound or many-membered foliage of the twelfth century affords unlimited scope for ingenuity in design and variety in colouring. In the old illuminations the colours almost invariably used are red, blue, yellow, green, and a violet tint. These are applied in the form of *gouache* or tempera, the vehicles being white-of-egg, or a size made from parchment cuttings, with the occasional use of gum water. Both raised and flat gilding are found in illuminations of the period. In the designs, borders are only introduced around panels, their place being taken, so far as the text is concerned, by frequent prolongations of certain suitable initials, as in the case of the initial shown in Plate III. This neglect of the border is somewhat remarkable after its once lavish introduction by the Winchester school of the tenth century, as represented by the Benedictional of Aethelwold; and it is much to be regretted, for one can easily imagine the superb work that would have attended its adoption by artists capable of designing and executing initials such as those in the Winchester Bible.

Pen-work was much used in the illuminations of this century, greatly to the exclusion of the brush. This appears to have largely characterized work executed in the Cistercian *scriptoria*. The pen-work is chiefly found in initial letters; their branchwork, leafage, and animal forms being in red and other coloured inks, and sometimes having their open spaces grounded with blue and green, counterchanged.

We may conclude our brief remarks on twelfth-century work, by directing the student's attention to the unique and beautiful series of capital letters given in Plates IV and V. These are derived from a manuscript of the period known as "Cardinal Mazarin's Bible," preserved in the National Library, at Paris. As an example of most graceful and characteristic ornament, few, if any, mediaeval alphabets surpass this. Every letter is perfect in its form and full of grace in its embellishment. The colours are red, blue, and green; and these appear in each letter, the disconnected features being in the different colours; for instance, when the body of the letter is red, its enrichments are in blue and green.

PLATE II.



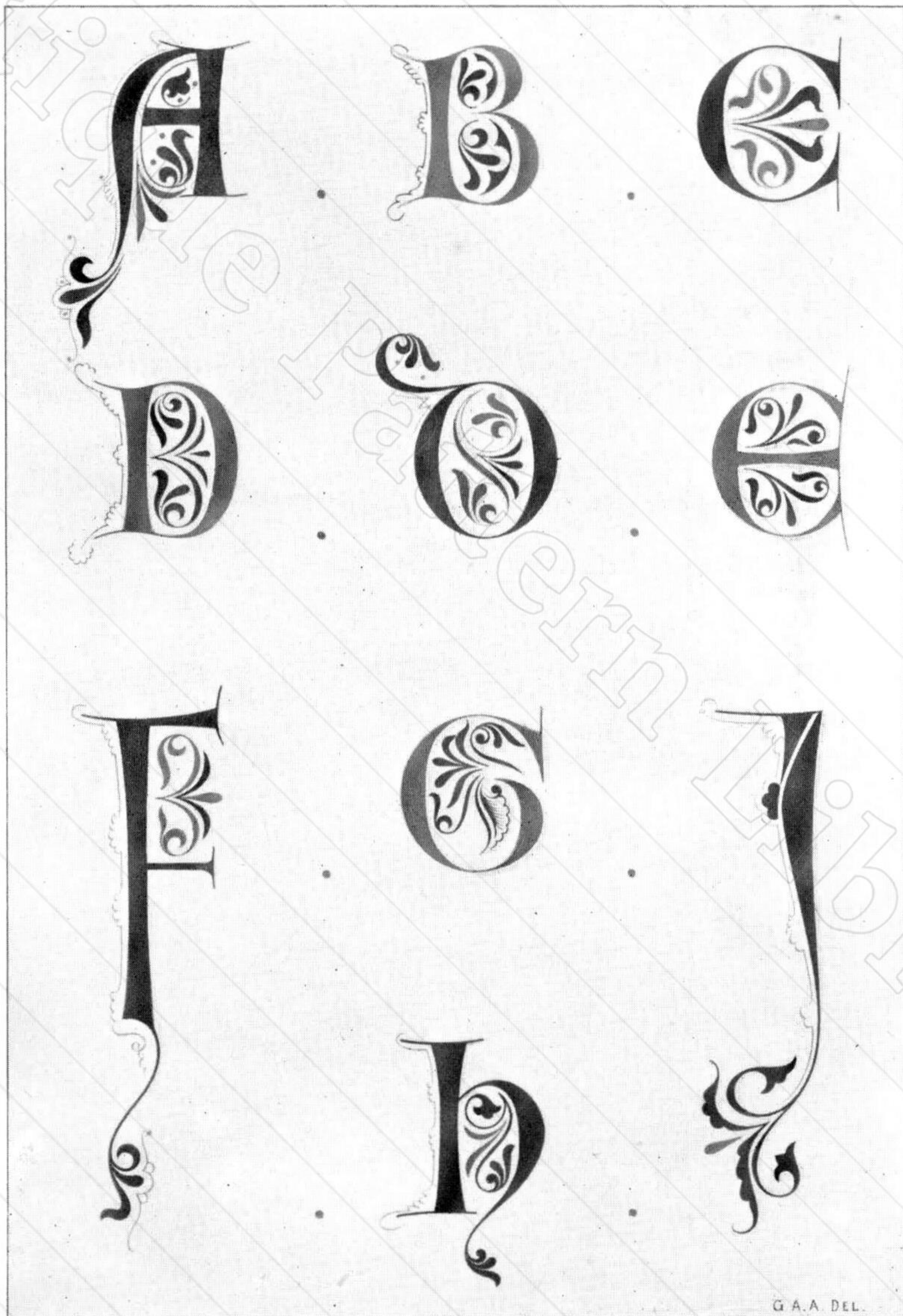
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PLATE III.



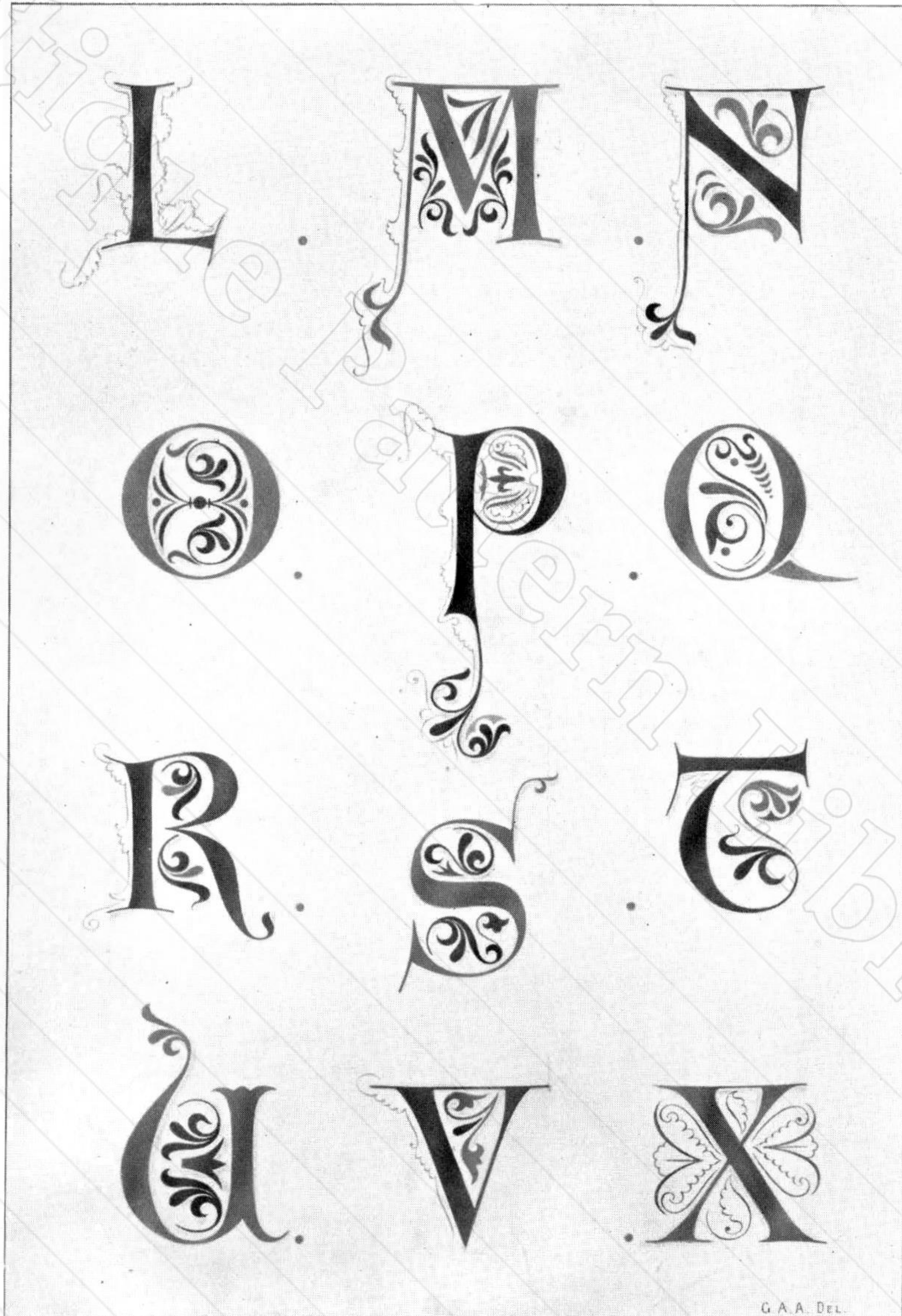
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PLATE IV.



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PLATE V.



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PLATE VI.

filia iherusalem ecce rex tu us ue nit sanctus et
 salua tor mundi. ad nullam maiorem Introit.
 Ver natus est no bis et fi
 lius datus est nobis cuius
 imperium sup hu merum
 e ius et uoca bitur nomen e ius magni con
 sily an gelus. p Cantate dño canticū nouū
 quia mirabilia fecit & gloria. 62. Ciderunt
 om nes fines terre saluta re de s'

BIIM

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In short, whichever colour the letter may be—blue, red, or green—the two remaining colours invariably appear in the ornamental accessories. A certain amount of pen-work is introduced, and all the other portions are flat brush-work, without outlining of any kind.

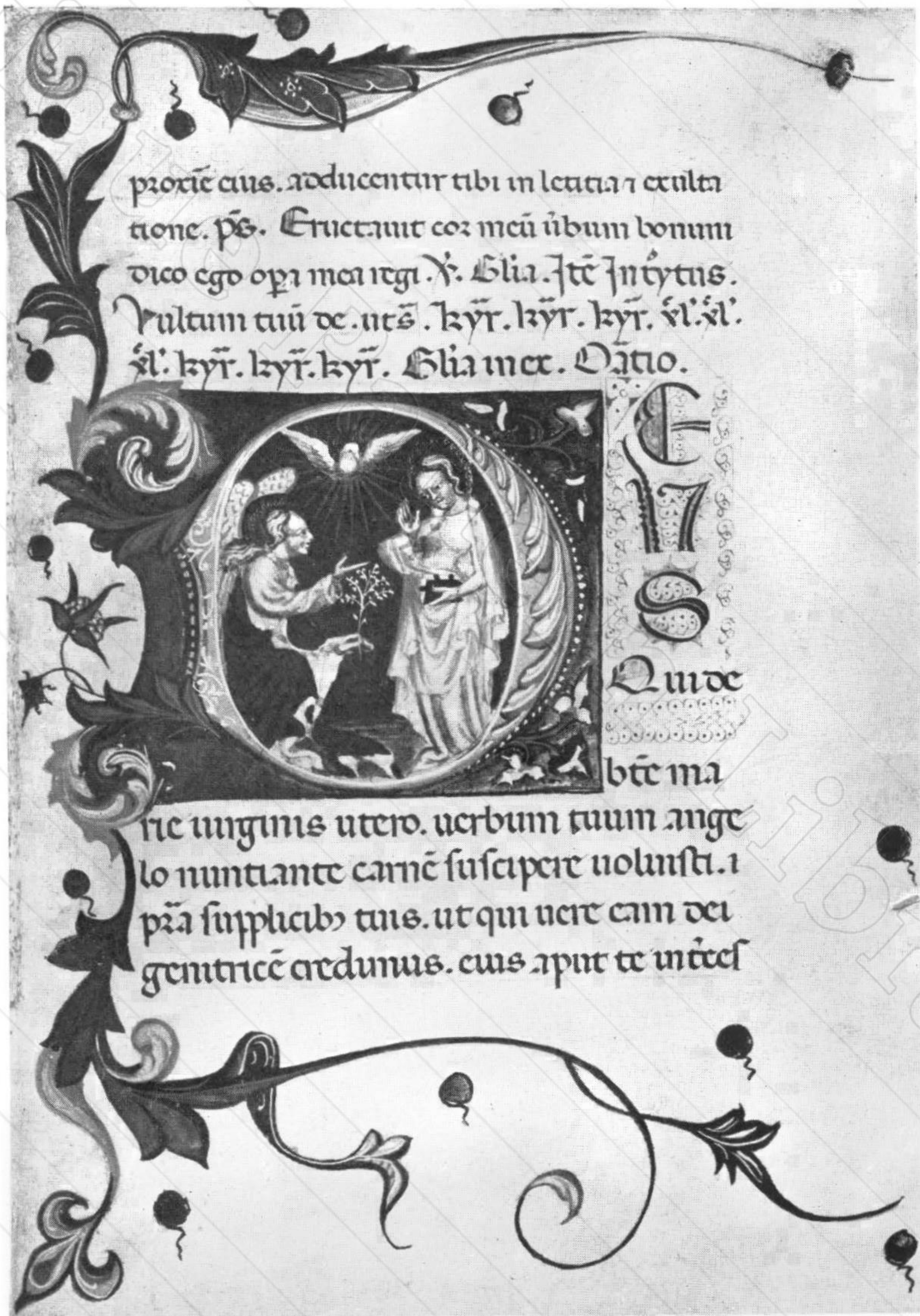
In illuminations of the earlier part of the thirteenth century, we find, as might be expected, a lingering influence of the styles of the preceding century; but there is an evidence of a falling-off in boldness and originality both in conception and execution. What we have endeavoured to convey by these few words will, perhaps, be better realized by carefully examining the illuminated page of a Flemish Psalter of the thirteenth century, photographically reproduced, on a small scale, in Plate VI. It will be observed that spiral branchwork still forms the more important part of the ornament, but that the beautifully designed and bold leaf-work has practically disappeared. This page illustrates another characteristic treatment. During this period the shaded branchwork and detail generally became reduced in scale and very frequently undesirably crowded, while the colouring became heavy, and, comparatively speaking, indistinct. The initials were reduced in size, but, as some compensation, their extremities were extended and worked into floriated or branchwork terminations, frequently descending to the bottom, or extending to the top of the page; or sometimes to both, as is the case with the initial P on Plate VI. This peculiarity in connection with the initials was the precursor of the characteristic “bracket” of the following century. Conventionalized animal forms were also introduced amongst the branchwork, and were oft-times elongated into the tail-like extension alluded to in connection with the initials. Mr. Bradley furnishes the following instructive particulars: “By the commencement of the thirteenth century the initial, which in Celtic and Carolingian art had dominated the whole page, is now losing its supremacy. It still holds control over the main lines of the ornament, but is becoming rapidly only one factor in the general design. A delicate fringework or filigree of pen flourishes which of late had sprung up around the lessening initials is converted into a tendril or slender stem bearing a succession of fine leaves and leaflets of ivy, mostly, perhaps at first entirely, filled up with burnished gold. Small figures and by and by groups of figures have taken the place of the linear

C

ornament in the interior of the letter, and in short, the fusion of calligraphy and miniature painting has at length taken place. The thirteenth century marks the stage of illumination when the art, *ch'alluminare è chiamata in Parisi*, has reached the fulfilment of its earlier promise, though not yet the complete attainment of its highest perfection. We cannot fix a precise date to the change. It is all a slow and gradual growth. The most we can do is to set a date against a certain stage and say this is what we mean by an epochal example. Such an example is found by some in the Psalter of St. Louis, or rather of his mother, Blanche of Castile, now in the Arsenal Library, Paris. Some writers state the division thus:—in the twelfth century few or no portraits, in the thirteenth scarcely anything else in miniature art. Two centuries more and the art, as pure illumination, will have reached or even passed its climax. One fact seems certain, that in the thirteenth century France clearly surpasses the rest of Europe, Italy included . . . and hence Dante was constrained, Tuscan though he was, to give France the preference over Italy in speaking of the art . . . France in the thirteenth century absorbed all previous varieties of book adornment, and became the prolific source of all succeeding styles since denominated national.”

Fourteenth and Fifteenth-Century Illumination.

It is indeed difficult, if not practically impossible, within the limits of the present little manual, and without a comprehensive series of examples in colour, to convey anything approaching a satisfactory idea of the very numerous and beautiful works executed by the illuminators of the fourteenth century; to give even a fairly full description would be impossible were its whole contents devoted to the purpose. Accordingly, a general idea or outline of the leading features to be observed in the illuminations of the period is all we can attempt to give. It is very important, however, that those who desire to become artistic illuminators should have as wide a general knowledge of the history and practice of the art as they can possibly acquire: and it is essential that they should be fairly familiar with the prevailing characteristics of the various schools and periods of the art during the Middle Ages. To acquire this knowledge the student should lose no opportunity



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of examining every illuminated manuscript he can gain access to; and, in addition, he should study the works on the subject by Sylvestre, Count Bastard, Humphreys, Shaw, Westwood, Wyatt, and others.

The prevailing style of the fourteenth century is peculiarly worthy of the modern illuminator's attention, being of all the styles perhaps the most adaptable and most likely to suit modern taste. In real feeling and artistic conception it may be considered inferior to the finer essays of the earlier schools; yet, owing to the generous distribution of its ornament in borders of all classes and initials, and its liberal introduction of highly decorative miniatures, it may take its position among the most brilliant schools which flourished during the Gothic periods. It must be admitted that in the brilliancy and beauty of colouring and the richness of their raised and burnished gilding the manuscripts of the later part of the fourteenth century stand almost unrivalled. The initial letters, and especially those in choral books, are frequently large, and filled in with elaborate ornament of a conventional and graceful character, coloured in the most careful and refined manner, soft shading being commonly used.*

A peculiar treatment obtains in many of the initials and capital letters, introduced in this period, which consists of forming their larger members of two flat colours, usually blue and red, or blue and gold, worked together in some ornamental fashion, and divided by a white thread line—the natural surface of the vellum in all cases. Examples of this effective treatment are given in Plate XIV. In addition to this characteristic method, several other artistic decorations of the initials were introduced, an example of which is to be seen in the initial D in Plate VII, a page from an Italian Missal, executed about the end of the century. This page also furnishes an example of the manner in which the extremities of initials were prolonged, so as to partly inclose the text, by the illuminators of the period. This feature is known as the fourteenth-century bracket, and is found in many beautiful forms and colourings in manuscripts of the several

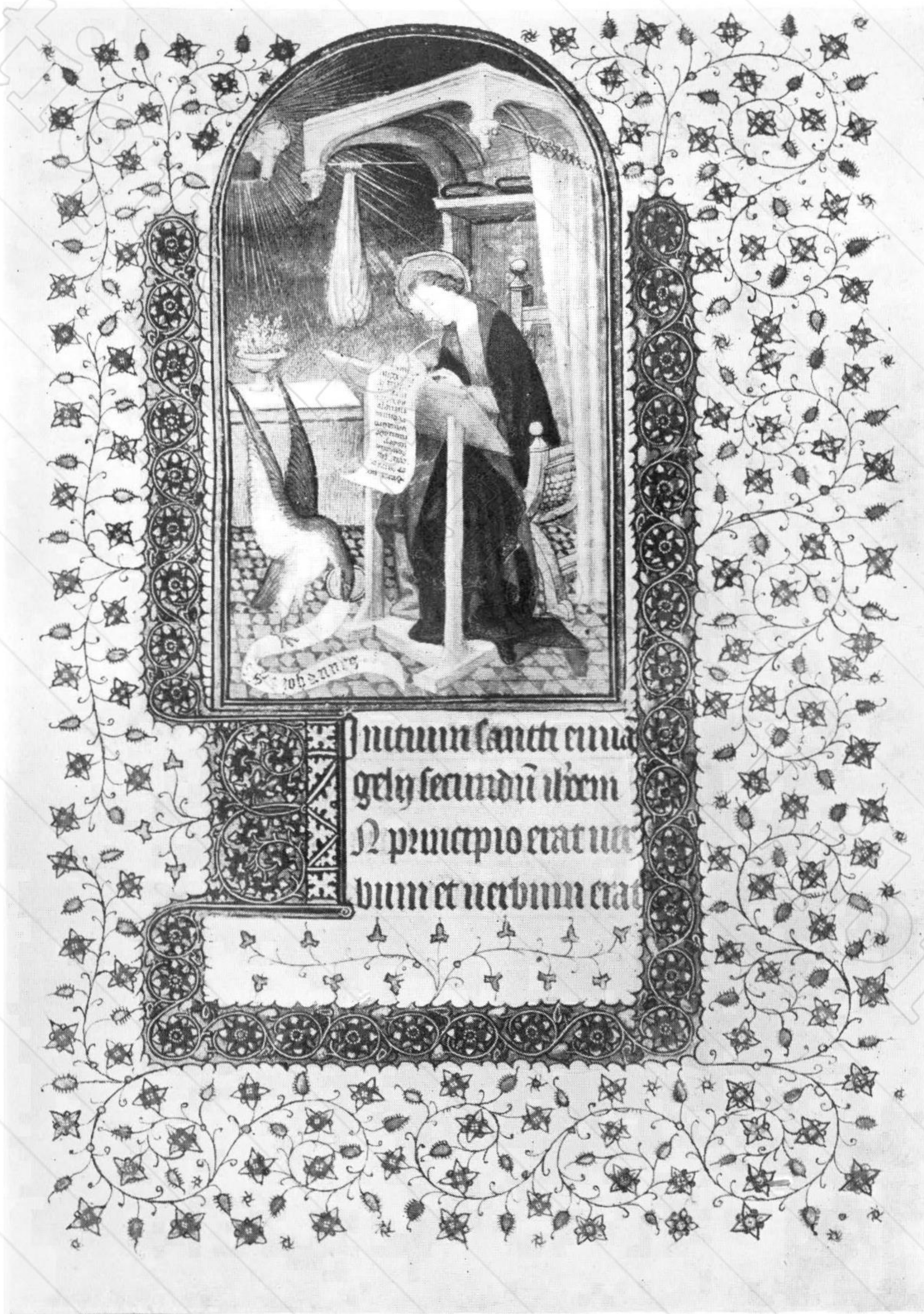
* In one page of a choral book in our possession there is an initial A, about 5 inches square, the large members of which are filled in with blue leafage on a dark blue ground. The manner in which this leafage, which is elegantly coiled and flowing, is relieved from the ground by the most delicate style of shading baffles description. It is difficult to know what the pigment and its vehicle are, for, solid as the effect is, the colour throughout is almost as thin as a wash. Late fourteenth century.

schools. In the initial is shown the practice of inserting miniatures in such letters. In such figure subjects gold and coloured diapers and chequers were frequently used as backgrounds, especially in French work, until superseded by architectural compositions in very poor perspective, and in numerous gay colours, and also by landscapes, with hills, trees, flowers, blue sky, and clouds, rendered in a semi-naturalistic and highly decorative fashion. The diapers and chequer patterns just alluded to are to be seen in numerous manuscripts, of many designs, sometimes heraldic in character, and almost invariably executed with great care and skill. In some examples they are executed on gold grounds; in others in bright, counter-changed colours, lined, hatched, or ornamented with gold.

