N. B. In further support of this thesis the Candidate is prepared to submit full Notes taken in the University Library Edinburgh; the Advocates' and Signet Libraries; the University Library, Glasgow; the British Museum; South Kensington Museum; and the John Rylands Library, Manchester. Visits to Oxford have also been made (Ashmolean, Bodleian).
St. Christopher, 1423, from the wood-cut print in the Rylands Library. See page 41 fol.

This plate shows only the outline of the print which has been coloured by hand in flat tints and is pasted on the inside of the cover of a MS. entitled Lais Virgini, written in 1417 in the Carthusian monastery of Bayreuth near Memmingen, Swabia. This is the first piece of wood printing extant which shows a date.
THE PRINTED BOOK AS AN ARTISTIC UNITY.


Research Student in Fine Art at The University of Edinburgh.

Submitted to the D. Litt. Committee in accordance with the Regulations of the University Calendar.

March, 1915.
INTRODUCTION.

The subject of the present enquiry is the external production of the printed book, viewed from the artistic standpoint, using the epithet in its broadest and best sense. It consists of three parts dealing respectively with typography, illustration, and binding; and its object is to formulate rules for the production of modern books based upon a detailed study of selected historical examples drawn from the best period of printing. I submit that this matter of what might be called the architecture of a book has a deeper significance than that which is merely technical. The effect of a message depends largely upon the manner of its delivery, and the efficient appeal of the matter of a book upon the form in which it is presented to hand and eye; and I venture therefore, to claim for this subject a place among the branches of fine art which it has hitherto been denied, at least in this country.

The Guild of St. Jean Latran (founded in Paris in 1401) whose history is detailed in Ernest Thoinan's Les Relieurs Francais unlike the other city guilds of Paris which arose under the control of the prevot or mayor had its origin in the protection which the University extended at a very early time, to all those engaged in the production of books, including scribes, illuminators and even booksellers: so that the idea of close University connection with the external production of books, apart from editorship or authorship, is more than five hundred years old.
Books have been printed for four and a half centuries and some of the finest craftsmen and most gifted artists have been concerned in their production. In order, therefore, to avoid diffuseness, my enquiry has been limited in the following manner:

1. The examples studied have been drawn from the products of the presses at work in the latter part of the Fifteenth and the first two decades of the Sixteenth Centuries. This was, roughly, the period when Germany and Italy were predominant in the art of typography and during this time some of the most perfect examples of printing were produced. A considerable number of these books were masterpieces, because the first printers were under the desperate necessity of justifying the new art of printing from movable types in the eyes of the critical scholars of the day, and of beating down by the sheer force of excellent workmanship the bitter opposition of the scribes threatened with loss of their employment. It must also be carefully noted that as the printed book could not in the nature of things rival the MSS. book in decoration and illustration the printer was soon forced, to the distinct advantage of his art to concentrate his whole energies upon the typography, the selection of the paper and ink and proper performance of the press-work.

2. Though many large folios have been examined in various libraries throughout the country, the examples most carefully studied have been rather the more portable books intended for hand use. The object of this limitation is to find historic
guidance for the worthy presentation of modern books such as are used in every-day life; for this enquiry is concerned throughout with the book which is to be published at a reasonable price and whose artistic qualities are to be the product of fine taste based upon historic study. The so-called "fine paper edition" prepared regardless of expense, does not come in for consideration.

3. Books of portable size are so varied in physical character and intellectual aim that this enquiry has been further limited to those intended for the general reader, omitting all consideration of text books or works of reference.

A consistent endeavour has been made to regard the book as an artistic unity and to discover rules for the production of volumes in which typographer, illustrator, decorator, and binder work together with the single aim of bringing author and reader into close communication under the most favourable intellectual, hygienic, and aesthetic conditions; and while models have been chosen from the earliest and greatest period in the history of printing, the fact has not been overlooked that it is now possible to produce books which are no mere revivals or senseless copies, but which will represent in a fitting manner the worthier characteristics of the age in which we live. When art follows tradition in a blind spirit of slavish imitation the result may be as "interesting" as a well-

The University, Advocates' and Signet Libraries, Edinburgh; the University Library, Glasgow; the British Museum Library; the Bodleian Library; and the John Rylands Library.
organised fancy-dress ball, but the mere necessity for conscious revival is sufficient to prove that true creative art is dead. All great artists interpret their own age, however much they may adopt the constructive elements of other times, and this is as true in the production of the printed book as in painting or sculpture or architecture. The worthy book of the twentieth century ought to be as distinctive in character as that of the fifteenth and ought, moreover, to be distinctly recognisable in future ages as belonging to the period of the Revival of Printing.