We may appropriately add to the above particulars those given by Mr. Bradley respecting French illuminations, executed between the middle of the thirteenth and the middle of the fourteenth century. Alluding to figure subjects, he says: "The background usually is a panelling of chequers or lozenges, as of mosaic or tapestry, in colours, or burnished gold, very delicately finished with black and white lines and dots. Sometimes the whole ground is burnished gold. Later, a kind of open-air scene with trees, mountains and buildings. The trees of the same rigid and symbolical kind as in glass painting, with severe black outlines and a bunch of typical leaves on a straight stem or trunk. At first the sky is made of a deep blue at top and graduated to pure white at the horizon, as if to indicate the first dawn of day after the dark sky of night.

"Initials composed of strangely contorted monsters. The letter itself has a body of deep blue or rose graduated to a pale tint on one edge and finished with a filigree ornament in fine white, and a white edge of wavy or serrated pattern. The interior spaces are occupied with small figures or simple sculpturesque groups, or with slender stems and ivy or some thorny, lobed leafage, on grounds of burnished gold. The border at first consists only of long sweeping stems from the letters forming brackets partly surrounding the text, sometimes above and below, sometimes on one side only. The full all-round border is not yet developed. The initial letter is sometimes placed in a richly enamelled panel with an ornamental frame, in which colour and burnished gold are interchanged and

PLATE VIII.



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PLATE IX.



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fine diapers of white are placed upon the colours. The branches and sprays are supported by thorny cusps of colour or gold with firm black outlines. Among the foliage are introduced figures of animals, as hares, deer, foxes, dogs, and monkeys, birds of bright plumage, and even insects. Foxes, monkeys, and monsters are used so as to suggest various *drôleries*. The animals are drawn with firm, black outlines, and are of similar character to the figures of painted windows. In the bestiaries and natural histories more especially, the forms are often fabulous. We find elephants with trumpet trunks, and birds with beastlike limbs. In later works the small medallion miniatures are very numerous."

In the execution of the illuminations of this period we find "pen-drawing in black, filled in with flat opaque colours, which are either diapered or else edged with fine lines of white, but the black outlines are mostly left clear and distinct. The colours used are deep and paled blue, scarlet, green, red-purple or wine-colour, white, and black. The burnished leaf gold used for grounds, laid on a composition or 'gesso,' in the small letter capitals, cusps, etc., to support the colours."

In Plate VIII is given a reproduction from a page of a French Book of Hours, executed at the end of the fourteenth century. This illustrates one of the representative styles of the period, in which the border-work almost surrounds the page, being only interrupted at top by the arched head of the miniature. This style is notable for its graceful and highly decorative pen-work, crowded with small flowers and leaf-like forms, tendrils, and patines of gold—small discs, outlined and fringed with black lines. The inner borders, which extend from the initial I, are of coloured branchwork and flowers, on a gold band with serrated edges. The favourite ivy leaf appears issuing from the panel of the initial and from the inner border across the bottom of the text. This style of ornamentation was largely followed by the illuminators of the fifteenth century, especially for small manuscripts, such as missals and books of hours.

Plate IX, reproduced from another French Book of Hours, is somewhat later in date than the preceding, from which it differs greatly in its decorative treatment. That it belongs, practically, to the same school is clearly shown by the ornamentation of the initial. The border is in this case quite independent of the

initial; and furnishes an admirable study of coiling leafage, and the soft shading so prevalent in the illuminations of the class during the fifteenth century. The miniature of St. Matthew, with his attendant symbol bearing the inscribed ribbon, is finely rendered; and its background is an exquisite work both in design and execution. It will be observed that figures are introduced in the centres of two of the coils in the right-hand border. It will also be noticed that all the leafage springs from the single stem in the centre of the bottom border.

The graceful design shown on Plate X is a fine example of the bracket treatment which, as before remarked, originated in the fourteenth century. This Plate is from a page of an English Psalter, executed about the middle of the fifteenth century. In this, as in all good examples, the bracket springs directly from the extremities of the initial. The pen-work is here extremely graceful and free, furnishing an adequate proof that the English illuminators were quite equal in artistic taste and skill to their French confrères.

To enter in any way approaching fulness on the subject of fifteenth-century illumination, as practised by the numerous Continental and English schools of the art, would be impossible in a small treatise like the present: but this is not a matter of much importance, seeing that the styles which obtained during the first half of the century were little more than skilful developments of those which originated in the preceding century. Accordingly, the particulars given of the earlier work, supplemented by the illustrations furnished by Plates VII, VIII, IX, and X, are sufficient for the purpose of a purely elementary and practical manual, and as an introductory guide to the student's studies.

The invention of the art of printing, which ultimately superseded the labours of the scribe, did not immediately seriously affect the art of illuminating; for as Mr. Bradley correctly remarks: "So far from this being the case, the vast number of MSS. subsequent to 1450, the date of the Mainz Bible, proves most conclusively that except for the commoner sort of books, as school manuals and the like, printed books were still the exception among the many literary productions of the following decades, and many of the best printed volumes were kept in harmony with their equivalent class of MSS. by being similarly

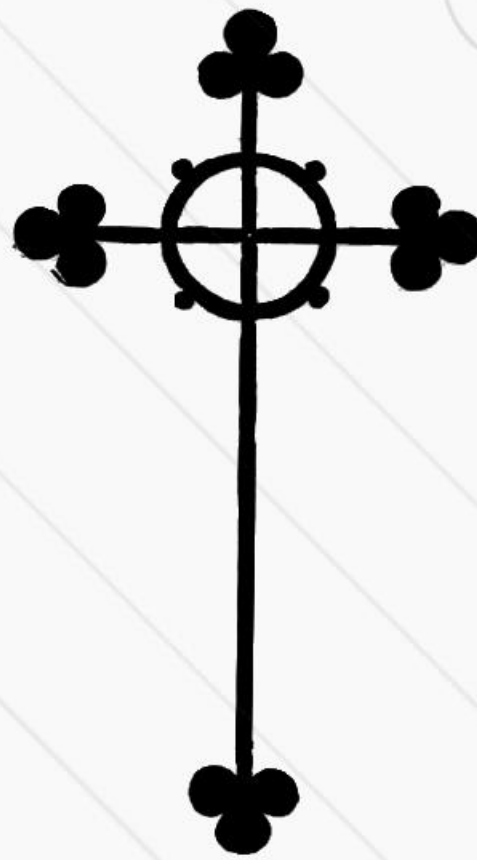
XC.

Domine refugium factus es
 nobis a generatione in generationem
 nusquam montes fierent aut
 formaretur terra et orbis a seculo et usque
 in seculum tu es deus.
Ne auertas hominem in humili-
 tatem et dixisti conuictum filium hominum
Primo mille anni ante oculos meos
 nunquam dies hesterni quod preterit
Et custodie in nocte quod pro nichilo
 habetur eorum annu erunt
Mane sicut herba transcat mane
 floreat et transcat uespere decidat in-
 duret et arescat
Quia deficiamus mira tua et in firmo-
 re tuo curati sumus
Posuiti iniquitates nostras in con-
 spectu tuo secundum uerbum tuum in illuminationem
 multas tui.

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enriched with miniatures, initials, or illuminated borders. In some cases, where ornament was less desirable, the enrichment was confined to the now conspicuous title page. These sumptuous volumes, frequently printed upon the finest vellum, are not only very numerous, but are actually among the most richly decorated volumes in existence."

At this point we may conclude our very brief survey of the rise and progress of the illuminator's art; for to carry it further would lead us more particularly into the realms of the pictorial artist and miniaturist, which are quite beyond the province of this little work.



PART II.

Materials used in the Practice of the Art of Illuminating during the Early and Middle Ages.

RESPECTING the materials which were used by the calligraphists and illuminators of the Early and Middle Ages, we must admit that they appear to equal in every essential, and in some properties far surpass, those available for our service to-day, with, perhaps, one exception in favour of paper. Yet, in being compelled to acknowledge the perfection to which the old artists brought their illuminating materials, we must not overlook the debt of gratitude we are under to our manufacturers, for the time and money they have spent, and the great trouble they put themselves to, to enable us to approach and even rival, the beautiful works of bygone times. And we are glad to be able to say that Messrs. GEORGE ROWNEY & Co. have long been in the front rank of our artists' colourmen in lending invaluable assistance towards the revival of the beautiful and interesting art of illumination, having produced, after much study and careful testing, a series of special illuminating colors, unequalled for body, ease of manipulation, and purity and brilliancy of tone. These valuable colours were first manufactured, at our suggestion, about forty-five years ago, and remain unsurpassed at the present day.

In the earliest eras of the calligraphic art, before miniature painting and illumination may be said to have been dreamt of, cumbrous and rude were the materials resorted to for the purpose of receiving the written matter: in the list of these

may be named stones, burnt clay, woods, metals, and the bones and skins of various animals. We have proof of the use of papyrus* at a very remote period; the "Papyrus of Assa," preserved in the National Library, at Paris, being supposed, on good grounds, to have been executed about two thousand years before Christ. About five hundred years B.C. a great advance was made in writing materials by the introduction of a description of paper made from the papyrus plant. This material, which for many years was the staple of Egypt, remained in use until about the eleventh century, when it was entirely superseded by parchment and vellum—now the only ancient materials in use and demand.

There is some little doubt as to the date of the first introduction of parchment; many writers attribute its invention or first successful manufacture to Attalos, King of Pergamos, but we are strongly of the opinion that it was in use long before his time (200 B.C.) The credit of its invention is by others claimed for Cumenes, who reigned at Pergamos, 159-136 B.C. It seems probable, however, from the original name it bore—"Charta Pergamena"—that it underwent some important improvement either in quality or mode of manufacture at Pergamos: at all events, it is known that for a considerable time Charta Pergamena was a staple article of trade in that centre. We have no exact information respecting the nature of the material, but it was, in all probability, a carefully prepared sheep or goat skin, resembling the parchment of to-day.

As to vellum, while we have no decisive knowledge of the date of its introduction, we may naturally suppose that it was not long after that of parchment; the only substantial difference between the two consisting in the skin from which they are manufactured—vellum being prepared from that of the calf, while parchment is from that of the sheep. The difference alluded to, however, materially alters the quality of the products,

* Papyrus was used in Egypt and other civilized countries in the earliest known times. The writing material was prepared from the *liber*, or internal white pith of the plant, which was known to the Egyptians by the name of *byblos*. The material was prepared as follows: The white cellular pith of the plant was separated into thin layers, and spread out on a flat surface, these layers, crossing at right angles, being superimposed on each other. By pressure these, while in the original sappy state, and damped with Nile water, became firmly united into one sheet of uniform thickness, which after drying, was smoothed and softened by gentle beating, and brought to a finished surface by burnishing or rubbing with some polished tool.

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especially as we now know them, vellum being the only one of the two suitable for the art of the illuminator. We cannot, of course, speak with any certainty of the quality of vellum in the early times of its use, but we do know, from personal examination of numerous manuscripts, that for the last ten centuries no advance has been evidenced in its manufacture—rather the reverse.

The art of staining vellum purple, violet, and rose-colour, which reached so great a perfection in the time of Justinian, is now altogether lost, and, in fact, was so at a somewhat early period, for recourse was had to painting to imitate the beautiful and durable stains of more remote times. The earliest existing example of Christian book-ornamentation is a Greek manuscript, preserved in the Imperial Library, at Vienna. It consists of portions of the Book of Genesis written, for the most part in letters of gold and silver on twenty-six leaves of purple vellum. We have alluded, in our historical notes, to the practice, during the times of Constantine and Theodosius, of writing in gold and silver on vellum finely stained with rose, scarlet, or purple dye. Vellum was sometimes gilded all over with gold-leaf attached with white-of-egg, the skin being previously prepared in some manner, and subsequently smoothed and polished. The fashion, however, never became common.

No one can examine the finer illuminations executed by the artist monks of the Middle Ages without being struck with the brilliance of their colouring—more brilliant, in some cases, after a lapse of centuries than that which can now be produced. We have before us, as we write, some illuminations of choral books, executed about the beginning of the fifteenth century, in which there is a scarlet of a solidity and brilliance which the finest vermilion we now have cannot match; and an intense blue that has defied the effect of time and exposure. Certain it is that the colours these old illuminators employed were of the finest and purest description; no expense or trouble being spared in procuring whatever was considered necessary or conducive to perfection of their work.

A strange mode of preserving the more sensitive and precious pigments was sometimes resorted to by the illuminators and colourmen during the Middle Ages; namely, that of introducing them into linen cloth. For this purpose, various pieces were

steeped in mixtures of the different colours, and when thoroughly charged were dried. The clothlet-colours, as they were termed, were then protected from dust, damp, and exposure to air and light, by being placed between the leaves of books made of paper. When these colours were required for use, fragments of the differently-charged cloths were taken and steeped in pure water for several hours, and, finally, lightly pressed; by which means the pigments were extracted, and (after the superabundant water was poured off from the precipitated colour) rendered suitable for working by incorporation with their proper vehicles, of which there were some which appear to us very peculiar.

The following is a list of the colours commonly used during the Middle Ages, with their late Latin names:—

Vermilion	<i>Minium.</i>
Dragon's Blood	<i>Sanguis Draconis.</i>
Orpiment	<i>Auripigmentum.</i>
Yellow	<i>Crocus.</i>
Ochre	<i>Carum.</i>
Green	<i>Viride Græcum.</i>
Blue	<i>Azorium.</i>
Indigo	<i>Gravetum Indicum.</i>
White	<i>Album.</i>
Black	<i>Nigrum.</i>

These, however, were not the only colours used by the old illuminators. During the fifteenth and sixteenth centuries, carmines, lakes, ultramarines, and some other colours were freely introduced in the finer illuminations. The Italian artists liberally employed these pigments, and that with pre-eminent success, as may be realized on the examination of the two exquisite specimens of the work of Giulio Clovio (executed between the years 1525-1580), preserved in the Soane Museum, London.

There were two principal modes of gilding or lighting-up the ornamentation of manuscripts practised by the illuminators of all periods, with the exception of that known as the Celtic in Ireland.

The first, and by far the most brilliant and effective, is gilding with leaf-gold. This mode, in which was employed fine gold beaten out into the form of sheets or leaves of great tenuity (although by no means so thin and tender as we find it in the gold-leaf of our time), was resorted to, generally speaking, when

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surfaces of any considerable size were to be covered. The style of gilding with leaf-gold which is most commonly met with in the finer illuminations of the fourteenth and fifteenth centuries is that known as *raised gilding*: this is nothing more than the leaf laid on a bed, composed of minium and white-of-egg; or a preparation of chalk, or some earthy pigment, and size, called *raising gesso*, laid, by successive coats, on the surface of the vellum, and gradually rising from it, sometimes to a considerable thickness in its higher portions, the edges being kept very thin and almost flush with the surface of the vellum. The leaf was attached by means of a suitable gold-size, and subsequently burnished to great brilliancy.

The second, and much simpler, method is gilding with powder-gold (or "liquid gold" as it is sometimes, but erroneously, designated), followed, in most instances, when the surfaces or ornaments to be gilded were small, or for the purpose of lining, hatching high-lights, and diapering upon coloured grounds. The powder thus used was probably produced from leaf-gold by a process of milling in some holding body, easily removed by subsequent washing, probably honey. The powder was mixed with some pure size, and laid on with a pen or brush, and finally burnished.

Silver was used to a considerable extent in ancient calligraphy, but only to a small degree in the illuminations executed during the Middle Ages. Unlike gold, it is liable to oxidation, and this fact naturally checked its use then, just as it should do now. In old manuscripts we find the silver in a very bad state; in most cases almost black, and practically perished.

PART III.

Materials used in the Modern Practice of the Art of Illuminating.

Colours.

IN the days of the old illuminators all the pigments that were used were most carefully selected, not only on account of their absolute purity, but also on account of their brilliancy; and to secure both these properties intact they were ground with great labour, and otherwise prepared within the walls of the *scriptoria*. It is unquestionably to these facts that the great excellence and durability of the colours we find in illuminated manuscripts are due, and notably in those executed during the fourteenth, fifteenth, and sixteenth centuries. Good and essentially durable colours are also to be found in earlier illuminations, although long usage and the inevitable effects of time have impaired their appearance.

We have no real cause to complain of the colours we have now at our command, notwithstanding the fact that in some directions they do not seem to reach the perfection of certain old pigments: and we have every reason to be thankful that we have not to undertake the tedious and fatiguing process of grinding by hand. Perhaps what we miss in modern illuminating colours are certain vehicles, which were employed during the best epochs of the art, and which imparted certain desirable properties to the pigments with which they were incorporated, including a great resistance to moisture and ordinary friction, and, consequently, extreme durability.

While it is impossible for one to say to what extent the colours now available for the illuminator's palette are able to defy the effects of time and dry exposure, we are able to affirm, from personal experience of quite half a century, that colours manufactured by Messrs. GEORGE ROWNEY & Co. have shown no indications of fading or decay up to the present time. We have illuminations which we executed, with the colours alluded to, in the year 1860, which are as bright to-day as when freshly executed.

Without troubling the reader with a complete list of the water colours at present manufactured, it will be sufficient to give the names and peculiarities of those which are suitable and more or less requisite for the practice of the Art of Illuminating on vellum and paper:—

BLUES.

1. Ultramarine.
- *2. French Ultramarine.
- *3. Cobalt.
4. Smalt.
- *5. Cœruleum.
- *6. Permanent Blue.
7. Prussian Blue.

REDS AND CRIMSONS.

- *1. Scarlet Vermilion.
- *2. Vermilion.
- *3. Scarlet Alizarin.
4. Indian Red.
- *5. Carmine.
- *6. Crimson Alizarin.
7. Rose Madder.

PURPLES.

- *1. Violet Alizarin.
2. Purple Madder.
- *3. Cobalt Violet.

BROWNS.

- *1. Burnt Umber.
- *2. Vandyke Brown.

YELLOWS.

- *1. Cadmium Yellow.
- *2. Indian Yellow.
- *3. Lemon Yellow.
4. Mars Yellow.
5. Chrome Yellow, No. 2.
6. Aureolin.
- *7. Italian Ochre.

ORANGES.

- *1. Deep Cadmium Orange.
- *2. Orange Vermilion.
3. Mars Orange.
- *4. Burnt Sienna.

GREENS.

- *1. Viridian.
- *2. Emerald Green.
- *3. Moss Green.
- *4. Oxide of Chromium.

BLACKS.

- *1. Chinese Ink.
- *2. Lamp Black.

WHITE.

- *1. Chinese White.

It is desirable that the artistic illuminator should possess all the colours above named in one form or another: those marked with asterisks should, however, be procured first, being practically indispensable for work of any variety and range of effects.

The following remarks on the nature and properties of the colours comprised in the above list will be helpful to the student both in selecting and combining the pigments.

BLUES.

1. *Ultramarine*.—This valuable pigment, the richest and purest blue in existence, is pre-eminently suited for illuminating, its only drawback being its present high price. It need only be used for small and very choice work. It forms a beautiful series of tints and body colours when paled with Chinese white, or combined with Chinese white and carmine. It should be obtained in the moist form. It is absolutely permanent.

*2. *French Ultramarine*.—A very useful colour, which, in ordinary work, ably takes the place of the true ultramarine. Combined with Chinese white, white and cobalt, and white and carmine, it forms a valuable series of body colours in blues and lilacs. It should be obtained in the specially prepared powder form. It is permanent; and, if good, it is strong and brilliant.

*3. *Cobalt Blue*.—A useful blue for illuminating, forming a class of pure and more or less pale azures in combination with Chinese white: the addition of a little carmine or crimson lake gives another fine class of tints. It should be obtained in the prepared powder form. It is permanent.

4. *Smalt*.—A very fine full-toned blue inclining to a violet tint. As it is not likely to be used, in combination with Chinese white, as a body colour it may be obtained in the moist form. It is, unfortunately, an expensive colour, and will, accordingly, be used only in choice work, and for small details. Being of a vitreous nature it is absolutely permanent.

*5. *Cœruleum*.—A very beautiful and pure blue, due to the presence of the oxides of tin and cobalt. It was introduced by Messrs. GEORGE ROWNEY & Co., and forms an invaluable addition to the illuminator's palette. It works well both in wash and body colour, and is permanent. It should be obtained in the prepared powder form.

*6. *Permanent Blue*.—A fine pale variety of artificial ultramarine, having less of the purple tinge of French ultramarine. It is a most desirable colour, forming very beautiful shades in combination with Chinese white; fine greens in combination with lemon yellow, cadmium yellow, aureolin, and chrome yellow; and fine purple tones in combination with crimson alizarin and carmine. It is, as its name implies, perfectly permanent. It should be obtained in the prepared powder form.

7. *Prussian Blue*.—This pigment—sometimes called Chinese blue—is not indispensable to the illuminator; but, in the moist form, he will find it useful in the formation of lilac and green tints. Used alone in washes it is liable to fade in long exposure to strong light.

YELLOWS.

*1 *Cadmium Yellow*.—A most valuable and beautiful pigment; particularly rich and glowing when of good quality. It may be combined with scarlet alizarin, crimson alizarin, scarlet vermilion, carmine, lemon yellow, and Chinese white, producing numerous brilliant and refined tints. It may be said to be invaluable to the illuminator, working well, and being permanent. It should be obtained in the prepared powder form. A small pan of moist colour will be found convenient for washes.

*2. *Indian Yellow*.—A fine and most desirable colour; very rich in its lighter washes, but inclining to a dull ochre tint when applied thickly. Mixed with carmine and lemon yellow it produces useful tints; and with the body blues it gives fine shading greens. It is of the most use in the moist form. Under ordinary conditions it is practically permanent.

*3. *Lemon Yellow*.—An indispensable colour to the illuminator, being of good body, and producing beautiful families of colours when combined with French ultramarine, permanent blue, cœruleum, cobalt, Prussian blue, scarlet vermilion, scarlet alizarin, crimson alizarin, viridian, oxide of chromium, and moss green. It can be paled with Chinese white, and deepened by cadmium or chrome yellow. It should be obtained in the powder form. It is strontium chromate, and is absolutely permanent.

4. *Mars Yellow*.—A useful pigment of a rich tint, inclining to a warm brown tinge when laid on thickly. It is much im-

proved by the addition of a little lemon yellow or cadmium. It is not absolutely necessary in illuminating. It can be used in either the prepared powder or moist forms. It is permanent.

5. *Chrome Yellow, No. 2.*—A powerful body colour; very useful in combination with French ultramarine and permanent blue, producing intense body greens, well suited for grounds, and also valuable for shading lighter greens. It cannot be depended on when used alone, turning darker and duller on long exposure to light and air: it is satisfactory in combinations of a deep tone. Should be obtained in the powder form.

6. *Aureolin.*—A delicate yellow, somewhat fuller in tone than lemon yellow, but not so rich as cadmium. It is a somewhat expensive pigment, being dearer than either lemon or cadmium yellow. It can be used for full washes, and is practically permanent. Should be obtained in the moist form.

*7. *Italian Ochre.*—A light and bright yellow ochre. As it is an earth coloured by a ferric oxide it is absolutely permanent. In combination with blues it forms a family of dead greens; and with Chinese white good light buffs. Should be obtained in the prepared powder form only.

REDS AND CRIMSONS.

*1. *Scarlet Vermilion.*—This is an absolutely indispensable pigment for illuminating; and every care should be taken to select it of the most brilliant character obtainable. It is a perfect body colour, flowing well, and drying mat and uniform. Combined with Chinese white, it forms a rich series of salmon tints, which can be shaded with the pure colour, or with ordinary deep vermilion very slightly paled with white. It forms full body crimsons in combination with carmine. It should be obtained in the prepared powder form; but the moist colour is convenient for very small details and line-work.

*2. *Vermilion.*—The ordinary deep-toned pigment is here intended. It is only second in value to scarlet vermilion. It is well suited for rubrication and line-work on account of its good body, even when laid on thinly, and its full tone. It is also suitable for grounds which are to be diapered with gold or dotted with white. It forms fine browns with burnt umber or lamp black. Deepened with carmine it is suitable for shading

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scarlet vermilion; or, slightly paled with Chinese white, for shading salmon colour, as mentioned in the preceding paragraph. It should be obtained both in the prepared powder and moist forms. This pigment was known in old times as *cinnabar* and *minium*. It is practically permanent.

3. *Scarlet Alizarin*.—A very beautiful scarlet colour, somewhat deeper in tone than scarlet vermilion. This is one of the valuable pigments originally introduced by Messrs. ROWNEY & Co. While it does not take the place of scarlet vermilion, it is very valuable for combination with other colours. It should be obtained in the prepared powder form. It is practically permanent.

4. *Indian Red*.—A permanent, dull, deep-toned red, derived from iron. It is seldom used alone except in shading; but is valuable in forming warm browns and dull tints in combination with lemon yellow and white. It is also useful in forming chocolate colours. It should be obtained in the prepared powder form.

*5 *Carmine*.—This splendid colour is the richest of the crimsons and may be said to be indispensable to the illuminator. It washes well, with great transparency and force, and is, accordingly, invaluable in shaded leaves and branchwork. It does not make agreeable tones when paled with white, unless a considerable proportion of vermilion is added. Used as a body crimson, it must have an excess of vermilion, otherwise its colour would appear a dull claret-red. With chrome yellow it yields many beautiful tints; and with cobalt and French ultramarine it gives good purple and violet tones. When applied in thin washes, and exposed for a considerable time to strong light, it fades; but used in combination with body colours it may be said to be permanent. For thin washes we recommend the use of crimson alizarin. Carmine should be procured in the prepared powder form, being best suited for body colours.

*6. *Crimson Alizarin*.—This beautiful and valuable crimson pigment, rivalling carmine in richness, was introduced by Messrs. ROWNEY & Co. It washes well, and being permanent, it has a great advantage over carmine and crimson lake. It combines with other colours in a way similar to carmine, as set forth in the preceding paragraph. It is invaluable to the illuminator in both its prepared powder and moist forms.

7. *Rose Madder*.—A delicate, transparent, and pure-toned carnation or rose colour. Very useful for illuminating. Mixed with a small proportion of Chinese white it yields beautiful and tender tones. While it is not quite permanent, it is more durable than carmine. It should be obtained in the moist form.

PURPLES.

*1. *Violet Alizarin*.—There are very few simple pigments of a purple or violet colour, and certainly the most desirable one is violet alizarin. It is a very beautiful colour, inclining, as its name implies, toward the blue scale: but this can be changed, when desired, by the addition of crimson alizarin or carmine. Fine body colours are produced by the slight addition of Chinese white. The student will form some useful tints by combining it with other red and blue pigments. It should be procured in both the prepared powder and moist forms. It is practically permanent.

2. *Purple Madder*.—A deep-toned, rich colour which inclines to the red scale. It works well in washes, and combines with other kindred colours and Chinese white, producing some desirable body colours.

*3. *Cobalt Violet*.—A pigment which holds in the purple scale a position similar to that held by cobalt blue in the blue scale. Like purple madder, it inclines toward a red tone. As a body colour, paled with white, it is useful for delicate effects. It is permanent.

BROWNS.

*1. *Burnt Umber*.—A rich warm brown pigment, of good body, and absolutely permanent. It enters into the composition of many quiet, useful tints, when combined with yellows, reds, and white. It is a valuable shading colour. It should be obtained in the prepared powder form.

*2. *Vandyke Brown*.—The most generally useful brown pigment for illuminating. It combines well with other colours forming chocolate tints, and, with white, producing good shading or graduated tones for branchwork, stems of floral designs, and conventionalized animals.

ORANGES.

*1. *Deep Cadmium Orange*.—This is the finest and most desirable simple orange pigment. It is rich in colour and absolutely permanent. It can be paled with cadmium or lemon yellow, and deepened with scarlet alizarin or vermilion. Paled with Chinese white, it forms a body colour of great delicacy and refinement of tone. It also forms a family of refined greens with the several blues that have been previously named. It should be obtained in the powder form.

*2. *Orange Vermilion*.—This pigment is a singularly vivid and light-toned vermilion, closely allied to scarlet vermilion. It is valuable in the illuminator's hands, either in its simple or in its several desirable compound forms. It can be paled with lemon yellow or chrome yellow. With Chinese white it forms beautiful tones. It should be obtained in the prepared powder form. It is, like all the vermilions, practically permanent.

3. *Mars Orange*.—A fine, deep orange pigment, inclining to the brown scale. It is a valuable variant; and produces a characteristic series of tints in combination with blues, crimsons, and white. It is desirable but not indispensable in illuminating. Being an artificial ochre, it is permanent. It should be obtained in the prepared powder form.

*4. *Burnt Sienna*.—A useful brown-orange, of perfect permanency. Works and washes well. Useful in producing, in combination with blue, a family of autumnal and dull greens, and for toning other pigments or mixtures. It should be obtained in the prepared powder form.

GREENS.

*1. *Viridian*.—A very rich and bright normal green, of great value to the illuminator. It is very forcible in washes, and forms beautiful body colours, paled with Chinese white, reduced by lemon yellow or cadmium, or deepened with permanent blue, French ultramarine, or Prussian blue. It is a perfectly permanent pigment.

*2. *Emerald Green*.—An indispensable pigment, very brilliant and vivid, having great power of lighting up other colours when

in juxtaposition with them. It is much brighter than viridian, inclining more to the yellow scale. It is opaque and permanent, but does not work well alone as a body colour. It can be mixed with white or lemon yellow, which impart better working qualities, but at the sacrifice of its individual character. It can be deepened with viridian, oxide of chromium, or permanent blue. It should be obtained both in the prepared powder and moist forms.

*3. *Moss Green*.—This indispensable and beautiful pigment is prepared expressly for illuminating by Messrs. ROWNEY & Co. It may be considered one of the most valuable colours adapted for the illuminator's use, being quite permanent, and of great body and opacity. It likewise works perfectly, drying a rich mat green. It forms a highly effective ground for richly coloured work; and is useful for shading emerald green or viridian. It can be paled with lemon yellow, cadmium, or chrome yellow—preferably with the first—and deepened with French ultramarine or permanent blue. With Chinese white it forms very useful subdued body greens. It should be obtained in the original prepared powder form.†

*4. *Oxide of Chromium*.—The opaque pigment of this name is a useful rich, deep-toned green, inclining to the olive scale. With lemon yellow and Chinese white it forms body colours extremely effective in leaf-work and shading. With burnt sienna and crimson alizarin, paled with lemon yellow in various proportions, it forms good dead or autumnal greens. It forms bright tones in combination with emerald green and a little lemon yellow. It is permanent; and should be procured in the prepared powder form.

BLACKS.

*1. *Chinese Ink*.—The only black material in every way suitable for outlining and lettering, working perfectly, and, when laid on thickly, drying with a gloss. It should be procured of the finest quality, in the stick form, and rubbed down as required. For outlining where colour is to be washed in, the ink should

† This valuable pigment was first prepared at our suggestion, and was named by us, in the year 1866. It still remains unsurpassed in the several properties above given.

not be used thick, otherwise it may run. A drop or two of a solution of bichromate of potassium largely prevents the ink from running when touched with water.

"Indian ink" in a liquid form can be procured, as prepared by Messrs. ROWNEY & Co. from the genuine Chinese ink; and the student may find this useful for outline and line work. An "Indelible Indian ink" in liquid form can also be obtained from the same manufacturers; they also supply an "English water-proof Indian ink," useful where much colouring is to be applied.

*2. *Lamp Black*.—A very useful body black, suitable for grounds or masses of a mat character amidst bright colours. It is also valuable in combination with other pigments: with chrome yellow it produces a peculiar quality of green; with vermilion a warm brown; and with white a series of grays of much use.

WHITE.

*1. *Chinese White*.—The pigment of the greatest use to the illuminator, combining with, and giving body to, all colours with which it may be mixed. Used alone, in the form of lines, dots, or ornamental figures upon gold or coloured grounds, it possesses great beauty and power of effect. It is permanent, and works well, drying bright and hard. This pigment should be procured in the moist form, in compressible tubes, for it will be found not only most convenient but also most economical when so made up.

GENERAL REMARKS.

The above list of pigments will, we are of opinion from practical experience, be found to include all that are necessary for the practice of the art of illuminating: they may all (with the exception of Chinese white and Indian ink) be procured in three different forms; namely, in powder, moist, and dry cakes. Any or all of these forms may be used by the illuminator, but the colours prepared in the condition of powder are unquestionably superior, in the great majority of cases, to either moist or cake colours.

What is most desirable and generally useful for artistic illuminating is a series of pure, permanent, and intense body colours, capable of being kept clean and uncontaminated while

in constant use. In moist or paste colours in pans, this is next to impossible, altogether so for any length of time; in tubes there is no great difficulty on the side of cleanliness; and, accordingly, when moist colours are required, those in tubes should in all cases be preferred. Cake colours are least suited of any for illuminating, from the great difficulty of obtaining by their use a body character or a large amount of solid colour. They are only serviceable when delicate washes are required, and these are seldom resorted to in high-class illuminating.

Powder colours, as manufactured expressly for the illuminator's use, are at once the best and handiest of all. First—from the ease with which any desirable quantity of an intense body can be immediately obtained. Secondly—from the perfect cleanliness in which they can be kept before and after mixing. Porcelain "cabinet-nests" should be used for mixing the powders in, because the colours can be preserved in their mixed condition, clean, and for any length of time: when dried up, they can be quickly brought into a working condition by a brush and a little water. Economy is thus secured—a very desirable thing in the case of expensive pigments. In mixing the colours, pure water—distilled or boiled—should be used.

Messrs. ROWNEY & Co. have produced a complete set of illuminating colours, in prepared powder, of great body, strength, and brilliancy; which, containing a strong glutinous substance, only require the addition of water and mixing with a brush. We have long used them, and can, with perfect assurance, recommend them to all who may be desirous of procuring perfect working materials.

We feel it our duty, in closing our remarks on colours, to warn the illuminator against the use of inferior or untrustworthy pigments. It would be poor encouragement to the artist to find, in the course of a few months, works over which he has perhaps spent weeks, fade or become unsightly through the insufficiency of the colours he used. Yet such would certainly be the case were he not very careful in his selection.

Metallic Preparations.

Certain metallic substances have been, and still are, largely used in the higher branches of the illuminator's art; and when

properly applied, add greatly to the beauty and brilliancy of the colours among which they are introduced: indeed, it is doubtful if the term *illumination*, in its true sense of *lighting-up*, can be properly applied to an adorned page in which the brilliancy of burnished gold is altogether absent.

The forms in which suitable metals are prepared for the illuminator's use at the present time are as follows:—gold leaf, silver leaf, aluminium leaf; gold, silver, and aluminium in shells, saucers, and china pans. These metals can also be obtained in a so-called liquid form.

We must warn the student against the use of any imitation preparations, such as cheap bronzes and liquid gold and silver "paints," none of which will produce satisfactory results, or undergo exposure untarnished.

In preference to silver leaf, or any preparation of silver powder, we strongly advise the use of aluminium leaf and the other forms of the metal mentioned above. It is true that aluminium is not so brilliant as silver; but it must be borne in mind that, even when protected by a varnish, silver will become tarnished, and duller than any form of aluminium, in a very short time. We can see the complete failure of silver leaf where it has been applied in the old manuscripts: in many cases it has become completely oxidised and almost black.

Gold leaf—is pure gold beaten out into leaves of great tenuity, preserved for use between the leaves of small books, each book containing twenty-five squares of gold. This is the best and most durable form of gilding material, but the most difficult to manipulate well. It is to be regretted that specially beaten leaf has not been produced for the illuminator's use, say, at least double the thickness of the ordinary commercial product. The illuminators of the fourteenth and fifteenth centuries evidently used gold leaf of great substance in comparison with the flimsy kind now manufactured.

Silver leaf—is of the same nature as gold leaf, but, necessarily, of greater thickness.

Aluminium leaf—is the pure metal beaten out into leaves of much greater substance than either of the above; it is sold in books of larger size than those containing gold.

Shell gold—is a very fine gold powder prepared and placed in small mussel-shells, hence its name. This is a most convenient

form when small quantities of the metal are required to be laid on by the brush, as is fully described farther on, in Part IV.

Saucer gold—is similar to shell gold, but placed in small china saucers instead of mussel-shells. The saucers, containing more gold than the shells, are necessarily more expensive.

Solid cake gold—is the same gold powder as above alluded to, in the form of small oblong cakes, laid in china pans. This form is the most convenient when a considerable amount of the metal is required. It is, of course, proportionally expensive; each cake being about equal in price to seven of the largest shells (No. 1).

Shell green gold—is a valuable addition to the list of metallic preparations for the illuminator's use. It can be effectively associated with certain colours which produce pleasing contrasts. It is the same price as the ordinary shell gold.

Shell and cake silver—are identical in their disposition with shell and cake gold, as above described.

Shell and cake aluminium—are also the same in disposition as shell and cake gold.

Gold, silver, and aluminium are also supplied in a "liquid" form in bottles. The price of the gold in bottle is the same as gold in the cake form.

Gold paper has been recommended for the illuminator's use; but it is only of any value in large work of a hasty and temporary character. No true artist would ever resort to so makeshift an expedient. The paper has to be cut in the form required, and then pasted on the surface of the illumination prepared for it.

Brushes.

The brushes best suited for illuminating are red sable, being stronger and having more spring in their hair than either brown sable or camel's hair; and they retain a finer and firmer point, when charged with body colour, than any other description of brush. All sizes are required for different classes of work, from the No. 1 size to the No. 6 size. All these should be obtained in handles with seamless albata ferrules, and of the round variety.

The brushes required of each size are as given in the following list, according to Messrs. ROWNEY's catalogue:—

No. 1	.	.	.	.	2 brushes.
„ 2	.	.	.	.	3 „
„ 3	.	.	.	.	4 „
„ 4	.	.	.	.	3 „
„ 5	.	.	.	.	2 „
„ 6	.	.	.	.	1 brush.

Brushes that retain a firm point when fully charged should alone be used; for a brush that splits into two or more points is absolutely worthless, save for mixing colours.

A few camel's hair brushes of sizes Nos. 5 and 6 should be procured, for mixing up the various colours with water, and keeping them in proper working condition; thereby saving the more expensive sables from undue wear.

All brushes should, after use, be cleared of colour, well washed in clean water, and brought to a fine point before being laid aside. Brushes used for gold should be washed in water contained in a shell, so that the gold powder may be deposited and preserved.

A flat camel's hair brush, about $2\frac{1}{2}$ inches wide, is useful for damping; although for general purposes a small soft sponge is superior: as neither is expensive, both had better be procured.

Pens and Pencils.

It is very important for the illuminator to possess a good selection of pens; for without such he will find great difficulty in executing in a satisfactory manner many of the more important branches of his art. The pen is in constant use—scrolling, outlining, shading, hatching, or lettering—in close attendance on the pencil and brush throughout the execution of all classes of work. Both steel and quill pens are required for illuminating; and of each class of pen certain different kinds should be procured.

Steel pens are mostly used for outlining and scrolling, and for executing all the delicate linework ornaments introduced in illuminations. Pens of several breadths of point are required, from the “mapping-pen” to the flat pointed “engrossing pen.” For general purposes, such as outlining and fine scrolling, there is no better pen than Gillott's No. 303: it combines strength and size with a beautifully tapered and fine point, while it holds a desirable amount of ink or colour. For bolder work in ink and general

work in colour, a broader pointed pen may be used with advantage, such as Gillott's No. 404.

Quill pens are used principally for hatching—that is, working gold or colour in lines or small designs upon any coloured ornament or ground—and for small lettering. For hatching, a very soft goose-quill is the most suitable; and its point, when accurately split and cut to shape, should be scraped with a sharp knife until the necessary flexibility is secured, so that it can lay its gold or colour without scratching the ground below. For very fine and delicate work, a crow-quill will be found suitable; but it is so little that it holds a very small quantity of colour, and is not a comfortable pen to manipulate.

For writing or lettering of a reasonable size, a quill having a good spring and considerable durability is necessary; and a well-baked turkey-quill is, accordingly, to be preferred to the largest goose-quill procurable. The pen must have a point proportionate to the size of the text to be written—a little less in breadth than the thick strokes of the letters. Hair lines are made by moving the pen sideways. In cutting the quill, care must be taken to have equal material on each side of the split, and to give to the pen a clean, smooth, inclined point; although the student may prefer a point cut rectangular to the split. It is not possible to give more explicit instruction in this direction, for so much depends on the hand that is to guide the pen, and the class of lettering to be executed: a little experience will add all that is necessary to hints we have given.

On examining certain old manuscripts, and notably such a one as the Book of Kells, one is at a loss to form a clear idea of the pens used by the early illuminators; and one is lost in wonder at the marvellous skill and certainty of the hands that held those pens.

Few pencils are required by the illuminator: one strong hard pencil, and an HHH fine drawing one are all that are absolutely necessary; the former for use in preparing the design or cartoon, tracing the same, and any ordinary work; the latter for forming the guide lines of the lettering, the outlines of borders and devices, &c., upon the vellum or paper page. It is also very suitable for transferring the tracing, being, when properly sharpened, in some respects superior to the ivory tracing-point, which does not clearly mark any departure from the tracing.

Drawing Instruments, etc.

It is of the greatest service to the illuminator to possess a set of good drawing instruments, of which the following is a list:—

Divider, 4½ inch.	Drawing-pens.
Compasses, with pen and pencil points.	Ivory tracing-point.
Bow-pen.	Straight-edge, steel.
Bow-pencil.	Set of small curves.
Spring bows, set of three.	T-square, and set-squares 45° and 60°
	Drawing-board, 24" × 19"

With these instruments, and after a little instruction or practice in their manipulation, the student will experience no difficulty in properly laying out and arranging his design. The drawing-board and T-square are most important articles in the hands of the illuminator who aims at accuracy in his work; and we have been surprised to find practically no mention made of them or their use in the several manuals on the art of illuminating that have been issued. We strongly advise the beginner, if not already familiar with the use of drawing instruments, to get a few lessons in their proper manipulation; for we can assure him he will find the time so occupied to have been well spent.

A set of small-membered curves are of the greatest use for guiding the drawing-pens while inking-in the lines of scrolls, branchwork, and other ornaments, originally sketched by free-hand. Select curves that present the most graceful sweeps.

The compasses and bows may frequently be used for the same purpose (and also for making the cartoon); but it being more difficult for the student to strike a "*line of beauty*"—which is never strictly developed on the line of the circle—with them than with the curves, he should use the latter in preference. As the circle and arcs of the circle occur in many devices in legitimate designs the use of the instruments is imperative. The student should acquire a perfect control of the drawing-pen in the production of lines of every possible size. Of its great use in fine lettering we speak in the succeeding Part. We strongly advise the tyro in illuminating, as, indeed, we do the advanced student, never to trust to the unaided hand that which can be better done by the aid of instruments, for no human nerve can acquire their precision.

Burnishers.

There are two forms of burnishers useful in illuminating; namely, the flat and the pointed. These should be of agate, perfectly true, and highly polished. The flat, or straight-edged broad burnisher is used for bringing up large flat surfaces of gold, and should alone be applied to gilding executed with powder or shell gold, without raising preparation. The pointed burnisher is useful in diapering or lining on gold, and for burnishing raised leaf gold, and very small details.

Vellum, Cardboard, and Paper.

Of all the materials adapted to receive illumination, vellum stands pre-eminent. Precedent in itself might well dictate its use, for all the finest illuminated MSS. in existence are executed on it: thus it is that we ever connect this fine material with the art of illuminating itself. Vellum, however, was not exclusively used by the artists of old. At an early period paper was largely employed in the countries of the East, long indeed before it was introduced into the *scriptoria* of western lands.

Vellum can be procured prepared for the use of the illuminator, and of any size up to whole skins; though unfortunately not of the beautiful thin, opaque, and silky quality we find it in Books of Hours and other choice MSS. of the fourteenth and fifteenth centuries. It is, on account of the beauty of its texture and the ivory-like finish of its surface, as well as its delicate cream tint, the most desirable material for the illuminator's art; though from its expense and the great care required in working upon it, it is somewhat inferior to cardboard or specially made "vellum drawing paper" in the hands of the tyro.

Vellum, as we now know it in the market, is manufactured from the skin of the calf, which is treated with lime to get rid of all fat and fleshy substance, and afterwards washed to remove the free lime, stretched on a frame, and carefully scraped with a knife to remove all undesirable matter. The skin is then finished by being washed with a weak acid, bleached if necessary, and, when absolutely dry, surfaced by grinding with pumice-stone. It appears that the fine, thin, silky vellum we have above alluded to, was prepared from the skin of the kid. While it may, properly, be

classed as a superfine parchment, it presents all the desirable characteristics of the choicest vellum.

For illuminating, the finest and whitest skin should be selected; and before it is worked upon it had better be stretched upon a clean and perfectly smooth and flat drawing-board. This may be done by very slightly damping the reverse surface of the vellum with a clean wet sponge, and then immediately glueing the edges all round to the board. If the piece of vellum is large, about half-an-inch along each edge should be turned up toward the face side, so as to render the glueing down clean and easy. These edges should not be damped, but only the under surface up to them. Use good hot glue. When the vellum is quite dry, it must be well pounced with dry precipitated-chalk, which must then be thoroughly rubbed all over the surface with a flannel roll.* This removes all tendency to greasiness which might remain on the skin. The chalk must then be entirely removed from the vellum with a clean cloth. All pencil work on the vellum which is to be ultimately removed must be applied as lightly as possible, and cleared off with dry, stale, white bread only.

The next best material for illuminating is that which has long been known as "Whatman board." This superior article is manufactured from the best Whatman's Turkey Mill drawing paper, of all necessary sizes and thicknesses, and is brought to a beautifully hard and smooth surface by being hot-pressed by powerful machinery. "Whatman board" is, indeed, a valuable material, being of all substances the safest and easiest to work upon, and moderate in price. The most suitable thickness to use is either three- or four-sheet: the size is only limited by the largest hand-made drawing paper manufactured, which is "Antiquarian"—52½ by 30½ inches—; but it is not likely that a larger size than "Royal"—24 by 19 inches—will be used by the most ambitious student.

"Bristol board" is a much less desirable material than Whatman board, and is, accordingly, only suitable for elementary work. Its surface is much less absorbent, and neither takes nor holds the colour so well as Whatman Board. Its cheapness recommends it to the beginner, and for common work.

* This is made by tightly rolling a long strip of clean flannel, about 2 inches wide, until a diameter of about 1½ inches is reached. The roll has then to be bound around with string, and finished by having one end shaved flat with a razor or equally sharp knife. The roll should always be protected from dust.

There are several kinds of paper which are suitable for the illuminator's use, combining the necessary properties for the reception of pen and brush work. Chief among these are Whatman's hot-pressed, hand-made drawing papers; and especially Whatman's "vellum drawing paper," seamless, of a delicate cream tint, stout, and having a very fine surface. This paper is manufactured expressly for illumination, and can be obtained from Messrs. ROWNEY & Co., in "Royal" and "Imperial" sizes.

When paper of any considerable size is used, on which fine illumination is to be executed, it should be stretched in a similar manner to vellum. When small pieces of paper only are required, it is sufficient to attach their corners by paste or gum to the drawing board.

Great cleanliness should characterise every branch of the illuminator's work; so we recommend every part of the vellum, board, or paper to be always kept covered, save just the portion which is being operated upon by pencil, pen, or brush.

It is very desirable to use a tracing paper well adapted to receive fine pencil lines, and to be sufficiently thin and tough to transfer properly without requiring much pressure by the tracing point. The surface should be as mat as possible, so that it may hold the pencil point: glossy paper is to be avoided if delicate tracing is to be executed.