The course of study which has been undertaken suggests the thought that the earliest printed books, though much sought by collectors and representing enormous monetary value, are of little real use to the community in general. The books lie in public museums or, worse still, in private collections unorganised for any definite purpose; yet for intending publishers, master-printers, book-illustrators, designers, binders and even authors they provide material for a course of study which would go far to revolutionise British publishing of the better kind. Book production is a branch of fine art which comes home to ordinary people in a way that painting, sculpture, and even architecture can never do and can be made an easy means for the quiet and steady elevation of public taste. Yet the early books upon which the taste of our book-producers must be founded, are suffered to remain as mere curiosities in our various collections.

The work done in the various libraries has also proved to me very conclusively that another aspect of my subject awaits treatment by a competent hand. The story of the book...
constitutes a branch of social history which is of the first importance and which has never yet been dealt with even in outline.
Judging from the best examples of the incunabula, the first artistic qualification for a typographer is a clear recognition of the fact that his business is to print in such a manner that the reader shall reach the author's meaning with the minimum of conscious physical effort. A perfect page of type must be absolutely void of self-consciousness. The typographer must learn to stand aside. His chief aim is not even legibility, for that may become in the extreme so staring that the eye is shocked and repelled. The physical effect of his work on the reader ought to be to place him in a condition of absolute restfulness.

This quality of restfulness is determined by:

1. The character of the type face.
2. The inter-verbal and inter-linear spacing.
3. The length of the lines of type and the number of lines to a page.
4. The position of the type on the two facing pages or the disposition of the margins.
5. The typographic "colour" of the printed page.
Explicit guidance on all these matters can be obtained from a careful study of select examples of the incunabula.

(1). The Character of the Type Face.

Of the two great divisions of type faces, the Gothic and the Roman, the former is now rarely used by English or American printers for book work. It was very handsomely employed in a variety of sizes by the early printers of Northern Europe as well as by those of Italy for large folios and ecclesiastical works, and careful contemplation of the best of these books is absolutely necessary for all who wish to acquire correct taste in typography; but very early in the history of printing the Gothic was superseded by Roman type though it has survived in Germany to the present day. In our modern printing presses the Gothic is now only sparingly used for purposes of variety or display. At present it is not proposed to consider it to any great extent, at least so far as the shape of the face is concerned.

About the year 1470 a Frenchman named Nicolas Jenson settled in Venice and set up the second of the printing presses of that city. He used a form of the Gothic type in such a volume as the Decratorum Codex, a copy of which is now in the library of Glasgow University and used it very handsomely indeed; but his fame as a printer rests chiefly upon his employment of a beautiful fount of Roman type designed after the script of the best of the copyists of Italy.
oua hanno penne: o squame: o cortecce: o gusci: come sono la Testugine: o ueramen
tè hànó lappelle pulita: come sono leerper. Taglado laparte disopra delle pêne non cresco
no: svidendole rimettono: Glinsecti hanno ale di pannicoli & cosi le rondini marine &
epipitrelli: Ma lâle diquesti hanno ledita. Dalla grossa pelle escono epeli asperi. Le
femine ghànó più fussili. Ecauagli nel collo & eleoni nelle spalle ghànno maggiori.
Etafi ghànno nelle goto drento & ne piedi: lequali due cosè Trego attrbusisce anco
ra alla lepre: & con questo esempio conclude che gli uomini libidinosi sono pilosi. La
lepre & uelcosîstima sopra tutti glanimali. Solo lhuomo mette epeli nelleta apta agene
rare: Ilche seno & dimostra stenlita cosè nel maschio come nella feminæ. Epeli nel hu
omo parte singenerano insieme: parte poi. Quegli che sono insieme con lui generated
non manchono dipoi come on anchora molto. Sono truate alchune che quando get
tono ecapelli diuentano ຽuălade: come anchora nel fluxo del mestruo. Equadrupedi
mudano ogni anni. Amaschi crescono affai nel capo & poi nella barba. Taglali non
rimettono in su lagatlatura come rimettono lherbe: ma esco infulori dallaradice. Cre
fcono in ceste malattie & maxime nella toffe & nella uccelhia & ne corpi morti. E cosè
geniti caggiono più tosto a libidinosi: Ma enati crescono più tosto. Nequadrupedi in
grossano per la uccelhia & lelane diuentano più rade. Edosso de quadrupedi sono pilo
fi: euenti fanza pelo. De chuoì de buoi cercodogli sìa optima colla. Item de tori. So
lo ditutti glanimali lhuomo maschio ha lepoppe: neglaltres animali emaschi hànó cer
ti segni dipoppe: Ma ne anchora le femine hanno lepoppe senon quelle che posson
nutrire efigluoli. Quegli che generano huoya non hanno poppe: Nessuno animale
ha lacte senon quegli che generono animali. Tra gluccelli solo el pipistrello. Credo che
sia faulolo so quello che fidente delle Streghe che mughino ellacte inbocca a faciuli. E
nelle Bestemie antiche questo nome di streghe: Ma non éla che uccello si sìa.