The transfer paper should be made by the student. A sheet of very thin paper, such as is used for fly-leaves over engravings in bound books, is taken, and one side is well rubbed over with fine powdered black lead until a very thin and uniform coating is obtained. All the free lead is to be removed with a piece of cloth, until the surface will not soil white paper against which it may be laid and simply pressed by the hand. When a transfer is made, there should be nothing left on the surface of the vellum or paper beyond the clear lines of the design. After the design is inked-in, or otherwise permanently fixed, any of the transfer that may require removing or clearing should be gently rubbed with stale white bread. Soft "Express rubber" may be used on board or paper, but not on vellum.

PART IV.

Manipulatory Processes.



WE now come to the most important branch of our subject, which embraces all the manipulatory processes necessary for the execution of a genuine and artistic work of illumination; and we trust that the student who has read the previous parts of our treatise feels sufficiently interested in the study of the most fascinating of all the decorative arts to follow us yet further.

To the student eager to acquire proficiency in the practice of illumination there is a great treat in store; and we crave his earnest attention while we submit for his consideration, and we trust instruction, the experience of many years of constant study and laborious practice in every branch of the art.

Yes, good student, years: he who would become in truth an illuminator must not for one moment think that weeks or months will terminate his study and practice. If they were sufficient to do so, the charm which dwells with the art would have, indeed, a brief existence, instead of increasing, as it should do and always does, day by day continually. The student must realize and bear in mind that he is *no illuminator* who for a time takes up the implements of the art, to execute a book-mark for a friend, or to adorn some fair lady's album with gold and colour, and then consigns them to the dust and darkness of a drawer until some such-like call prompts their use. How different is he—the *true illuminator*—who toils, yet feels it not, day after day, in every spare hour, and through the night, far into the hours of the morning; who travels to wherever an old manuscript can be seen; who wanders abroad among the beauties of Nature; who bears home to his quiet studio the wild leaves and flowers of the forest

and the gems of the garden, to convert their wondrous forms to the beautiful conventionalisms which are to adorn the labours of his hands, careless, perhaps, whether other eyes see them or not. Other eyes will see them, however, and many tongues will convey to him a full measure of praise.

Lettering.

It is of the utmost importance that the illuminator should be a good calligraphist; therefore the student should spare no pains to acquire a proficiency in this branch of his art. No beauty present in the illumination will be an excuse for a bad piece of text or lettering; while beautiful calligraphy will go far to cover shortcomings in the illumination.

It is true that during the Middle Ages the scribe and the illuminator and miniaturist were almost invariably different persons, though generally working in concert, and within the precincts of the *scriptorium*. It would, however, be very inconvenient for the illuminator of the present day to have to depend upon the labours of another hand for the text of his illuminations.

Perhaps there is nothing more calculated to astonish one, while examining the manuscripts of the Middle Ages, than their beautifully-executed text. Faultlessly regular in every line, on every page, perfect in the form of every letter, yet with an artistic freedom which speaks of long practice and rapidity of execution. We need never hope, in our lives of bustle and varied occupations, to successfully imitate such work of the old scribes. We may say the art of the calligraphist has, with the necessity for its constant practice, gone for ever. We have examined hundreds of pages of beautiful writing, the letters of which stood less than an eighth of an inch high, without detecting one false line, mis-shapen letter, or a trace of an erasure.

Be not discouraged, good student; you may, and doubtless will if you persevere, attain the necessary expertness in writing, although your hand may never execute work equal in every respect to that of the monks of old.

It is only possible to give very general directions to the beginner, but we trust they will be sufficient to start him on the proper way to success, assuring him that, without the most severe practice, rules or directions are of no avail. The student should carefully

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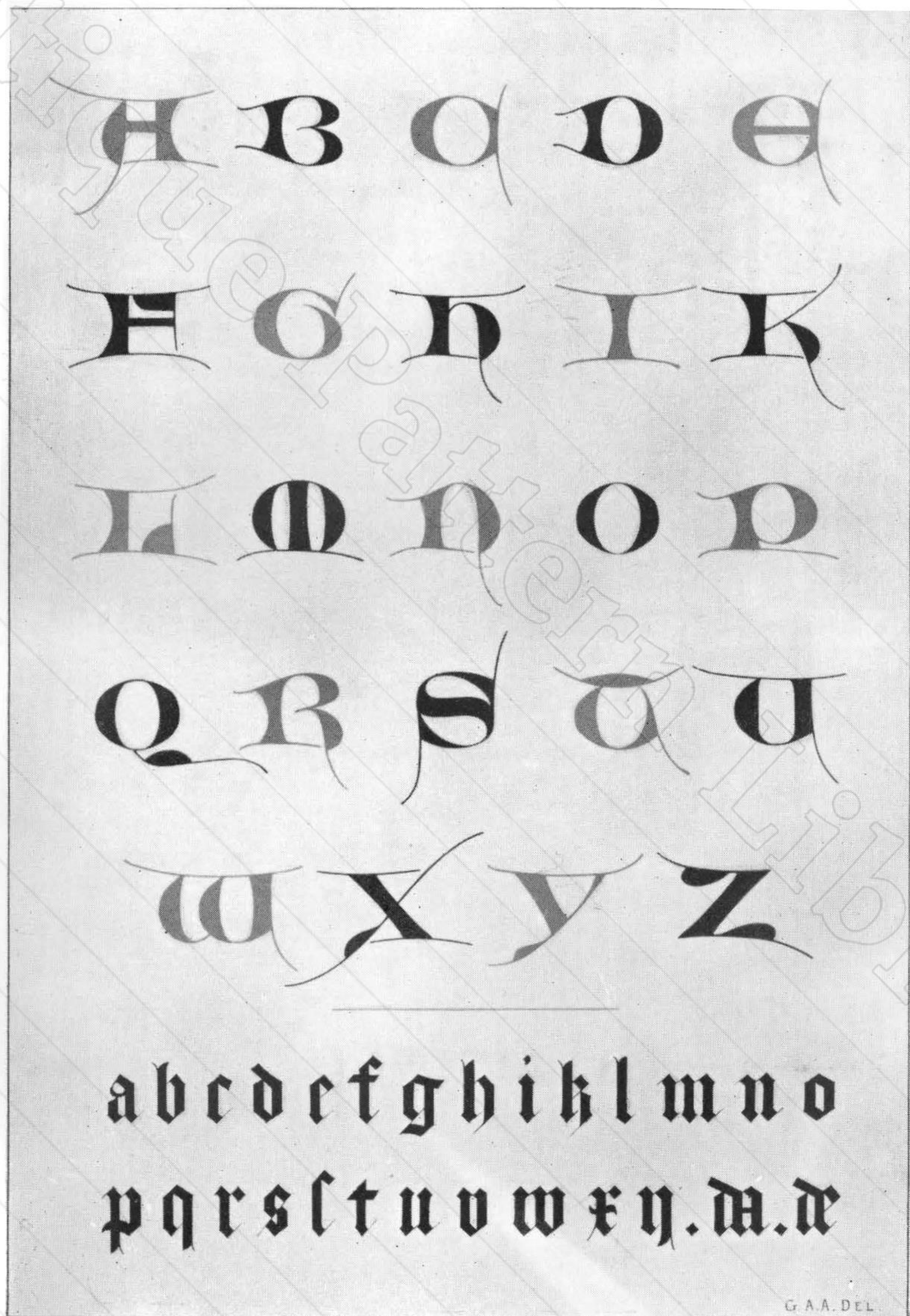
examine the texts of such manuscripts of the thirteenth, fourteenth, and fifteenth centuries as he may get access to; notably such as are exposed to public view in the libraries of the British Museum and the Victoria and Albert Museum, London. He may with great advantage sketch the several forms of the letters such manuscripts present, and afterwards reproduce them with pen and ink; ultimately comparing them with the originals. To those who have no opportunity of examining actual MSS., the several reproductions given in the historical part of the present treatise will to some extent be helpful. Ordinary Reference-Libraries contain works on illuminated manuscripts, in which the student will find fac-simile reproductions of great interest. Time spent over the study of such works will, as we well know from personal experience, not be time lost.

On the lower portion of Plate XI is given an alphabet of a very suitable style for general use, based on fourteenth-century models. This alphabet should be diligently practised by the student in various sizes; but before essaying complete letters, he should practise the free-hand production of such vertical lines as the letters present, for regularity in this direction is as essential as it is difficult: once attained, lettering becomes easy. The quill pen must, of course, be cut with a point sufficiently broad to execute the lines by single strokes, and at such an angle as the student finds most suitable and convenient for his hand.

In proceeding to letter, first draw double lines (in very faint pencil and with the T-square) across the space to be filled with text, in distance from one another equal to the height of the intended letters. The space between these double lines may vary according to circumstances: the best proportion, for what may be considered close lettering, being about one-and-a-half the depth of the text lines. Red lines are sometimes drawn between the rows of lettering; and when these are to be introduced, it is advisable to rule them either in pencil or colour, previous to commencing to fill in the writing, as they serve as guides to the long strokes of the letters **b d f g h j k l p q t u z** the remaining letters **a c e i m n o r s u v w x** being confined, practically, between the text lines.

Placing the alphabet that is to be followed before him for reference, if necessary, the student must carefully write in letter by letter with the broad pointed quill pen: the hair strokes being

PLATE XI.



Antique Pattern Library

done at once by using the quill edgewise, or afterwards with a No. 303 steel pen, already alluded to in the preceding Part.

In the process of lettering, spaces must be left for the large initials and the small capitals, which have to be executed along with the rest of the illumination; all of which will have been previously schemed, although not fully drawn for the actual work.

When the lettering is to be of considerable size, the unaided hand cannot well be depended upon; and the T-square and drawing pen may brought into requisition with the best results, as the desirable elements of regularity and verticality are secured. The corresponding lines given in the accompanying illustration will make the mode of procedure clear; one line showing the unfinished letters as left from the drawing-pen, and the other showing the letters completed by the ordinary writing-pen. The only difficulty attending this method, after acquiring reasonable skill in the use



of the drawing-pen, is the necessary calculation in spacing the letters in their unfinished state, but a little practice will enable the student to overcome this, and his care and patience will be amply rewarded in the satisfactory nature of the work produced.* Practice alone can make the student expert in the beautiful art of calligraphy, and upon it he must depend, not being daunted by early failures.

INITIAL AND CAPITAL LETTERS.

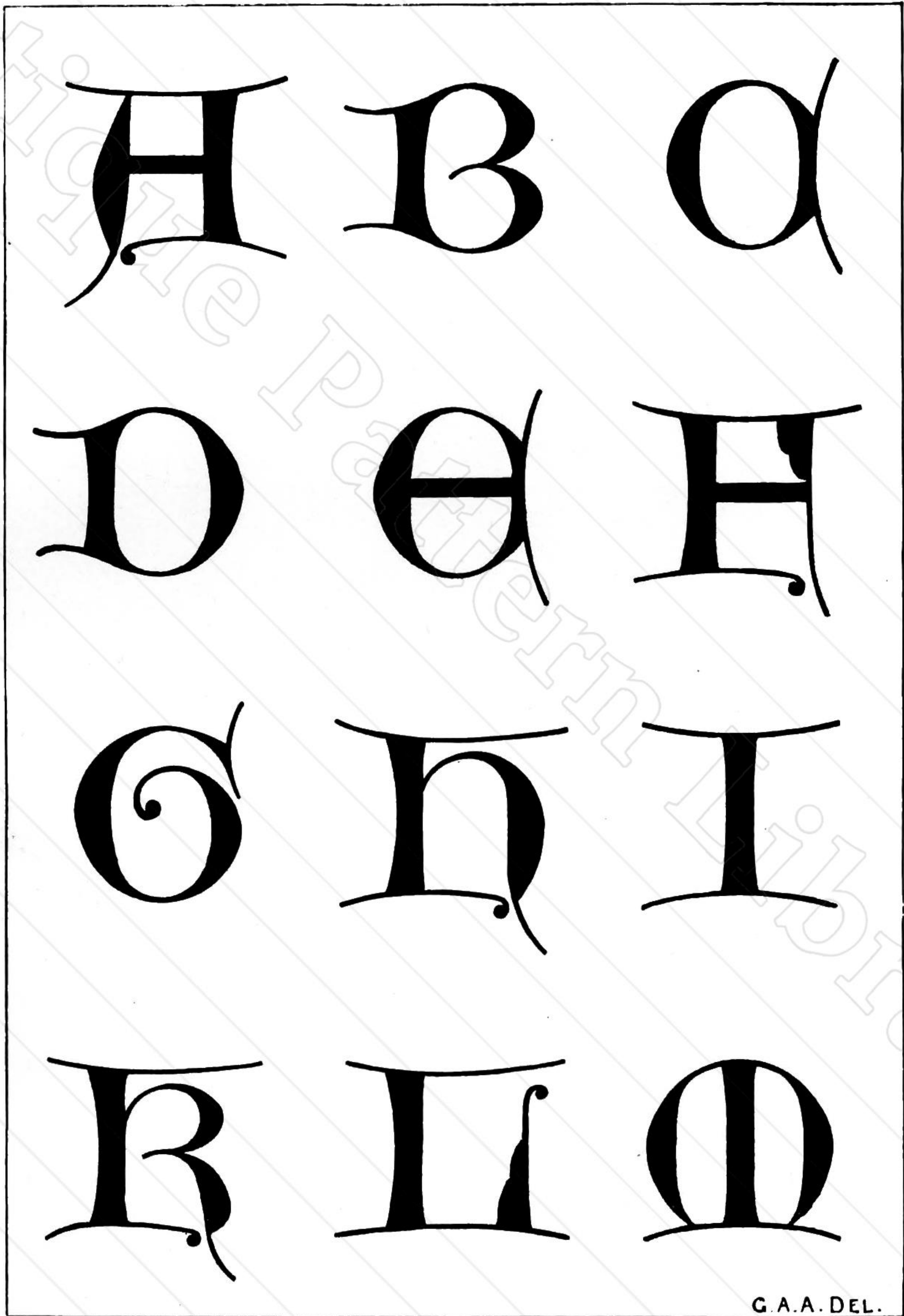
It is of the greatest importance to the illuminator that he should be practically familiar with the best and most thoroughly characteristic forms of the initial and capital letters of any style or period

* We executed the whole of the text of the three chapters of Saint Matthew's Gospel, in the original illuminations of our Illuminated "Sermon on the Mount," by this method.

of illumination in which he may be designing. To acquire this knowledge he must carefully study either original manuscripts, or such works as contain fac-simile reproductions from such manuscripts. It is, of course, quite impossible, in a necessarily circumscribed treatise like the present, to give anything approaching a representative series of such initial and capital letters as are to be found in the finer manuscripts of the twelfth, thirteenth, fourteenth, and fifteenth centuries; but what we are able to furnish the student with will be of great use and suggestive value. On the accompanying Plates XII and XIII is given an alphabet of capital letters in the style of the fourteenth and fifteenth centuries. Great care has been taken, in the rendering of the letters, to retain the true and characteristic forms of the originals. The student will do well to study the letters and to practice copying them free-hand, so as to familiarize himself with all the peculiar curves and proportions the letters present; and be able, from memory, to design any letter, either as an initial or text capital, retaining the true spirit of the old work. In no work known to us is so serviceable an alphabet given; it has been compiled with careful study from fine illuminated MSS. in our own possession and in several great libraries. Although the capital letters shown on these Plates are, necessarily, given in solid black, so as to clearly define their forms, they would, when associated with black text, be executed either in red or some other effective colours; or, when a rich effect is desired, they should be rendered in either flat or raised gold. When such letters are enlarged so as to be suitable for initials, varying in height, say, from one to three inches, they may be enriched by having their heavier portions either rendered ornamentally in two colours, after the fashion met with in fourteenth and fifteenth-century manuscripts, or panelled and enriched with foliage more or less conventionally treated. Numerous fine examples of this treatment are to be found in fifteenth-century illuminations.

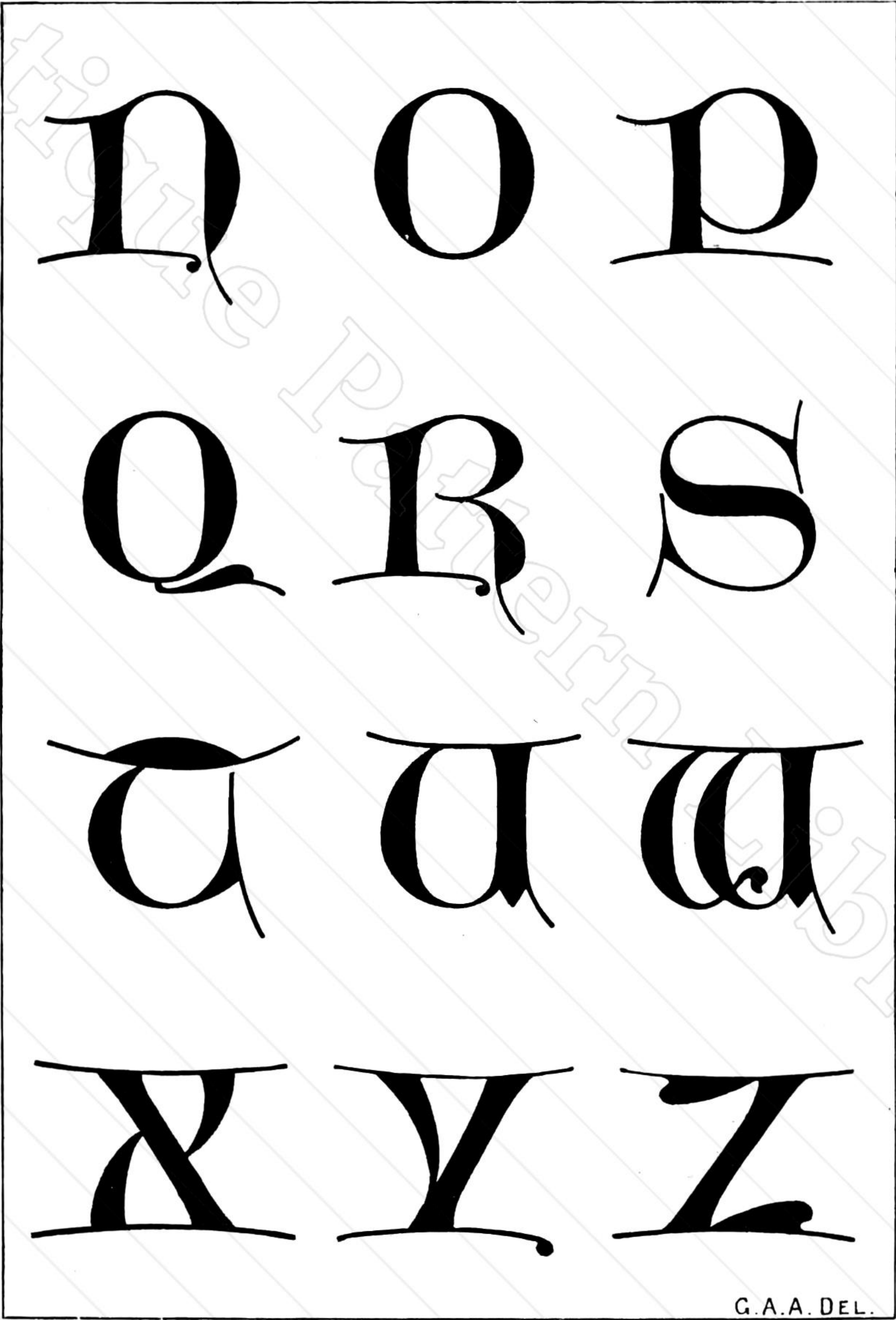
On Plate XI is given an alphabet of capitals suitable for insertion in lines of text. The alphabet has been carefully compiled from fourteenth-century manuscripts; and, accordingly, the capital letters strictly agree in style with the text alphabet given on the lower portion of the same Plate. When the spacing between the lines of text is not sufficient to admit of the full sweeps of the thin members of the capitals, they may be made much shorter than shown without any serious loss to the spirit or beauty of the

PLATE XII.



Antique Pattern Library

PLATE XIII.



Antique Pattern Library

letters. The capitals, when inserted in the black text, should be executed in gold or red, although blue, green, or other full-toned colours may be used for them if some special effect is aimed at. Fine pen-work ornamentation can fill the interior spaces and surround the exterior of the letters, with good effect: it should always be executed in contrasting colours.

On Plates IV and V is given an alphabet of very graceful initial letters of twelfth-century style, which ought to be very carefully studied by the modern illuminator. This alphabet has been described in the Historical Part of this treatise, in which the Plates are inserted.

Outlining.

We now come to the consideration of the earlier manipulatory processes of the illuminator's art, which group themselves under the head of Outlining, and which must be practised before any colouring and gilding can be proceeded with.

Under this head, four distinct processes are included; namely, cartoon drawing, tracing, transferring, and inking-in or outlining.

Previous to proceeding to draw the cartoon, it is, of course, necessary that the idea for the design of the illumination be formed in the mind of the artist, to which he may give some tentative shape by a few dashes of his pencil on a piece of waste paper. As the design is essentially a mental work—an exercise of the inventive faculties, guided by the knowledge acquired by careful observation and study—it cannot be pronounced a manipulative process; and, accordingly, we do not specially touch upon it in this Part of our treatise: it is gone into, so far as the limited space at our disposal permits, in the concluding Part.

In the following instructions, all the processes above mentioned are given in their proper order; that is, in the order in which the student must practise them in executing his illuminations.

PREPARING THE CARTOON.

The Cartoon is a correct and carefully drawn pencil sketch of the design of the illumination—the first embodiment of the artist's thoughts—on which every detail so far as the outlines are concerned must be executed and perfected. This flower must be improved; that scroll corrected; a leaf inserted here; a half-opened

flower there, the space will not admit of a full flower, yet something in rich colour will be required there to balance and harmonize: such will doubtless be the thoughts flitting through the illuminator's mind, as he bends over his cartoon, and such should be the nature of his thoughts if he be a true artist.

To prepare the cartoon the student should proceed in the following manner:—Stretch a piece of good smooth drawing paper (a little larger in size than the extreme limits of the intended design) upon a drawing-board, and draw or trace on it the boundary lines of the text, with the spaces for the initial and capital letters, terminal slips of the incomplete lines, &c. It is advisable to render these outlines permanent by inking them in with a drawing-pen. We recommend this, because however much the India-rubber may be resorted to during the drawing of the design, it will leave the boundary lines intact.

The rest is straight-forward work. Lay down the design, step by step, line after line, until, with its hundred alterations—dictated by the fertile imagination and the critical eye—it is found to be satisfactory in every respect. A careful study of Part V and the several illustrations given throughout the treatise will greatly aid the student in developing his design. Practice alone will bring correctness and precision of execution; and such precision must not be neglected in preparing the cartoon, for much depends upon it in this early stage of the work.

TRACING.

The finished cartoon must now be covered with a piece of thin tracing paper, of the quality recommended in the preceding Part, and an accurate transcript of the design made by going over every line of the same with a sharp pointed good hard drawing-pencil. Care must be taken to make a clean and distinct outline of every detail, or the value of the transcript will be to a great extent lost. In tracing, an opportunity is given to alter or improve any crude or undesirable form which may exist in the cartoon.

In tracing coloured examples or old illuminations, the student should proceed in precisely the same manner as above directed for cartoon tracing, with, perhaps, one difference; namely, in copying old work he should rigidly adhere to the original outlines, be they good, bad, or indifferent; that is, if a fac-simile is aimed at.

TRANSFERRING.

The tracing, after completion and removal from the cartoon, must be placed in proper position over the sheet of vellum, paper, or cardboard to be illuminated, and on which the text has already been executed, and temporarily fixed at two corners to the drawing board. A piece of black-lead transfer paper (described in the preceding Part) must then be laid between the tracing and the sheet, with its leaded surface downwards upon the text, and the remaining corners of the tracing fixed to the drawing board. When everything has been correctly adjusted and securely fixed so as to prevent any movement of the tracing, the transferring may be proceeded with.