NATVRA. DELLE POPPE DEGLANIMALI. CAP. XL.

Lafine dolgono lepoppe dopo elparto: Il perché sìueanno lasinino elfoxto me-
se: conciosìa che lecaualle dieco lapoppa un anno. Tutti glanimali che hànó un
ghia dun pezo non generano più che due per uolta: ne hanno più che due poppe & qìl
le nel peclitione: nel medesimo luogo hanno quelle che hanno lunghia didue pezi
& sono cornute: le uacche quattro: le pescòe & capre due. Quelle che partorificono più
che due & hanno le dita napiedi hanno molte poppe per tutto eluentre in due filari.
Le troie generose hanno dodici poppe: le uulgari due meno. Similmente le cagne. Alch
une hanno quattro in mesto del corpo: come sono lepanthere. Alchune due chome
sono le leonessè. Lohellephantè solo ha due poppe sotto lebraccia: & nó nelpecto. Nel
suna che hâbia dita napiedi ha poppe nel peclitione. Eporcèllini prima nati succiono
leprime poppe & benche habbino lalre presso alla boca: ciaschuno conosce leuse in
quello ordine che è nato: & có quella sinutrisce & non con altra. Et leuato un porcellio
This Roman type and others of a very similar physical appearance have become models of Roman typography. It is no exaggeration to say that the Old Style Roman founts of type of which there are many varieties now in use are all based, more or less directly upon Jenson's type which possesses the necessary quality of restfulness in a marked degree.

To the modern eye, however, this earliest of the Roman types appears in its original form to be somewhat affected while it is unnecessarily wasteful of space; and if taken as a model it requires somewhat radical adaptation in several respects to meet the everyday requirements of a generation which reads a thousand books whereas the people of Jenson's time read one. This wastefulness of space was probably one of the chief reasons for the designing of the first of the type faces classed as Modern Romans which came from the foundry of Giambattista Bodoni who settled in Parma in 1768. His types have been altered and adapted in many ways but we may truly say that as Jenson is to the Old Style Romans so is Bodoni to the Modern Romans.

In English-speaking countries the Old Style Roman types are now generally preferred for book-work by printers and readers of cultivated taste. We may allow something for the aesthetic effect of the historical associations of these types

Wendelin of Speier in De Natura Deorum, 1471, Signet Library, Edinburgh.

Christopher Valdarfer of Venice in Dion Chrysostomos, 1471, Signet Library.

Gering in Vergilii Maronis Opera, 1484, Edinburgh University.

Jean Bonhomme in Augustine's Confessiones, 1475, Signet Library, Edinburgh.

* The qualities of Bodoni's type are also shown in Manusci Typograplic (Paris 1888)
Contrasted Old Style and Modern Roman
showing the difference in the stroke + the greater
contrast in the letters between major and minor
lines in the design.
but the preference has deeper significance and is indeed, based upon hygienic considerations. People of "cultivated taste" read a great deal and Old Style Roman types are more restful to the eyes as I shall endeavour to prove. The Modern Romans, being more economical of space, are generally used for works of reference and for newspapers and magazines in the printing of which the chief aim is to pack into the smallest possible space the largest amount of matter.