All the lines of the tracing must be carefully gone over with the ivory tracing point, or with a sharp-pointed HHH pencil, which is sometimes to be preferred because it takes a firmer hold of the surface of the tracing paper, and because any deviation from the lines of the design is immediately shown by the pencil marking the same. A moderate pressure should be used, only just sufficient to produce a clear transfer. If too great a pressure is given, a coarse, broad marking will be the result, which it is desirable to avoid, for the finer and lighter the transferred lines are (so long as they are distinct) the easier it is to ink them in.

When the tracing has been gone over, two of its corners (either at bottom or one side) may be detached, to admit of it being raised to examine the transfer. Any omission which is observed should be filled in by letting the tracing fall again in its original position, and by going over the incomplete portion with the tracer or pencil point. Any parts which may have been imperfectly transferred had better be removed with bread or soft rubber, and re-transferred correctly.

The reader may think the processes above described useless or superfluous: not so, however; the point to be gained is a clear, perfect outline, and the only means by which the beginner can secure this is by carefully following the several processes here described. Years of study and practice may give the eye and hand such precision and skill that in some cases cartoon drawing, tracing, and transferring may be dispensed with; although in intricate compositions, large initials, and such like, they can never be laid aside with any advantage or certainty of success.

INKING-IN.

Few directions are required for this final process connected with the execution of the outline. The transferred lines have only to be gone over very carefully and firmly with a fine steel pen. The Chinese ink must not be dark in the portions which are to be coloured; unless a heavy outline is desired, when such inks as Messrs. GEORGE ROWNEY & Co.'s "Liquid indelible Indian ink," or "English waterproof Indian ink," should be used, for these will not run while being touched with colour. All scrollwork and ornaments which remain in line only should be executed in very black ink or full colour, as the case may be.

The beginner will doubtless experience considerable difficulty in this branch of the art; but, above all things, he must not be daunted even though his failures be many; for by constant application and practice the most difficult problems may be solved, the most laborious undertakings achieved, and a rich reward obtained.

It is most important that a perfect outline be secured before proceeding to lay on the gold and colours, for although one may cover or correct any slight imperfections with those materials, one must not depend upon them to perfect a bad outline. If positive errors exist in the outline, colour only tends to make them more evident to the eye.

We recommend all students of illuminating (at all events those who are not experienced draughtsmen) to procure access to original manuscripts, or good copies of old illuminations, and to carefully trace them, line for line, and subsequently transfer and ink them in either on vellum or paper. This most useful and valuable practice not only gives the hand precision in work of the class, but it has a decided educational effect with reference to design; furnishing the student with a collection of examples from authentic works of the different periods and schools which will always prove of the greatest use to him, and should be carefully preserved.

After the process of inking the transfer is completed, the whole of the drawing should be cleaned with stale, dry bread, so as to remove any free black lead that may remain on its surface. When this has been done, the work is ready for gilding and colouring.

Gilding and Silbering.

All the processes of gilding are somewhat difficult; at least considerable practice is necessary to attain skill and certainty in conducting them. As gilding is one of the most important and effective branches of the illuminator's art, the student should spare no pains to master all its processes.

Two distinct styles of gilding were practised during the Middle Ages; namely flat gilding and raised gilding: the latter is most commonly found in the rich illuminations of the fourteenth and fifteenth centuries, while flat gilding is commonly found in the works of earlier times, and for "illuminating" or imparting high-lights to certain colours in late manuscripts and printed books, notably in manuscripts executed in the sixteenth century.

In the fourteenth and fifteenth-century illuminations, raised gilding is commonly found in grounds for initial letters, miniatures, and slip-borders; and, when of smaller masses, in dots, small leaves of spray-work, *nimbi* around the heads of sacred figures, and other minor details. In the illuminations of these centuries, flat gilding is introduced in the curling leaf-work and in the surface-lining and hatching upon body colours, particularly in the drapery of figures and in diapered backgrounds.

There are certain objections to the use of raised gilding in modern work, apart from the difficulty attending its successful execution. In the first place, it is so very liable to crack and scale off, if the illumination is bent, or in any way roughly used. If it has to be rolled up, raised work is practically inadmissible. In the second place, its appearance is at times against it; if it be used to any great extent it has the effect of throwing the surrounding colours into the shade, so to speak, and destroying the general repose and harmony of the composition. There will always hang a charm around it, however, from the fact of its being such a distinctive and favourite class of work with the old illuminators; and, such being the case, it will doubtless be eagerly practised by the more ambitious modern students of the art of illuminating. We, therefore, feel called upon to give as full directions as practicable with regard to its execution.

RAISED GILDING.

There are two materials required for raised gilding in addition to gold leaf; namely, raising composition and gold-size.

Messrs. GEORGE ROWNEY & Co. have prepared a raising composition according to our recipe, which we feel sure will be found perfectly satisfactory, and to possess all the qualities of the mediæval gesso. It is very necessary to use a good raising preparation, for without it perfect raised gilding is impossible. The special preparation above alluded to bears our name,* and can be obtained in tubes, ready for use, only requiring the addition of a little water if found too thick for easy working.

The first step in the process of raised gilding is to slightly roughen the surface of the vellum, cardboard, or paper at the parts which are to be gilded. This may be readily done by scraping them with a sharp knife in different directions. Care must be taken, however, not to disturb the surface of the vellum or paper too much. The roughening process is required to enable the raising preparation to adhere firmly: this preparation should be laid on in the following manner:—

Having squeezed a sufficient quantity of the preparation from the tube into a small saucer, mix it well, with a small hog hair brush, into a good working consistency, adding a little water if found advisable. The preparation should flow easily, and lie down evenly and set with a smooth surface. A red sable brush is best for laying on the preparation, being sufficiently stiff in the hair for the purpose. The first or priming coat should be laid on thinly, and well rubbed into the roughened surface of the vellum or paper. When this coat is quite dry, the second should be floated over it; the preparation being about the consistency of ordinary cream. Should a greater thickness be desired, one or more coats may be added; care being taken to have each coat dry and hard before another is laid on. The student should practise what we have just described before venturing on any special work of a permanent character. When all is perfectly dry, any ridges or irregularities that may show themselves on the surface of the gesso must be removed with a sharp scraping-knife; and the surface finished by being well smoothed with an agate burnisher.

* "Audsley's Mediæval Raising Preparation."

The raised ground is now ready for the process of gilding with gold leaf. In the first place, the gesso should be made as non-absorbent as possible; and this may be conveniently done by washing it with one or two coats of well-beaten white-of-egg, thinned with a little pure water. When dry, the surface may be improved by rubbing it gently with the burnisher made so hot that it can hardly be touched by a finger. This will so set the albumen coating as to render it practically insoluble.

The next proceeding is to coat the ground with the size on which the gold leaf is to be laid. The most suitable preparation is that known as "water mat gold size." This must be well and evenly laid on the prepared ground with a soft brush, and allowed to dry. At this stage the ground is ready to receive the gold leaf, which should be manipulated in the following manner:—

For ease and convenience in using gold leaf the student should procure a gilder's cushion, knife, and "tip"; indeed, these simple and inexpensive accessories are practically indispensable for the successful handling of so delicate and tender a material as gold leaf, and especially the extremely thin commercial article in common use. If possible, the student should obtain the thicker leaf alluded to in the preceding Part, under the head of Metallic Preparations.

To remove a leaf of gold from its book, the student must very slowly open the latter, exposing the leaf in part: then, while holding it open, he must gently flap the free edge with the gilder's knife, until the adjoining edge of the gold folds back sufficiently to allow the knife to be laid where the front portion of the leaf originally lay. On gently breathing on the back portion of the leaf it will unfold and lay itself on the flat blade of the knife. The leaf can then be safely and easily removed on the knife, and deposited, with a side motion, on the leather pad or gilder's cushion. The knife can be slipped from under the leaf, and then used for cutting the leaf, as it lies on the cushion, into such pieces as may be required. It is, perhaps, unnecessary to remark that the knife must be perfectly clean and dry, otherwise the gold will stick to it and be destroyed.

The next proceeding is to lay the gold on the raised ground already prepared to receive it. The student must remove a piece of the leaf (a little larger than is required to cover the

part to be gilded) from the cushion with a pad of clean cotton-wool, or with the thin flat brush known as a "gilder's tip," and then carefully deposit it on the sized ground, which must be brought to the necessary sticky condition by being breathed upon, or slightly moistened with a damp sponge or camel hair brush. When deposited, the gold must be gently pressed down on the ground with a pad of cotton-wool. The pad of cotton or the "tip" must be slightly greased to lift the gold easily from the cushion: this may be conveniently done by touching the hair of the head (provided it is at all greasy) with them before essaying to lift the gold.

When all the above simple processes have been successfully manipulated, and any imperfections in the gold filled up or made good, nothing remains but the process of burnishing: this must be done when the size is perfectly dry, as is directed in the next section.

FLAT GILDING.

This style of gilding may be executed with two materials; namely, gold leaf and shell gold. Shell gold, which is real gold reduced to a very fine powder, is certainly the more suitable and convenient of the two materials, being much more easily manipulated than gold leaf.

Shell gold is, as we have already stated, gold in a very finely divided state, mixed with a gum, and placed in mussel-shells for use. When such gold is required for gilding on vellum or paper, it should be prepared in the following manner: If a considerable surface has to be covered, several shells must be taken and the gold washed from them all into one with a plentiful supply of pure water. When this is done, the shell containing the gold in solution must be set aside for about an hour: the gold will then be found to have settled, and the dirty water should be entirely poured off. A little clean water must now be added to the gold powder, with the addition of a drop or so of gum-water, and the whole mixed with a brush to an easy-flowing, creamy condition: in this state the gold is fit for use. Care should be taken to use a solution of the finest white gum-arabic, and not the ordinary commercial mucilage; and only just sufficient should be added to the gold to fix it securely to the

vellum or paper surface. If too much is added, the gold will not be bright, nor will it burnish well. The student should test the mixture before using it in permanent work. If too much gum has been added, the gold must again be washed and mixed.

While laying the gold on the vellum or paper, the student must be careful to keep his brush fully charged, and the gold flowing freely on the work; for unless he observe these important conditions a streaky or cloudy surface will be the result; and one almost impossible to repair without washing all the gold off, and going over the surface again in the proper manner.

Flat gilding can be executed with gold leaf, but not so easily as with shell gold. The surface to be gilded should be treated with white-of-egg and gold size, just as above directed for raised gilding, and the leaf applied with the cotton wool or "tip," as already described.

Perhaps, of all the departments of the illuminator's art, gilding with gold leaf is the most difficult and uncertain; and in none are failures and disappointments more common. The student must not be daunted, however; the more difficult a thing may be, the more glory attends its successful accomplishment. We recommend him to seek a little personal instruction from some professional gilder, especially in the manipulation of the gold leaf, for he will, by so doing, save himself from many failures and vexations.

Silver leaf may be used and applied in the manner directed for gold leaf; but, on account of its liability to tarnish, and ultimately to turn almost black, we strongly condemn its use in illuminating. Its place is ably taken by aluminium, as already mentioned in the preceding Part.

Aluminium leaf being much thicker, and, in every sense, less delicate to manipulate than gold leaf, the student will find comparatively little difficulty in using it. It is only really suitable for flat work on surfaces of considerable size; shell aluminium being preferable for small surfaces and ornamental details. Shell aluminium can be treated and applied in the same manner as above directed for shell gold.

Burnishing.

In burnishing raised gold, care must be taken that the gold

size is thoroughly dry and hard, and that all portions of the surface are entirely covered with the gold-leaf, before venturing to apply the burnisher. Too much haste should not be indulged in in this process, for a false step with the burnisher is fatal to the beauty of the work. There is considerable art in burnishing, and the student would do well to devote sufficient time to its mastery. The wondrous brilliancy of the gold in old illuminations is almost altogether due to the perfect manner in which it was burnished. This burnishing was assisted, doubtless, by the thick gold leaf used. While writing this, we have before us two illuminations, about five hundred years old, in which the original gilding is richer and more brilliant than in any modern work we have ever seen, and the burnish still appears as if done yesterday.

In burnishing raised gold, two burnishers may be used with advantage—the flat and the pointed. For surfaces of considerable size, the flat burnisher is required; while for small details, the pointed burnisher will, in all likelihood, be found more convenient. To burnish raised gold, the burnisher should be moved chiefly in one direction with a gentle uniform pressure, which may be slightly increased as the gold becomes bright and shows no signs of leaving the ground. A skilful and delicate touch is required for this process, which can only be acquired by practice. We recommend the student to experiment on a number of trial pieces of raised gilding before proceeding to operate on a formal study.

The burnisher must be carefully cleaned before it is used; for if any grains of dust come between the agate and the gold, the latter will become torn up or covered with innumerable scratches, which must destroy its brilliancy. To clean the burnisher it should be rubbed before commencing to burnish, and at times during its use, upon a piece of chamois leather, stretched for the purpose over a flat piece of wood. The gold should be dusted with a soft camel hair brush.

A few words respecting the selecting of the agate burnisher will not be out of place here. A really good stone is a difficult thing to get at times, and yet without it little can be done in a perfect manner. A perfectly smooth stone must be selected, absolutely free from irregularities along its burnishing edge. It should be firmly secured in a wooden handle by a metal ferrule.

In burnishing flat gilding, in which shell gold is used, a considerable pressure is necessary; and to render this safe, a sheet of highly-glazed wove paper should be laid over the gilded surface and held firmly while the burnisher is rapidly and heavily passed over it. If the proper amount of gum-water has been added to the gold, the burnishing will bring up a bright effect, not, of course, such as appears on burnished raised or gold-leaf gilding, but one that is perfectly artistic, and which harmonizes well with the associated colours. Should the shell gold not brighten satisfactorily, it will be evident that too much gum has been added. This dull effect may, perhaps, be considerably removed by breathing on the gold and again burnishing it.

When the process of burnishing is completed, the gold may be ornamented by being etched or dotted. This must be done with the pointed agate, using sufficient pressure to secure the amount of effect desired. Diapering by means of crossing lines and impressed devices can be readily executed. Dots impressed in conjunction with line-work, or simply in rows along the edges of gold letters or panels, have a peculiarly sparkling and pleasing effect. This mode of decoration was much used in late illuminations. Both flat and raised gilding admit of being etched and dotted, but the process is most suitable for flat gold. Diaper patterns of great beauty may be worked with the etching burnisher on fields of flat gold, such as panels around coloured initials, or spaces within them.

Colouring.

We now come to the consideration of the last of the purely manipulatory processes, and at the same time the most important of all; namely, that of colouring. We cannot profess, however, to treat the art of colouring fully in these pages, the limited space at our disposal necessarily preventing anything approaching a complete dissertation.

In the preceding Part we have at reasonable length noted the prevailing characteristics and properties of the several colours suitable for the palette of the illuminator, and, accordingly it is only necessary, under the present heading, to give practical hints

and directions for working them, or laying them on, in body, *gouache*, or wash, as the illumination demands. In the following Part we speak of the Theory of Colour, or its laws of harmony, both in analogy and contrast; and this, again, has the desirable effect of confirming our remarks in the present Part to manipulation of the pigments.

BODY COLOURING.—In the great schools of illuminating body colouring has always played an important part; and this is not to be wondered at, for by it alone can the desirable uniformity and solidity of colour be obtained, and great durability secured. In the illuminations of the twelfth and three following centuries we find the application of body colours carried to the greatest degree of manipulatory skill and excellence; the perfection of the pigments used greatly favouring the same.

There is considerable skill and practice required in successfully laying on body colours perfectly flat and uniform; but the student is greatly assisted by the unique series of illuminating powder colours, specially prepared by Messrs. GEORGE ROWNEY & Co., as already commented on in the preceding Part. We have always used these colours (originally manufactured, at our suggestion, in the year 1867), and can with positive assurance recommend them to the student who aims at the production of really satisfactory work. No other colours obtainable (for the illuminator's use) are comparable to them for ease of working and satisfactory results.

In using any of these powder colours, dust a little from its bottle into one of the nested saucers, and add to it a little clean (distilled or boiled) water, mixing the same with a brush. The colour should then stand for a few minutes before being used, and must be finally reduced with water to an easy-flowing consistency, say, about the thickness of ordinary cream: if thicker, it will not be suitable for large surfaces. The brush employed to lay on this colour should be a red sable of appropriate size, according to the form and dimensions of the surface to be covered: it must always be kept well charged with colour, and worked downwards, or towards the operator, keeping the colour flowing full and uniformly over the entire space operated upon. The illumination should be only very slightly inclined while the colour is kept flowing, and then immediately laid horizontal and allowed to dry. When the whole surface is covered, the colour should

be equally wet throughout, and slightly raised with excess of water. As the water dries off, the colour becomes deposited with a velvet-like, mat surface, a characteristic of true body colouring which is ever charming.

No gum must be added in mixing the powder colours, for they are manufactured with the necessary amount of fixing material. If more colour has been mixed than is requisite for the work in hand, it can be re-mixed when again required; care being taken to return the saucer to the nest, so as to keep the pigment clean and free of dust. Some colours, on account of their nature, are more difficult to lay on perfectly than others; and some require body to be given to them by the addition of another full body colour; such as emerald green and carmine, both of which do not prove good body colours when used alone. The student will, by a little observation and practice, soon become familiar with the characteristics of the several pigments. The remarks made on the pigments in the preceding Part, and those concluding the present section, will greatly assist the beginner in mixing and compounding the tints useful in illuminating.

GOUACHE COLOURING.—This is the term applied to a style of tempera met with in the colouring of early Roman and other illuminated manuscripts. In this style, the pigments are understood to have been mixed with white-of-egg and fig-tree sap, or sometimes with yolk-of-egg added, and laid on thickly, with a free brush, coat upon coat. As no such medium as that just mentioned is ever likely to be revived by the illuminator of to-day, it is unnecessary to give further details of *gouache* colouring pure and simple. Its effect can be obtained by the use of the powder colours in different degrees of body.

WASH COLOURING.—Washes may be laid on in somewhat the same manner as body colours, but no excess of colour must, on any account, be left on the surface of the vellum or paper to dry off, as in the case of body colouring. The brush, preferably a red sable, should be kept moderately full; and during the process of washing, the colour must be kept evenly flowing, especially along the edge of the wash. As the surface operated upon becomes covered, the excess of colour must be gradually removed by the brush, leaving all uniform in tint. As colours at times show a tendency to flow in irregular masses, especially when laid on vellum, a little prepared ox-gall should be added.

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Moist colours are, as a general rule, the best suited and most convenient for wash colouring, although, as is pointed out in our remarks on pigments in the preceding Part, there are some of the powder colours that can be used as washes.

Wash colouring is most suitable where delicate and transparent stains or primary coats are required, on which colours of greater strength or body are to be subsequently laid. They are valuable in richly-shaded scrollwork and floral designs, such as appear in sixteenth-century illuminations.

Care must be taken in all the processes of colouring to have everything perfectly clean. The saucers must be well washed before being used, and kept covered when not in use, so long, at least, as any colour remains in them. The brushes employed, if used for different colours, must be washed, in clean water, entirely free from any trace of one colour before being used for another. It is desirable to have a special brush for each class of colour in use at any time. Brilliancy and purity can only be secured by constant caution. Scarlets and yellows are the most sensitive to foreign matter or any impurities; they accordingly, require special care.

A few hints on useful combinations of pigments will form an appropriate conclusion to this Part of our treatise. Many colours are useful in the practice of illuminating which require to be composed by the mixture of two or more pure colours. Pure or positive colours are very frequently used in two or more tones, formed by the addition of another and kindred colour in different proportions.

We first treat of the proper colours to be used with other colours to obtain gradating tones or shades.

Blues.—French ultramarine, permanent blue, and Prussian blue may be paled with Chinese white; and darkened with black. Cobalt and cœrulium may be paled with Chinese white; and darkened with ultramarine or Prussian blue. A refined greenish tint can be imparted to the above blues by the addition of any of the yellow colours given in our list.

Reds.—Vermilion may be slightly paled by the addition of cadmium yellow; and darkened by carmine or Indian red. Paled with Chinese white, vermillion forms a complete family of beautiful salmon tints. Paled with Chinese white, Indian red forms another family of useful tints of a subdued character.

Crimsons.—Carmine and crimson alizarin can be rendered rich, as a body colour, by the addition of scarlet vermilion; and darkened with ultramarine or black.

Yellows.—Cadmium yellow can be paled with lemon yellow, without much loss of brilliancy; and with Chinese white, with a certain loss of richness. In combination with scarlet vermilion, rich and permanent orange tints are produced of any desired depth. Indian yellow can be made a good body colour by the addition of lemon yellow or chrome yellow: paled with Chinese white it furnishes valuable and soft-toned body colours. Chrome yellow can also be paled with Chinese white, yielding pleasing tints.

Greens.—Emerald green can be paled and made a good body colour by the addition of lemon yellow; and enriched and slightly altered in character by the further addition of a little Prussian blue. Subdued and very light greens of the most delicate character are produced by the combination of emerald green and Chinese white; and, likewise, by the combination of moss green and Chinese white: both combinations produce perfect body colours. Moss green can be paled with lemon yellow; and darkened with French ultramarine, without any loss of its true character.

Purples.—Purple pigments can be altered towards either the crimson or blue scales by the addition of carmine or French ultramarine; both with or without the further addition of Chinese white.

Mixed tints or compound colours of considerable value to the artistic illuminator can be produced as follows:—

Pinks.—Beautiful pink tints can be obtained by the addition of a little carmine or rose madder to Chinese white. These tints can be slightly modified by a touch of scarlet alizarin. Crimson alizarin and Chinese white also produce good pinks.

Dead Greens—Can be produced of several tones by the combination of lemon, cadmium, or chrome yellow with lamp black. These can be modified by the addition of cobalt or ultramarine.

Dull Reds—Can be produced by the combination of vermilion with lamp black or burnt umber.

Bufs—Of all desirable tones can be obtained by the combination of Chinese white and Italian ochre. Bufs of another character can be produced by the mixture of burnt umber and

Chinese white, with or without the addition of a touch of chrome yellow or Indian yellow.

Browns.—A great variety of browns can be produced by the combination of burnt umber, Indian red, and vermilion, with Italian ochre, mars yellow, or lemon yellow, with or without Chinese white. Black will be found useful in some very dark tones, especially when vermilion is used to any great extent.

Greys.—The simplest grey tints are those formed of Chinese white and lamp black. Pearl grey is produced by Chinese white and a little lamp black and cobalt blue: the addition of a touch of rose madder produces a warmer tone. Slate grey is produced by the addition, to the black and white, of a little carmine or crimson alizarin.

Neutral tints.—Neutral tints, useful for shading, are produced by the combination of Indian red or vermilion with cobalt blue. Warmth or coldness can be imparted to these tints by allowing one or other of the pigments to predominate in the combination.

These brief directions, combined with the remarks on the nature and uses of the colours given in the preceding Part, will be sufficient to introduce the student to the important subject of pigments and their office in the art of illuminating. Further instructions are given in the succeeding Part.

PART V.

Designing and Colouring.



HAVING completed our brief resumé of the manipulatory process, we devote this, the concluding Part of our treatise, to directions and hints on the important subjects of Design, Composition, and Colouring; and, in addition, to some remarks on certain other subjects, including Symbolism and Heraldry, which have an influence on the art of design in illuminating.

Designing may be said to be the most fascinating part of the study and practice of the art of illuminating; and, under ordinary circumstances, it may be pronounced the most difficult, unless the student is gifted with the faculty of invention and an artistic imagination. By an attentive study of the best works of the past—notably those executed in the twelfth and three following centuries—and by constant practice, almost anyone possessing patience, and a conception of the beautiful, may acquire the power of design: while even those specially gifted by Nature with the artistic sense have to undergo a training of eye and hand before success crowns their essays. We hope the following remarks and directions will be of assistance to the student in the art of design: they will in all probability, if carefully observed and followed, save him from failures and any great disappointments. We must impress upon him, however, that much rests with himself, and in the manner in which he approaches his work. He cannot take too great care with every detail of his design at the outset, for no afterwork can reform a faulty composition or careless drawing. A thing worth doing at all is worth doing well.

Conventionalism.

One of the great principles in decorative art is that known as conventionalism; and it must be recognized as a dominating one in the art of illuminating, or a failure is certain to follow both in design and colouring. The most brilliant period of decorative art in any nation's history was when conventionalism was most strictly adhered to, both in design and colouring: the most certain sign of decay, when natural forms were directly copied, and Nature's pervading colour—green—was most liberally used in decoration. It must not be thought, however, that we countenance a decided departure from the laws and teaching of Nature; for conventionalism can only be worthy in proportion as it accepts and is guided by her laws and faultless methods.

In illuminating, it is imperative on the artist to have resort to conventionalized ornament in all designs, small or great, for wherever one observes purely natural flowers and leaves depicted, one likewise observes poverty of design and lack of invention—attempts ending in failure.

It may appear strange and somewhat contradictory on our part, after what we have said, that, should we be asked by the eager student where or in what field may conventionalism be best studied, we should tell him that Nature must be his school, and from it he must ever derive inspiration—yet such is the case. Conventional art is founded upon natural laws and natural forms; and the former cannot be outraged with impunity.

It is somewhat difficult to clearly describe what is meant by the term conventionalism, but it can be readily grasped by an attentive study of any great work of decorative ornament (excluding all representations of the human figure). It may be said to be a departure from the detail and treatment of the natural forms it expresses or embodies—a more or less formal and severe rendering of Nature's free and ever-changing forms, but with a strict observance of the natural laws of growth and graduation of parts. Conventional art aims not at direct copyism, while its strength exists in beauty of form, expression, and symbolism. In conventional ornamentation, the display of colour can be indulged in without special reference to that suggested by natural objects, while it should invariably be dic-

tated by the laws of harmony. The inventive powers are also brought into play in conventional design, while they become cramped and torpid if naturalism be alone resorted to.

In all the illuminated works of the finest periods, and, indeed, in all executed prior to the end of the fifteenth century, conventional forms and treatments were almost exclusively introduced; while during the sixteenth century, illumination lost in artistic power in proportion as realism or naturalism became infused into the adornment of manuscripts. In all the examples of illumination reproduced, in the present treatise, from MSS. of the twelfth, thirteenth, fourteenth, and fifteenth centuries, ornament of a strictly conventional character alone obtains.

Let us impress the would-be illuminator with the fact that no success can ever attend his labours if he essays the direct copying of natural flowers, fruit, and foliage. Such must ever be a mere attempt, inevitably ending in artistic failure.

Symbolism.

Intimately connected as symbolism has ever been with works of Christian art, it naturally forms a valuable and expressive feature in illuminations of sacred texts. A few words on the subject find their proper place in these pages, for the student should at least be conversant with the symbolic and emblematic devices most commonly used and understood: he will find a further acquaintance with symbolic art not only valuable but deeply interesting.

Symbolism, in its widest sense, may be said to pervade the whole range of art, for all art is more or less symbolical—that is, it aims at expressing something beyond its material condition, or its simple appeal to the eye and the perception of beauty. We, however, do not intend to speak of it here in this widely embracing sense; but, briefly, in its commonly understood connection with Christian art. Symbols and emblems are most appropriate decorations; and, if properly introduced, add greatly to the beauty and expression of the illuminations in which they appear. The subject of Christian symbolism being one of considerable extent, we must confine our remarks to those symbols, emblems, and monograms in most common use, and of the greatest value to the illuminator.

The most important symbols are obviously those which set forth the Persons of the Holy Trinity. The only appropriate and accepted symbol of God the Father is a Hand,—the “Hand of God,”—which is commonly depicted, issuing from clouds (which should be conventionally treated), and with the fingers disposed in the act of blessing, preferably according to the Latin form—that is with the first and second fingers extended straight, and the thumb slightly curved; the other fingers being folded against the palm. The hand should be invested with the tri-radiated *nimbus*.*

The chief symbol of God the Son is the *Agnus Dei*, the ‘Lamb of God,’—properly depicted as a spotless Lamb, invested with the tri-radiated *nimbus*, and sometimes supporting a slender cross, emblematical of our Saviour’s passion, or a slender staff carrying a small banner or flag charged with a cross, emblematical of His triumph over sin and death.

There are two emblems of our Blessed Lord of service in illuminating; namely, the Pelican and the Fish. The Pelican is properly represented above a nest, and feeding its young with its own blood, shed by its beak, which is shown tearing its breast. The Fish was introduced at a very early date and originated in the fact that the letters forming the Greek word signifying *fish*—ΙΧΘΥΣ—are the initials of the Greek words Ιησοῦς Χριστὸς Θεοῦ Υἱὸς Σωτὴρ—Jesus Christ, the Son of God, the Saviour.

There are two monograms of our Lord’s name that are appropriate in illuminations; consisting of the Greek letters ΙΗΣ and ΧΡΣ. The former is a contraction formed of the two first and last letters of the word ΙΗΣΟΥΣ—Jesus;—and the latter formed, in a similar manner, of the first two and last letters of the word ΧΡΙΣΤΟΣ—Christ.

* The divine *nimbus*, confined to the symbols and portraiture of the Persons of the Trinity, is a circular disc on which are invariably displayed *three rays*, hence the name *tri-radiated* (first given to it by us). All the writers on Christian art and symbolism, altogether misconceiving the signification of this *nimbus*, have termed it the ‘*cruciform nimbus*.’ After exhaustive research, and the examination of a great number of portraiture which exist in illuminated manuscripts and in stained glass, we have established the fact that in all examples of this attribute, executed when symbolism was thoroughly understood by Christian artists, only three rays appear, even when a fourth ray could have been clearly shown. Hence, it is self-evident that no allusion to the cross was ever aimed at, while it is equally evident that the three rays indicate the Triune; and that the portraiture or symbol invested with it is that of one of the Persons of the Trinity.

The only symbol of God the Holy Ghost accepted in Christian art is the Dove, the head of which is invested with the tri-radiated *nimbus*. The Dove is usually depicted in the act of descending, with outspread wings, and of a white and grey colour. Sometimes three rays, as of light, are shown issuing from its mouth, indicative of the giving of the Holy Spirit.

A representation of this divine symbol appears in the miniature of the Annunciation filling the initial D in the page from an Italian missal, illuminated at the end of the fourteenth century, reproduced in Plate VII. Here the Holy Dove is invested with tri-radiated *nimbus*; and is depicted hovering in the centre of divergent rays of light.

The divine *nimbus* should have its field gold and the rays of scarlet. Each ray may be composed of three lines if it is desired to amplify the symbolic expression of this attribute.

The symbols of the Holy Trinity are the Triangle and the Trefoil. The former must be drawn truly equilateral. The Trefoil is supposed to have been first introduced by Saint Patrick, when he illustrated the doctrine of the Trinity by the shamrock leaf. This beautiful form, in many fashions, is very largely used in illuminations. Double and entwined equilateral triangles, and a triangle combined with the trefoil are sometimes introduced as expressive ornaments.

Perhaps of all symbols that of Christianity is the most frequently used. There is something, however, singularly beautiful in the simple Cross, apart from its symbolical interest; and the several artistic forms that have been devised by the mediaeval heralds have no doubt favoured its introduction in works of art. There are two classes of crosses in general use, the Latin and the Greek; the former has the lower member or shaft considerably longer than the remaining three members; while the Greek cross has all its members of equal length. Both forms are suitable in illuminations. Sometimes, to fill a certain space, it is necessary to form the cross with both its vertical members of greater length than its horizontal ones. When this form is adopted, the cross is usually treated in a highly ornamental manner.

The Four Evangelists have symbols peculiar to themselves. S. Matthew is symbolized by a Winged Man, as shown in the miniature on Plate IX., from a French Book of Hours, illu-

minated at the end of the fourteenth or in the opening years of the fifteenth century. S. Mark is symbolized by a Winged Lion; S. Luke by a Winged Ox; and S. John by an Eagle, as shown in the miniature on Plate VIII., from a French Book of Hours, of late fourteenth-century date. The Apostles have for their emblems the instruments of their martyrdoms, while S. Peter is symbolized by two Keys,—the Keys of heaven and hell;—and the emblem of S. Paul is a Sword,—the instrument of his martyrdom. Eternity is symbolized by a circle which has neither beginning nor ending.

All the Saints in the Kalendar have their special emblems or attributes, commonly derived from some dominating incident in the life or death of each: these, owing to the very limited space at our disposal, cannot be detailed here.

In illuminations, symbols and emblems can be introduced with considerable effect: they may be inserted in the interiors of initials or prominent portions of the borders around the text. Tasteful combinations may be made in great variety, by grouping two or more symbols or emblems, care being taken to make the combination consistent and expressive.

The student will find the study of symbolism extremely interesting and useful, and we strongly recommend him to give it a fair share of his attention.

Heraldry.

Heraldry is another branch of art to which the illuminator of to-day should direct his attention, for it closely partakes of the character of decorative illumination, and contributes largely to its interest and beauty. In old illuminations, and especially in charters and important deeds, heraldic blazonry was frequently introduced, and invariably with telling effect. The combinations of the tinctures, metals, and furs used by the herald have always a highly striking and decorative character. Messrs. GEORGE ROWNEY & Co. have supplemented their series of illuminating colours with an equally valuable set of heraldic tinctures which the ambitious student would do well to obtain.

What may be termed *Christian* heraldry is strictly a handmaid of illumination: it commonly assumes the form of shields, on the fields of which are blazoned, in colours, gold, and aluminium

(representing "*argent*" or silver), Christian symbols, emblems, and monograms. In blazoning these, the rule that obtains in heraldry proper should be strictly observed; namely, that no colour must be placed on colour, or metal on metal. If the field of a shield be of any colour, the device placed upon it must be "*or*" (gold) or "*argent*" (silver), and *vice versa*.

Harmony of Colours.

The student of the art of illuminating must realize at the outset of his artistic labours that much of the beauty of his work will depend on the knowledge and taste displayed in the selection and arrangement of the colours he employs. He should, accordingly, give a considerable share of his attention to the subject of the harmonies of analogy and contrast of colour. We have used the terms *knowledge* and *taste*, because although somewhat similar in their influence and results, they are dissimilar in their nature.

Knowledge may be said to be the ultimate result reached by a study of the laws, powers, and effects of colours and their combinations: while Taste is the innate delicate feeling or perception of the value of colour, and its harmonious grouping in decorative design. It is, for the most part, a natural gift; not easily acquired except by careful study of works of the most perfect kind, and considerable practice. One who possesses knowledge without taste, or taste without knowledge, in the sense above stated, very rarely arrives at any eminence as a colourist. The acquiring of such knowledge by the possessor of natural taste is little more than the cultivation of that gift.

We do not profess to supply adequate material or instruction for the cultivation of taste: such would be entirely out of our power in so circumscribed a work as the present. We therefore confine ourselves to a few hints, calculated to direct, to some extent at least, the student in the grouping or harmonious arrangement of his glowing colours.

Beginning with the three primaries—Blue, Red, and Yellow—let us point out the other colours which produce with them perfect harmonies of contrast and analogy.

BLUE—The primary of the first importance should be largely used in illuminating, chiefly on account of its refined and re-

tiring character. Its perfect contrasting colour is the secondary, orange, which is produced by a combination of the two other primaries—red and yellow. Its most perfect harmonies of analogy are those tones of blue, produced by its admixture with white or black, preferably with white.

RED—The second primary—represented by full-toned vermillion—is of great value in illuminations, imparting great richness and warmth wherever introduced. Its perfect contrasting colour is the secondary, green, produced by the combination of the other primaries—blue and yellow. Its harmonies of analogy are all the tones of orange and crimson.

YELLOW—The primary of most light and force is also of great value, but calling for more reserve in its introduction than either red or blue. Its perfect contrasting colour is the secondary, purple, produced by the combination of the other primaries—blue and red. Its harmonies of analogy are compounds of itself with white, and all the tones of orange.

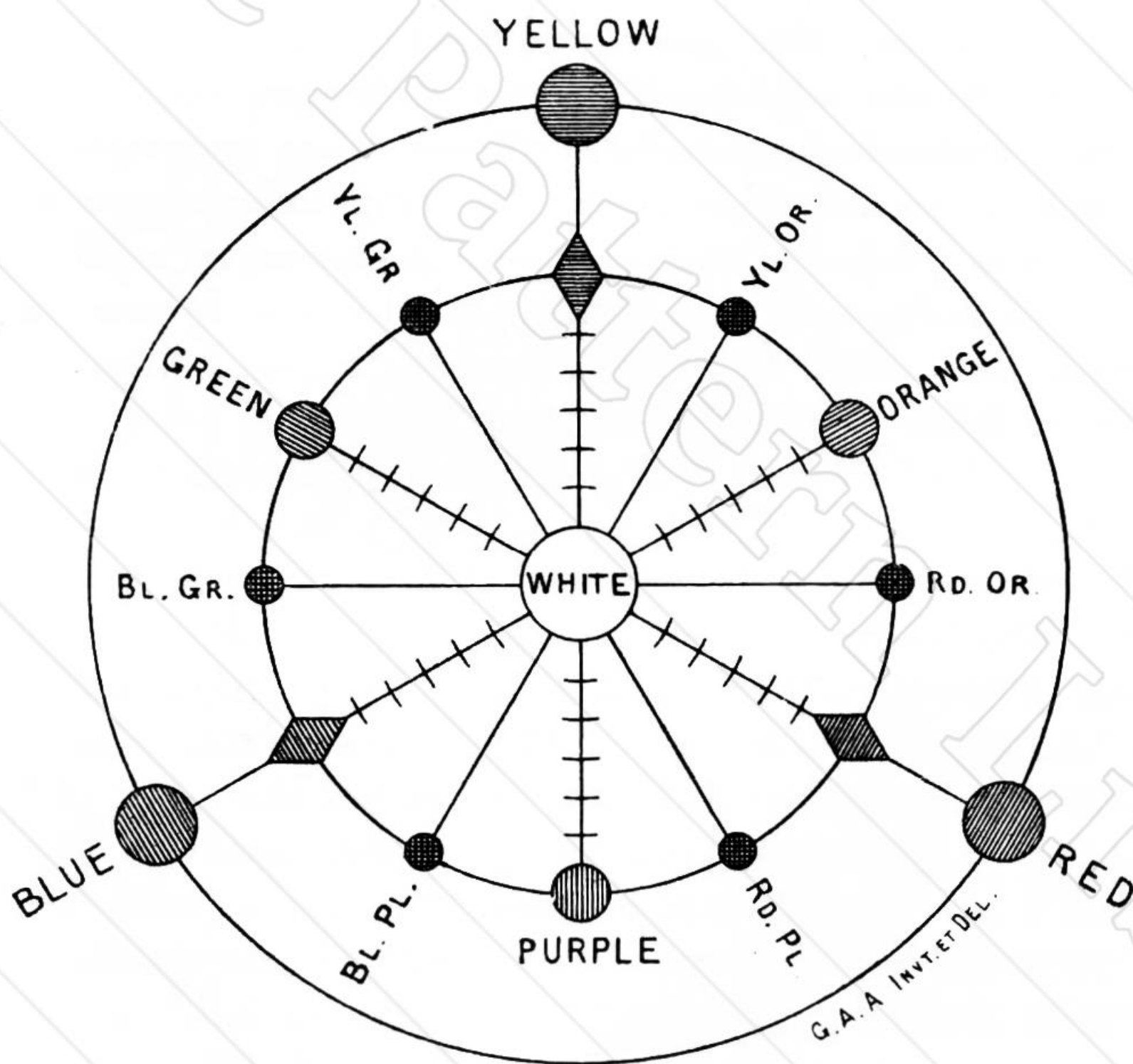
GREEN—The contrasting colour to red, should be sparingly used in comparison to the other colours,—primary and secondary,—being, in its brighter tones, essentially a lighting-up colour. It should seldom be depended upon for its own value, but chiefly on its effects on other colours, which it brightens and to which it gives vigour in an extraordinary degree.

The diagram or colour chart, here given, will be of use to the student in the determination, at a glance, of all questions respecting the harmonies of contrast and analogy. It will be observed that the outer ring is divided into three main parts, at the dividing points of which are placed orbs or discs representing the three primary colours. Directly opposite these orbs, and on the inner ring, are smaller orbs representing the three secondary and perfect contrasting colours. On the same inner ring, and situated midway between the primary and secondary colours, are the middle tones, or what may be termed *half-way* colours, with their proper contrasts directly opposite them.

The use of the colour chart may be briefly described as follows: In the first place, we may take the upper main orb, yellow; directly opposite to it on the inner ring we find a smaller orb representing purple—its perfect contrast. The same obtains in respect to the other primary and secondary orbs. Now, if we take the half-way colour, between the primary yellow and the

secondary, orange, which is yellow-orange, we find, on looking to the opposite side of the same ring, blue-purple to be its perfect contrast.

All the tones between yellow and yellow-orange are harmonies of analogy; and have their harmonies of contrast ranging between purple and blue-purple. This is only one example; the remaining eleven divisions of the circle working in the same manner and with equally satisfactory results. Again, using the chart as a



determiner of the harmonies of analogy, we may take purple as an example: the scale marked on the line towards the central orb of light (represented by white) denotes several shades of purple, produced by its being paled to different degrees by admixture with white. Any one of these shades forms a harmony of analogy with pure purple; the very light shades, however, assuming almost the force of contrasts. Moving along the inner circle, on either side of the purple orb, we find its har-

monies decreasing as we leave it, until we reach its most imperfect ones—blue-green and red-orange. Still moving along the sides of the circle, we approach its contrasting colours, gradually becoming more pleasing, until we meet, after passing yellow-green and yellow-orange, in its perfect contrast, the primary yellow. As all the colours in the chart work precisely in the same manner, a study of it will greatly assist the illuminator to avoid discords, and enable him to determine any harmonies of analogy and contrast in grouping his colours.

GOLD takes the place of yellow (when laid on flat) in the perfect group of the three primaries. In all branches of decorative art, the triplet—blue, red, and gold—is of very common occurrence. On the other hand, the illuminator cannot do wrong in associating gold with any other colours on his palette: with the darker colours it is especially effective. No artists have surpassed the illuminators in the appreciation and application of gold: it is the true illuminating element, and has always been recognised as such, especially by the Byzantine artists and the illuminators of the fourteenth and fifteenth centuries.

GREY may be introduced into almost any group of colours, usually with a cooling or quieting effect. It is particularly pleasing in juxtaposition with rich tones of blue and crimson.

The illuminator, while studying this department of his art, should experimentalize with numerous combinations of colours, taking note of those which appear most pleasing for future reference. A collection of combinations or groups of colours, made carefully and preserved in a scrap-book, would prove of great value and suggestiveness.

Styles of Colouring.

Nearly all the periods or schools of illuminating were characterized by special treatments of colour, as our readers may have gathered while perusing Part I of this treatise. The remarks on the subject there, being necessarily of the briefest character, we must urge the student to seek every opportunity to examine original manuscripts of the various schools, carefully noting their leading peculiarities in colouring, and surface enrichment, shading, and hatching.

In many examples the colours are treated in a flat style, that is, without any attempt to produce a relief or raised effect. This style is best illustrated by the illuminations of the early Irish school and its immediate imitators. The ornamentalations of these schools are almost invariably executed on the vellum, without any ground colour. In more advanced styles, a certain effect of relief is given in the ornamentation itself, by the introduction of shading in the details only. The ornamentation is sometimes executed on the vellum ground, and at other times coloured grounds are introduced. In the latest schools, the ornamentation is represented as in relief, by the introduction of shadows cast on the grounds. True illumination is in this last treatment outraged in its fundamental principles. There is no more reason for cast shadows to be applied to the ornamentation than for shadows to be applied to the letters of the text.

In illuminations of the thirteenth, fourteenth, and early part of the fifteenth century, delicate linework and small ornaments in white commonly appear upon the body-colours, producing very pleasing effects. In the parti-coloured initials, so frequently met with in the manuscripts of the fourteenth and fifteenth centuries, a white line almost invariably divides the colours, which are usually blue and scarlet, or blue and gold: in the former combination, a white line is an absolute necessity; while it is not imperative, though highly desirable, in the combination of blue and gold. Examples of the treatment alluded to are furnished by the four larger initials given in Plate XIV, in which the white dividing line appears in all parti-coloured portions, and also in those in which gold is used; namely, in the initials A and G.

In colouring rods, coiling stems, and branchwork, which may vary in width from a tenth to three-sixteenths of an inch, two styles of shading may be adopted. First, softly graduated shading may be applied, producing the effect of smoothness and perfect roundness: this treatment is usually met with in late illuminations, in which a naturalistic treatment obtains. Secondly, the shading may be effectively produced by hard-edged lines of body-colour in three or four gradations; for instance, if the rod or branch is to be green, it should be covered first with a light tint, just sufficiently pronounced to

separate it from the vellum ground: emerald green paled with white or lemon yellow will be suitable for this first coating. Then, upon this first tint a deeper shade of green is laid, covering about two-thirds of the width of the rod; and the shading is completed with a still deeper colour, laid on so as to cover about half the width of the preceding medium shade. This very effective method of shading is continually met with in the branchwork and rodwork of illuminations of the twelfth, thirteenth, and fourteenth centuries, sometimes brightened by a thin line of white. It is shown in the central rod of the accompanying illustration. Such shaded branchwork is executed in the illuminations of the twelfth century in rich polychromy; that is, the branches, as they spring from each other, are rendered in tones of contrasting colours; producing a highly decorative effect, associated, as they frequently are, with solid grounds of gold or different colours.

In shading conventional leafage, such as is shown in the accompanying illustration, for instance, and in the page of the early fifteenth-century French Book of Hours, illustrated in Plate IX, the illuminator should confine himself to harmonies of analogy; or, in other words, to the deeper tones of the colour employed to ground the leaf in each case, or of those colours nearest to it on the colour chart. For instance, if the leaf be grounded light-blue, it should be shaded with darker tints of the same colour: if of normal bright blue, with tones of blue running to violet or deep blue-purple. If the leaf is grounded with pink, salmon colour, or scarlet, it should be shaded with tones of crimson—red purple—running to purple.

The reverse side of the leaf, or its turn-over, as shown passing behind the central rod in the accompanying illustration, should be coloured with a full contrasting colour of the face of the leaf. For instance, if the leaf be blue, shaded with dark blue,



the turn-over should be paled orange, shaded with deep orange running to scarlet and full red. For the production of certain colour-effects, this general rule may be departed from, even to the exclusive use of harmonies of analogy on both sides of the leaves. Discords may sometimes be used in colour as in music; but they must be resolved into harmonies.

Leaves may be lighted up (illuminated) with delicate hatchings of gold, or lines of white or very light colours; while the deepest shadows may be intensified by a hatching of black lines. Dotting in white or colour was frequently applied to leafage and branchwork by the old illuminators, and generally with good effect. Examples of the application of white lines and dots to leaves and to an initial are shown in the fourteenth-century illumination illustrated in Plate VII. A fine study in the soft shading of leafage is furnished by the page of a French Book of Hours reproduced in Plate IX.

Design and Composition.

Design is, perhaps, the branch of the beautiful art of illuminating in which the beginner will feel most at a loss how to proceed; while it is the most important part of decorative composition. It may be asked in what direction may design and composition be so far separated as to admit of one being designated the most important part of the other? Such a question may be answered, in one direction at least, by the statement that design deals primarily with the formation or development of individual elements or details, while composition embraces the artistic grouping of those elements or details into one harmonious whole. Appropriateness of design, in a consistent style, and harmonious grouping of parts, constitute the chief phase of ornamental or decorative art.

In illuminating, the student must endeavour, as much as possible, to have one leading motive and one spirit pervading his composition; and the design should be in more or less strict keeping with the subject or matter illuminated. In illuminating after any particular school or period, the student will certainly be to a considerable extent tied by ancient examples; but in adhering to their teaching he will not go far astray, or feel himself unduly hampered.

G

While we cannot attempt, in the absence of a comprehensive series of specially selected examples, to give anything of the nature of hard and fast rules for design and composition, yet the few elementary hints we are able to give may prove of some service to our readers.

The text should, under ordinary conditions, be executed after the general idea of the whole composition is formed; although the design and composition should be, to as great an extent as possible, dictated by the nature of the subject matter: this should specially be the aim of the illuminator when the matter is of such a nature as to admit of symbolic or emblematic illumination. Under ordinary conditions, the taste and knowledge of the illuminator must be his guide in this direction. No fixed dimensions or proportions can be formulated for the relative sizes of text, initial, borders, and margins; all is a matter of opinion and individual taste. We recommend the beginner, however, not to be too ambitious, and overdo his ornamental features; for in that case one is apt to think that the text is secondary to the ornamentation, and not that the illumination is intended to decorate the text. The treatment illustrated in Plate X is worthy of careful study: the illumination is strictly subordinate to the text, yet the entire composition is admirable in its simplicity. This same may be said of the treatment obtaining in the bolder ornamentation in Plate VII. Perhaps, in this last example the initial may be considered somewhat large in proportion to the text; but in this direction the old illuminators often went into extremes; for they loved to expend their greatest energies and ingenuity on the design and colouring of initial letters. Of course, when initials were to be made the fields for miniatures there always existed a strong inducement to make them of large size; and the initial in Plate VII is an example of this. When the initial was independent of the miniature on a page, it rarely assumed a large size, although it always held a certain prominence with respect to the text. The pages reproduced in Plates VIII and IX afford good examples of what we have just stated. On the other hand, the smallest initial that should be used should at least extend in depth through two lines of the text, thereby asserting its importance over the capital letters in the text. Plate X affords an admirable example of this treatment. In illuminations of

the twelfth-century and of earlier periods, in which the initial letters formed the sole decorations of their pages, it was quite a natural proceeding to give them imposing dimensions, as we see them in the Winchester Bible, two examples from which are given in Plates II and III. Another example, of a thirteenth-century treatment, is given in Plate VI. From all these authorities the modern illuminator can find guides for his own essays, so far as the proportions of initial letters are concerned.

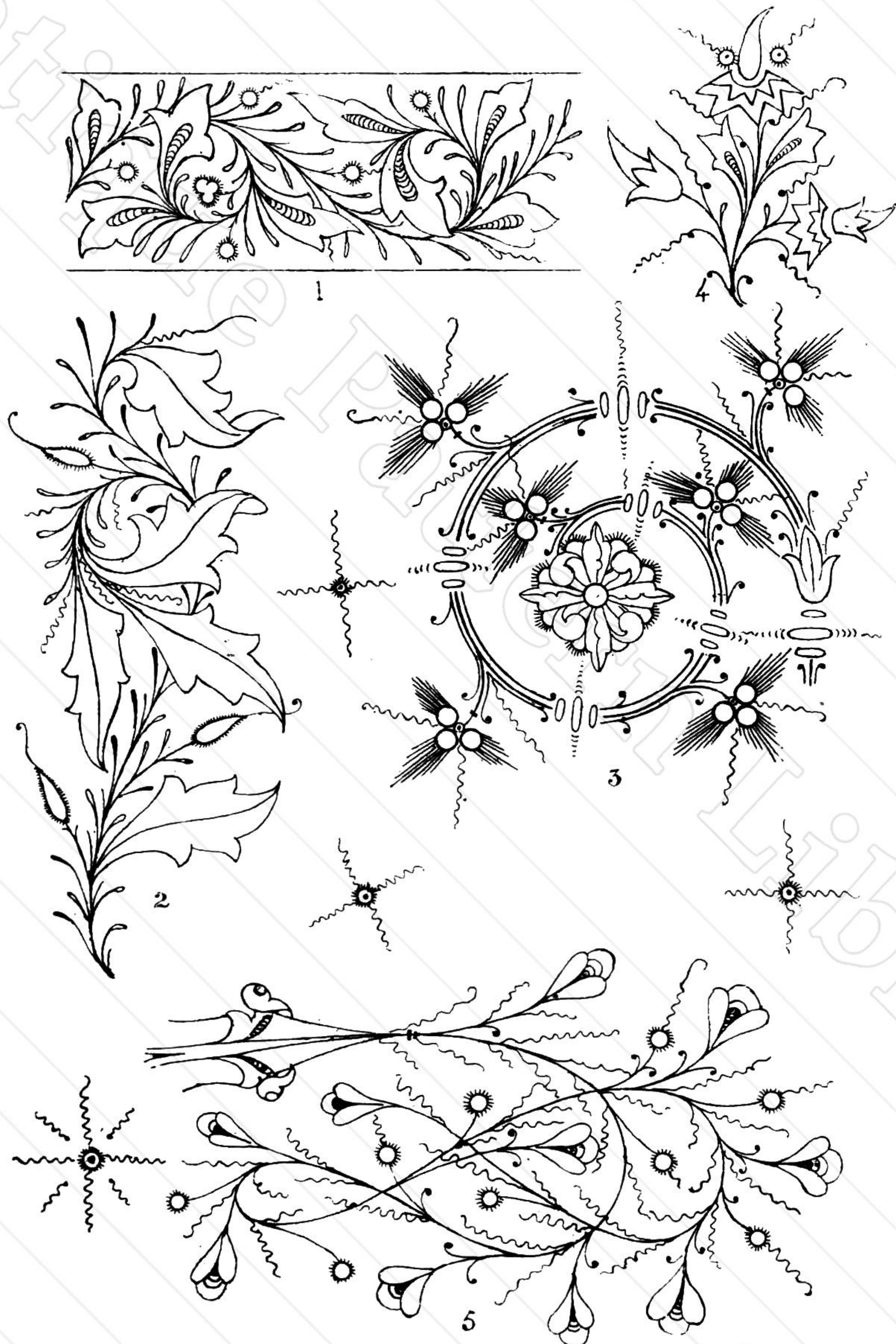
The letters themselves may be executed and ornamented in various ways; depending greatly on the style or school after which the student is carrying out the illumination. The styles that flourished during the fourteenth and fifteenth centuries are, perhaps, those likely to commend themselves for most modern purposes; although the initials of the twelfth and thirteenth centuries offer many suggestions of great value to the true artist, as may be realized on examining the initials in Plates II, III, and VI. Much taste and ingenuity can be displayed in the ornamentation of the thicker portions of letters. Good methods are illustrated in the initials in Plates VI, VII, and X; while more elaborate examples are shown in the single, vertical portions of initials in Plates VIII and IX. The ornamentation can be effectively executed in monochrome, that is, with different shades of the same colour; or in polychrome, with different tones of several colours harmoniously contrasted. Miniatures or figure subjects, branchwork (as in Plate VI), foliage or leaf-work (as in Plate X), diaper-work, or rich pen-work, may be used to fill up the interior spaces of the initials. The panels on which the initials are placed may, in like manner, be variously ornamented when burnished gold is not alone used. Examples of stem and leaf-work ornamentation are shown on the panels of the initials in Plates VII, VIII, and IX, and of diaper ornamentation on that of the initial in Plate VI. While square panels are frequently used for initials in manuscripts of the thirteenth and two following centuries, after the manner shown in the larger initials A and N in Plate XIV, other forms are by no means uncommon. Sometimes the panels follow, more or less closely, the forms of the letters, a slight following is shown in the larger initials G and D: while at other times the panels assume curved and cusped outlines, after the manner shown in the two lesser initials E and G, on

the same Plate. When of the last-named form, the panels outside the letters are commonly of burnished gold, or of some flat colour ornamented with line and dot-work in gold or white, as shown in the initials last alluded to.

All the initials shown on Plate XIV illustrate different and highly effective styles of ornamentation. The upper two initials, G and D, are developed from an early fifteenth-century illumination in our possession; the only example of the simple mode of shading flowers, as shown, which has come under our observation in old illuminations. We commend this easy and most effective mode to the attention of the modern illuminator. The peculiar bordering to the panels surrounding the letters is taken directly from the original illumination. The two smaller gold initials, E and G, in the centre of the Plate, are from fragments of fifteenth-century work preserved in the Victoria and Albert Museum, South Kensington. The peculiar form of their panels has been already commented on; and we have now to direct the student's attention to the simple and very effective manner in which the interiors of the letters are decorated. These examples suggest practically endless varieties of design and colouring: almost any flower or foliage that admits of a flat, conventional rendering can be pressed into service in this style of ornamentation. The two larger initials, A and N, at the lower part of the Plate, are developed from fourteenth-century work in our possession. They illustrate beautiful examples of parti-coloured letters, and a very elegant style of conventional ornamentation both within and around them. All the outlines, and much of the shading of the ornamentation are pen-work: and the designs so produced afford valuable suggestions for a simple class of illumination, which only demands graceful form and careful drawing.

In designing borders the student will do well to consult original MSS., or fac-simile reproductions of complete pages: he will by so doing, gain more insight into artistic design and composition in this important branch of the illuminator's art than mere description could ever convey to him. The eye is a great teacher, and should be carefully and continuously exercised. The student must never forget the truism, "There is no royal road to learning." The few examples that we have been able to give in this little work will, however, go far to introduce

PLATE XV.



G.A.A. DEL.

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the subject of the border to his notice. First, in Plate VII he will find a very bold treatment of what is known as the Gothic bracket, which we have commented on in our historical resumé; and he ought to find no difficulty in producing effective and varied designs in this class of bordering. In Plate X the student will find another bracket treatment, of a more elaborate and refined character, and calling for more manipulatory skill in its execution. Graceful pen-work is here called into requisition, in combination with conventional leafage, executed in colours on dividing grounds of burnished gold. In designing this class of pen-work, care must be taken to have every line and curve flowing gracefully; and each flower, bud, or leaf, however small or comparatively insignificant it may seem, should be formed and finished as if it were the only ornament on the page. The student should never neglect small things if he desire to attain skill in large things. In Plate XV are given five examples of graceful pen-work, combined with some characteristic forms of flowers and leaves. All the fringed details should be filled with gold—preferably raised and burnished—while the flowers and leaves may be coloured in any harmonious manner.

The inclosing border shown in Plate VIII affords another admirable and highly characteristic example of pen-work. In this case, all the fringed, leaf-like details are of raised gold, while the small flowers are executed in bright colours. This treatment requires for its support an inner border of some solidity, such as shown in the Plate. It will be observed that it is from this inner border that all the delicate line-work springs. Although this treatment imparts a certain feeling of connectedness to the composition, it is not absolutely necessary; for such scrollwork may spring from a single root-stem, placed either at one of the lower corners or in the centre of the bottom border, and be continued without a break throughout the borders which extend on each side of it. In either disposition the scrollwork will be quite independent of the inner border which incloses the text, or which may be continued from the initial in such a manner as obtains in Plate VIII.

Borders admit of any degree of elaboration; and the illuminator can expend his utmost powers of design and his highest manipulative skill on their production. The illuminated page

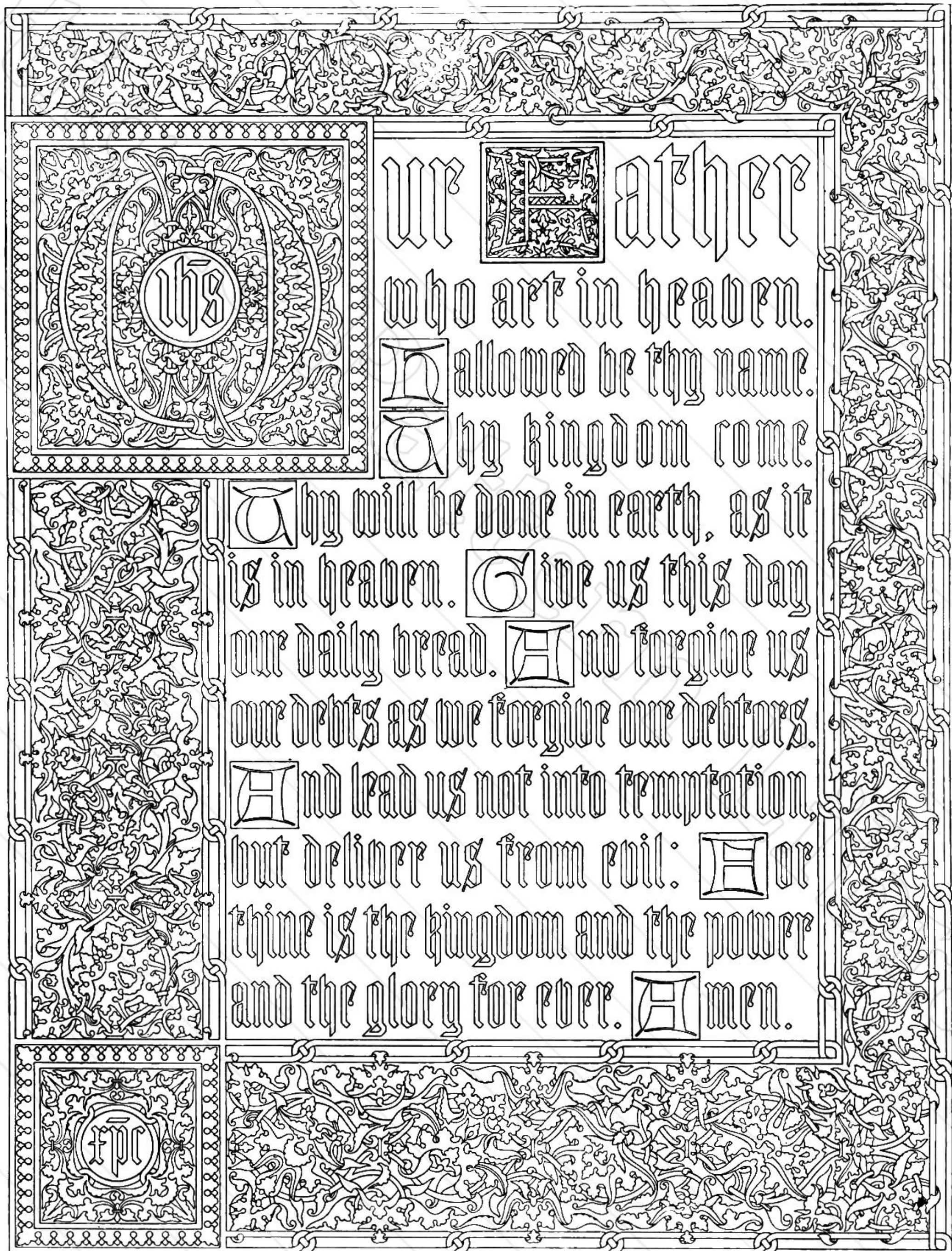
reproduced on Plate IX points the way to a class of border which can be varied to practically an endless extent, chiefly dependent on the type or form of leaf employed. It will be observed that all the foliage springs from the single root-stem in the centre of the bottom border. It could, however, and just as appropriately, have occupied the left-hand lower corner, as we find it in numerous examples. The outline design given in Plate XVI shows to what degree of elaboration a complete border may be carried. It may be mentioned that the forms and general treatment of the highly conventional floral designs in this border are after a style of illumination which obtained in the twelfth century in France. Such floral designs lend themselves to a most elaborate polychromatic treatment. The numerous lines within the flowers mark the boundaries of different contrasting colours, each colour being hard-shaded with its own tones, so that every flower may present harmonies both of contrast and analogy.*

The illuminator can impart much interest to his designs by introducing fanciful or grotesque animal and bird forms, after the fashion met with in the illuminated letters of the twelfth century. Suggestions in this direction are furnished by the initials shown in Plates II and III. In such fanciful creatures, any desirable system of colouring may be followed to harmonize with the rest of the ornamentation. A well-designed animal, with its tail carried around it in the form of ornamental scroll-work, and richly coloured, forms one of the most beautiful fillings for an initial letter, when a miniature painting would be inadmissible or too difficult for the student to execute. Miniature-painting is an art by itself; and, although it has been so largely introduced in illuminated manuscripts, it can hardly be pronounced a necessary branch of the illuminator's art. Much of the finest illumination executed during the Middle Ages comprises no miniature work.

In conclusion, we may advise the illuminator not to overcrowd his composition, whatever its nature may be, for little is gained by crowding decorative features. He should always strive to convey an impression of oneness or connectedness in

* This work was carried out in full colours, the border being on a gold ground throughout, and the text also being of gold outlined with black. The size of the illumination is 2 feet 1 inch by 1 foot 7 inches.

PLATE XVI.



G A A INVT ET DEL.

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his work; showing it to be a conception characterized by repose and directness of purpose. Simplicity and elegance are always charming, and especially so in the work of the illuminator.

Reader, in bidding you farewell, let us wish you every success and much enjoyment in the practice of the lovely and fascinating Art of Illuminating.



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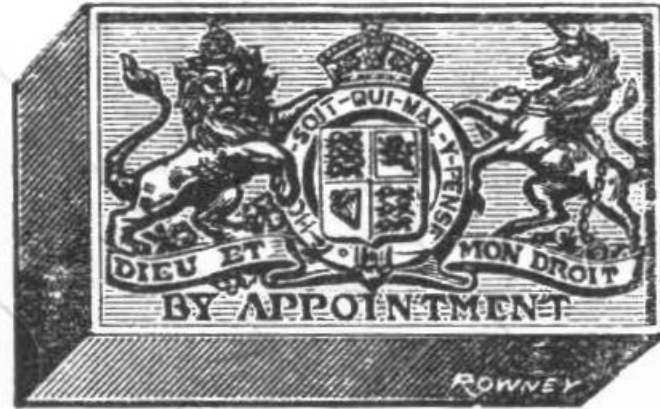
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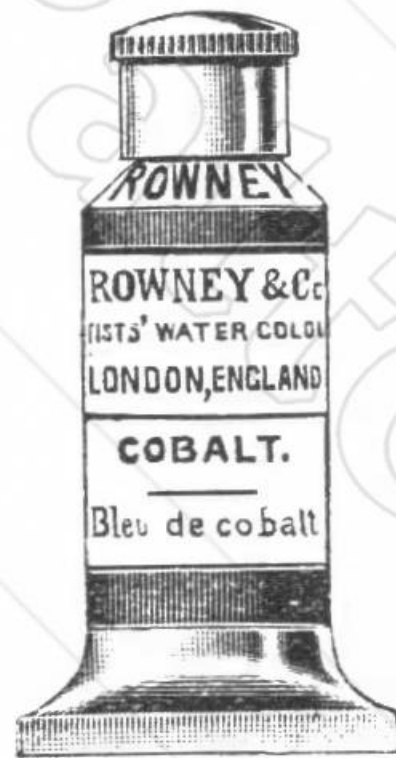


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Chrome 4, „ Deep
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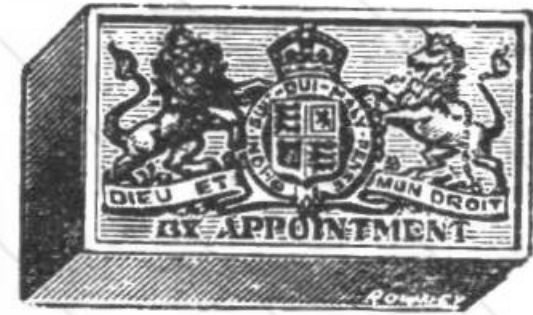


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Hooker's Green, 2
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Italian Ochre
Italian Pink
Ivory Black
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Light Red
Magenta
Mauve
Naples Yellow
Neutral Tint
New Blue
Olive Green
Payne's Grey



Half Cake.



Whole Pan.



Half Pan.

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Permanent Blue
Prussian Blue
Prussian Green
Purple
Raw Sienna
Raw Umber
Red Lead
Roman Ochre
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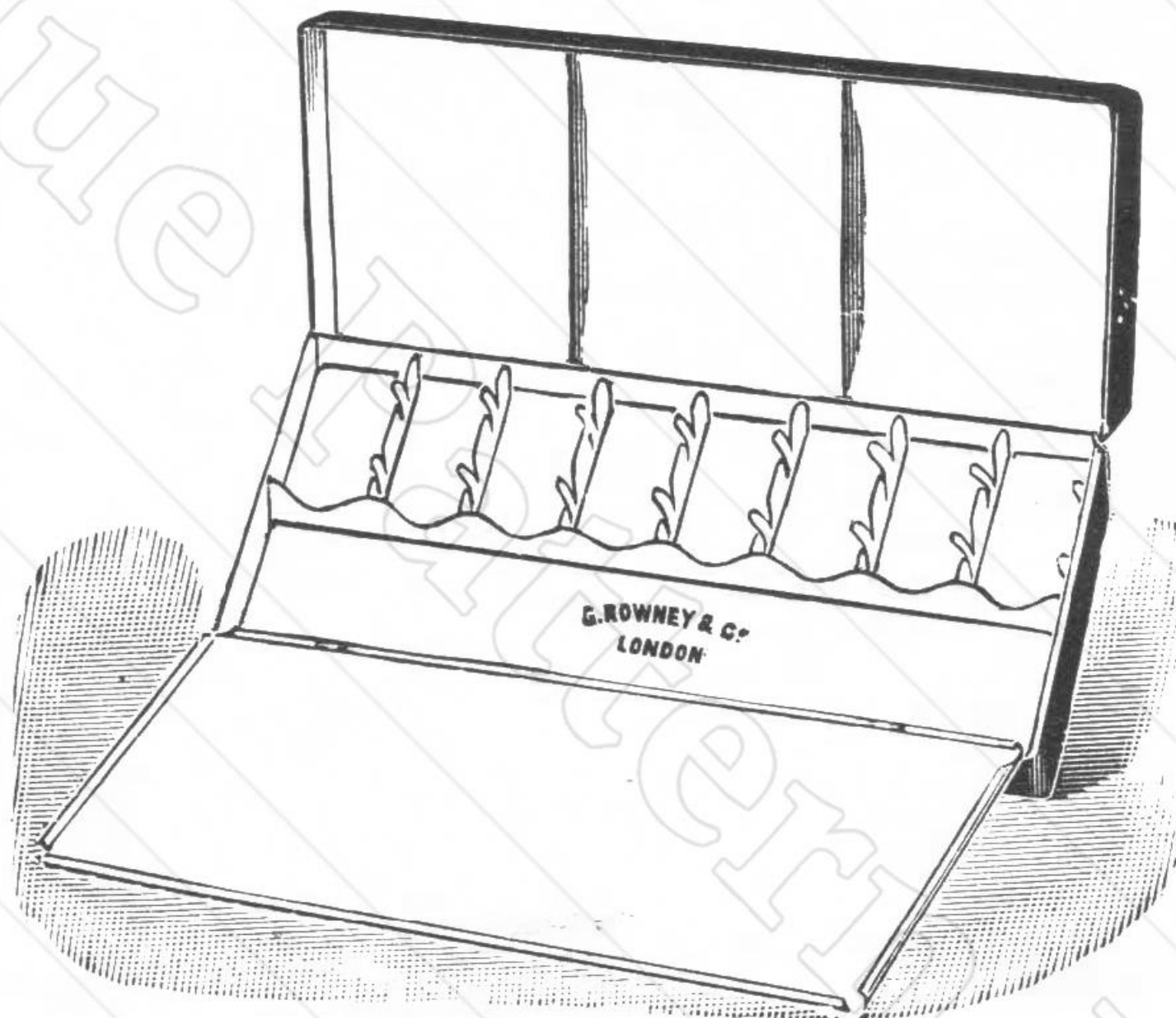
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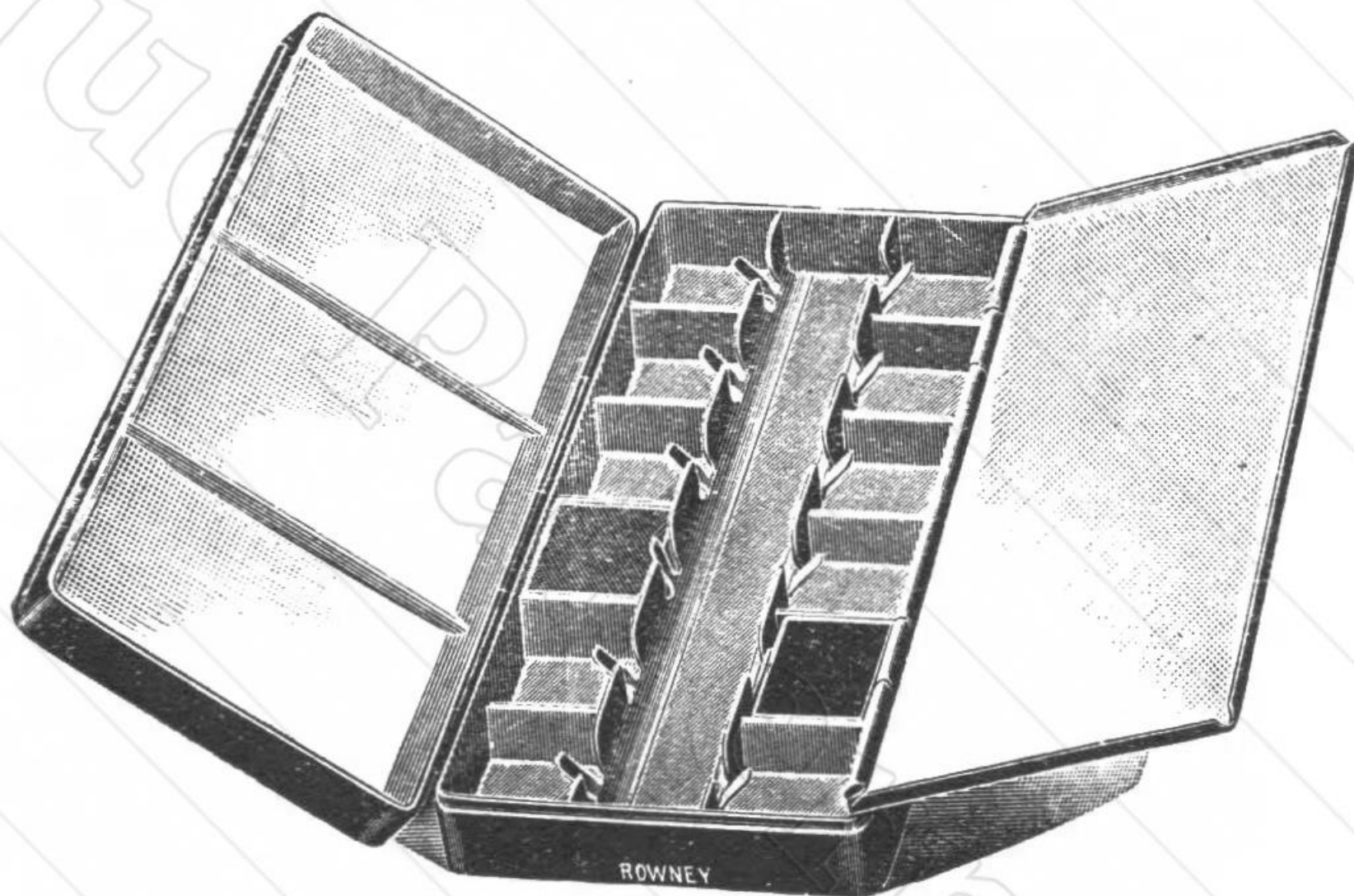
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10-HALF-PAN BOX	0 8 6
Gamboge, Yellow Ochre, Light Red, Crimson	
Alizarin, Burnt Sienna, Burnt Umber, Raw Sienna,	
Ivory Black, Cobalt and Prussian Blue.	
12-HALF-PAN BOX	0 10 0
Gamboge, Yellow Ochre, Raw Sienna, Burnt Sienna,	
Light Red, Vermilion, Burnt Umber, Crimson	
Alizarin, Madder Brown, Cobalt, Indigo, and Emerald	
Green.	
14-HALF-PAN BOX	0 11 0
Gamboge, Yellow Ochre, Raw Sienna, Light Red,	
Indian Red, Crimson Alizarin, Burnt Sienna,	
Vermilion, Burnt Umber, Raw Umber, Cobalt, Indigo,	
Ivory Black, and Emerald Green.	

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18-HALF-PAN BOX 	0	14	6
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Gamboge, Chrome No. 1, Yellow Ochre, Raw Sienna, Burnt Sienna, Indian Red, Light Red, Vermilion, Madder, Brown, Crimson Alizarin, Rose Madder, Vandyke Brown, Burnt Umber, Ivory Black, Cobalt, Indigo, Emerald Green, and French Ultra.

20-HALF-PAN BOX 	0	16	3
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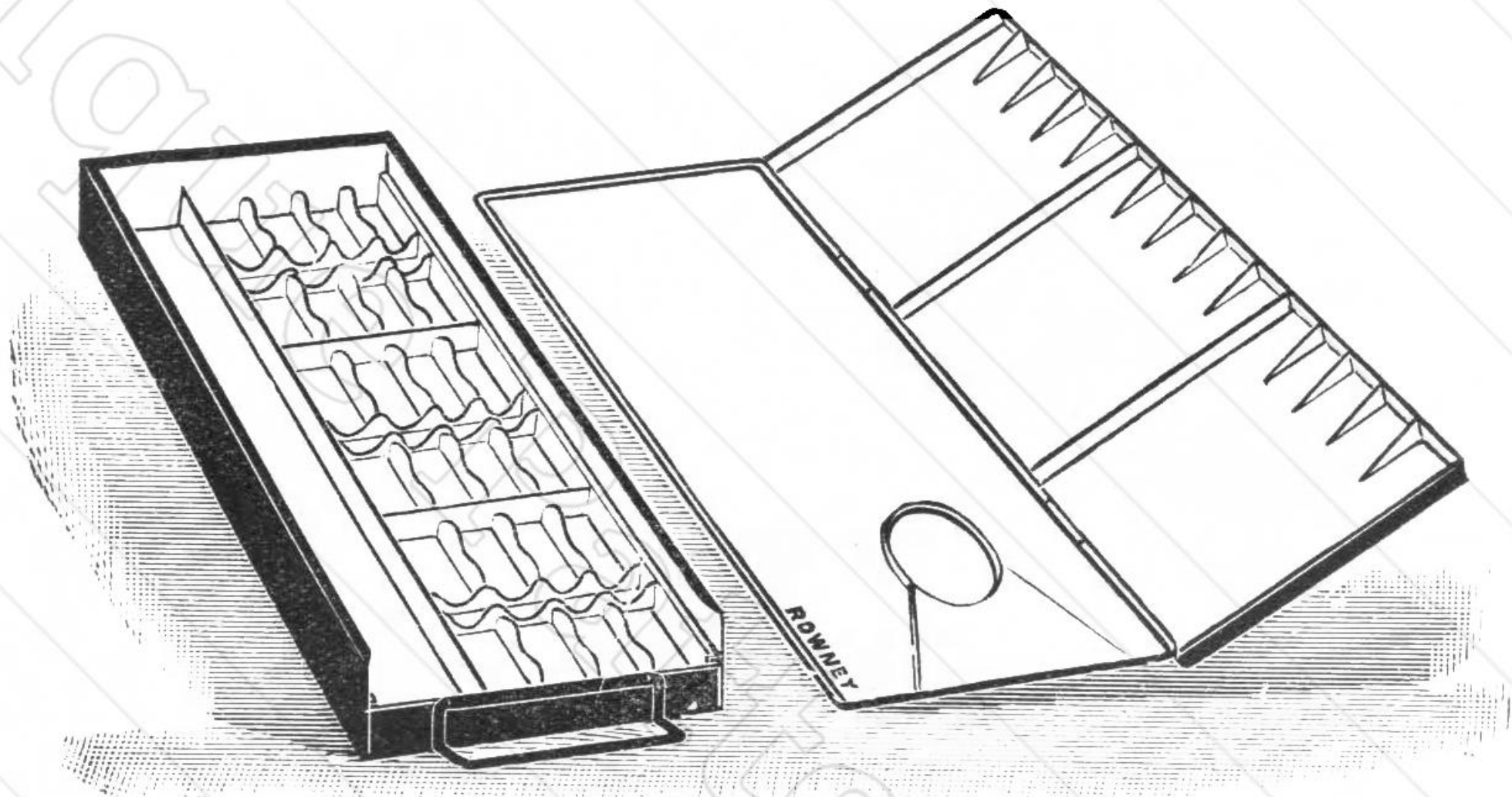
Gamboge, Chrome No. 1, Yellow Ochre, Raw Sienna, Burnt Sienna, Chrome No. 3, Light Red, Vermilion, Madder, Brown, Crimson Alizarin, Rose Madder, Ivory Black, Vandyke Brown, Burnt Umber, Cobalt, Indigo, Permanent Blue, Prussian Blue, Emerald Green and Viridian.

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Gamboge, Yellow Ochre, Lemon Yellow, Chrome No. 2, Raw Sienna, Burnt Sienna, Light Red, Indian Red, Vermilion, Chrome No. 4, Crimson Alizarin, Rose Madder, Madder Brown, Burnt Umber, Vandyke Brown, Sepia, Cobalt, Permanent Blue, Indigo, Prussian Blue, Emerald Green, Viridian, Neutral Tint, and Ivory Black.

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Gamboge, Yellow Ochre, Chrome No. 1, Chinese White, Light Red, Vermilion, Crimson Alizarin, Burnt Sienna, Permanent Blue, Prussian Blue, Burnt Umber & Ivory Black.		
15-Moist Tube Box	1 1 0	0 13 0
Gamboge, Raw Sienna, Yellow Ochre, Chrome No. 2, Light Red, Burnt Sienna, Vermilion, Crimson Alizarin, Madder Brown, Sepia, Lamp Black, Cobalt, Prussian Blue, Burnt Umber, and Chinese White.		
20-Moist Tube Box	1 10 0	0 18 6
Gamboge, Yellow Ochre, Chrome No. 1, Chrome No. 3, Raw Sienna, Burnt Sienna, Chinese White, Light Red, Vermilion, Orange Vermilion, Crimson Alizarin, Rose Madder, Ivory Black, Sepia, Burnt Umber, Cobalt, Prussian Blue, French Ultramarine, Emerald Green, and Viridian.		
24-Moist Tube Box	1 17 0	1 2 6
Gamboge, Yellow Ochre, Brown Ochre, Aureolin, Indian Yellow, Chrome No. 4, Light Red, Indian Red, Vermilion, Scarlet Vermilion, Crimson Alizarin, Rose Madder, Madder Brown, Burnt Umber, Vandyke Brown, Warm Sepia, Cobalt, French Ultramarine, Prussian Blue, Emerald Green, Ivory Black, Terra Vert, Viridian, and Chinese White.		
30-Moist Tube Box	2 12 6	1 9 0
Gamboge, Yellow Ochre, Naples Yellow, Roman Ochre, Lemon Yellow, Indian Yellow, Orange Cadmium, Aureolin, Light Red, Indian Red, Vermilion, Scarlet Alizarin, Crimson Alizarin, Rose Madder, Madder Brown, Brown Ochre, Vandyke Brown, Warm Sepia, Burnt Umber, Cobalt, French Ultramarine, Prussian Blue, Neutral Tint, Ivory Black, Emerald Green, Viridian, Olive Green, Chinese White, Cœruleum, and Ultramarine Ash.		

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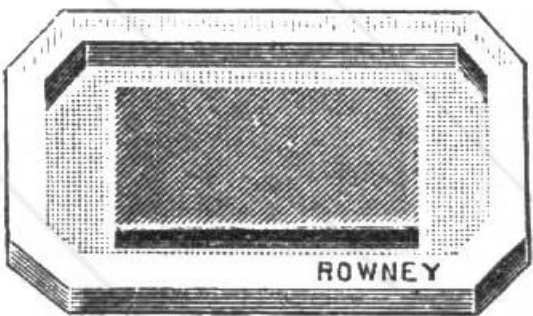
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erasing pencil marks without
injuring the paper.

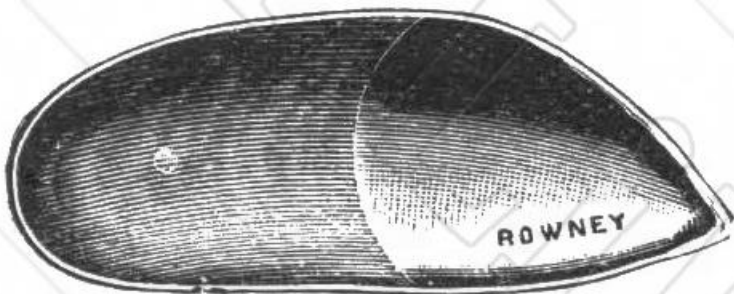
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&c.**



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					s.	d.
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Ditto Aluminium ditto (ditto)	"	2	6
Ditto Silver ditto (ditto)	"	2	6
GOLD, SOLID CAKE, in China pan	"	5	0
Aluminium, ditto ditto ...	...	...	...	"	1	0
Silver ditto ditto ...	...	...	...	"	1	0
GOLD SHELL, double quantity, No. 1	...	...	...	"	0	9
Ditto ditto single ditto ,, 2	...	...	...	"	0	6
Ditto ditto half ditto ,, 3	...	...	...	"	0	4
Ditto ditto green, single ditto ...	...	...	...	"	0	6
Silver Ditto	"	0	3
Aluminium ditto	"	0	3
GOLD SAUCERS, No. 1...	"	0	5
Ditto ditto ,, 2...	"	0	8
Ditto ditto ,, 3...	"	1	0



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				s.	d.	s.	d.	s.	d.	s.	d.
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Demy	18½-in. „ 14½	0	3	0	5	0	6	0	9
Medium	20½-in. „ 16¾	0	4	0	6	0	8	1	0
Royal	22½-in. „ 17½	0	5	0	8	0	10	1	4

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(G. Rowney and Co.'s make).

Thick Mounting Boards covered with Whatman's Paper on one Side.
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8vo Royal	9-in.	„ 5¾	0	1½		Half Imperial	21-in.	„ 14	0	7	
8vo Imperial	10½-in.	„ 7	0	2		Royal	23-in.	„ 18	0	9	
4to Royal	11½-in.	„ 9	0	3		Imperial	29-in.	„ 21	1	2	
4to Imperial	14-in.	„ 10½	0	4							

PACKETS OF WHITE OR TINTED CARD BOARDS.

For Pen and Ink Drawing.

EACH PACKET CONTAINS SIX CARDS.

			Size.				Size.
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Twopenny „	7¾-in.	„ 4¾		Shilling „	14½-in.	„ 10½	
Threepenny „	9¾-in.	„ 9					

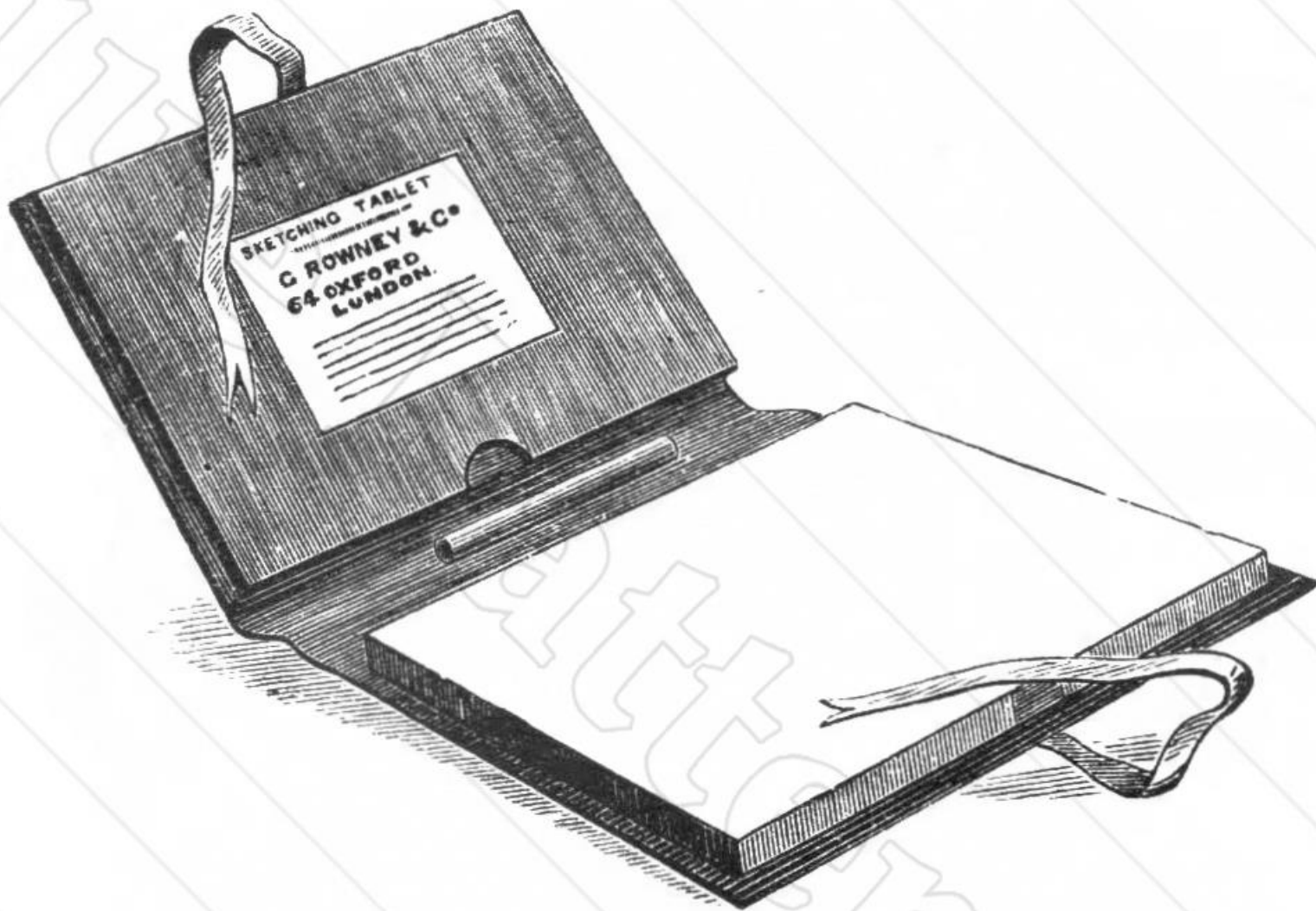
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Boxes containing twelve cards various shapes for painting on			1s. od.
Ditto	six cards	ditto	os. 6d.

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				s.	d.	s.	d.	s.	d.
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Imperial	28½-in. „ 21	0	5	0	7	0	9
Atlas	33-in. „ 26	—	—	1	0	1	3
Double Elephant	38-in. „ 26	—	—	1	2	1	6
Double Imperial..	42-in. „ 28½	—	—	1	5	1	9
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*There are 10 different tints in stock of 4 and 6 sheet Royal and Imperial only.
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WITH AND WITHOUT CASES.



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				(Imperial 90 lbs. and Royal 60 lbs.)		These are kept in three surfaces—"Not," "H.P." and "Rough."		Series a6		Series a7	
Each containing 24 Sheets.				Size.		Blocks.		Each.		Blocks with Cases	
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Imperial 16mo	7-in.	×	5	...	1	3	...	2
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Royal 4to	11½-in.	×	9	...	3	0	...	5
Imperial 4to	14-in.	×	10	...	4	6	...	6
Half Royal	18-in.	×	11	1	6	6	...	10
Half Imperial	20-in.	×	14	...	9	3	...	14

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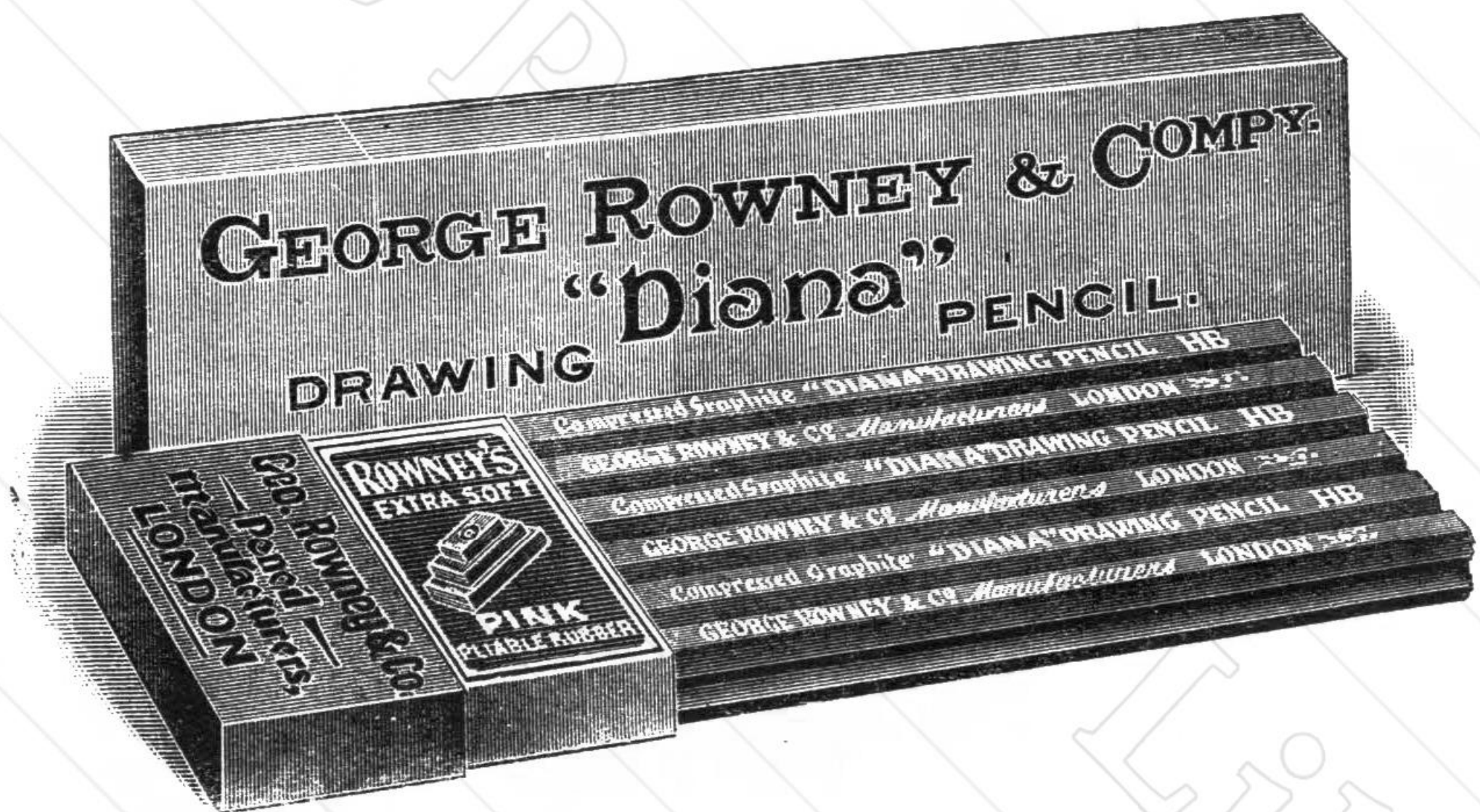
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2.	...	0	6	...	0	5		8.	...	2	2	...	1	6	
3.	...	0	7	...	0	7		9.	...	2	0	...	2	0	
4.	...	0	9	...	0	8		10.	...	3	6	...	2	8	
5.	...	1	1	...	1	0		11.	...	4	6	...	3	3	
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