Now the highly-trained reader takes the word (and even the phrase) at a glance, and over-separation of letters in a word tends to check his speed. Any typographic device, therefore, which helps to carry the eye from letter to letter while preserving the separate identity of each symbol promotes speed and facility in reading. Hence the practical usefulness of the serifs which are the projections from the side or sides of the type design and which are the chief differentiating feature of a type face, the style of the design varying with their form and the mode of their attachment to the major and minor lines.

In Old Style Romans the serifs are broad, short, and bluntly rounded at the ends, while under a glass they may be seen to be connected to the perpendicular lines of the type design by a generous curve; moreover, those of the small, or "lower-case" letters (by far the more important part of a fount of type) are set obliquely, helping the eye to connect letter with letter by giving a continuous or cursive effect to each word. In Modern Romans the serifs are long, sharply pointed, and set horizontally while the connection with the main lines is more or less angular in character. Thus in Old Style Romans the composite effect of the serifs and their connections
An Optically Round Line
An Optically Flat Line

Showing the effect of the arch, which is short and blunt in the upper line, long and pointed in the lower; connected to the main lines by a curved fillet in the upper and cut at a sharp pointed angle in the lower.
is to convey a general impression of curvature which is soft, pleasing, and restful to the eye as distinguished from the sharp-edged, flat and angular impression produced by the serifs of the Modern Romans. For the eye rests gratefully upon gentle curves while it is repelled by angularity.

It must not be forgotten that it is the rays of light reflected from the white paper which stimulate the terminals of the nerves of sight, in other words that in looking at a page of letterpress it is the white we "see" while the lines of the black type are merely the borders or boundaries of the stimulating areas. This optical fact is full of significance for our present enquiry, affecting it in several ways, two of which may be considered at this juncture.

In the first place, the internal areas of white in a type design must be clean and open and must never degenerate into mere spots of light. In the second place, the lines of the design must be full and comparatively broad without any descent to fine hair-lines in any part of a single letter. To put the matter in another way, the double task of the designer who keeps steadily before him la loi du moindre effort and aims at producing a restful type is to obtain open, internal spaces, bounded throughout by firm unwavering lines.

At the same time a general selfconscious squareness of effect such as William Morris advocated is to be rigidly avoided. There is no aesthetic attractiveness in a square or a circle both of which repel the cultivated eye, possibly because of the absolute character of their formation. The designer must also avoid the clumsy blackness which is so often and so mistakenly, deemed to be necessary for legibility. When
specimen from Clark, set in 14-point Old Style type, June 1914—the meadows near the salt sea they set forth, where always they were wont to gather in their company, delighting in the roses, and the sound of the waves. But Europa herself bore a basket of gold, a marvel well worth gazing on, a choice work of Hephaestus. He gave it to Libya, for a bridal-gift, when she approached the bed of the Shaker of the Earth, and Libya gave it to beautiful Telephassa, who was of her own blood; and to Europa, still an unwedded maid, her mother, Telephassa, gave the splendid gift.

Many bright and cunning things were wrought in the basket: therein was Io, daughter of Inachus, fashioned in gold; still in the shape of a heifer she was, and had not her woman's shape, and wildly wandering she fared upon the salt sea-ways, like one in act to swim; and the sea was wrought in blue steel. And aloft upon the double brow of the shore, two men were standing together and watching the heifer's sea-faring. There too was Zeus, son of Cronos, lightly touching with his divine hand the cow of the line of Inachus, and her, by Nile of the seven streams, he was changing again, from a horned heifer to a woman. Silver was the stream of Nile, and the heifer of bronze and Zeus himself was fashioned in gold. And all about, beneath the rim of the rounded basket, was the story of Hermes graven, and near him lay stretched out Argus, notable for his sleepless eyes. And from the red blood of Argus was springing a bird that rejoiced in the flower-bright colour of his

These two pages contrast the Old Style Roman type with the Modern Roman, showing the difference of the serifs and the greater contrast in the Modern type between the major and minor lines of the design. Leads are not used in either example.
specimen from Clark, set in 14-point Modern type, June 1914—the meadows near the salt sea they set forth, where always they were wont to gather in their company, delighting in the roses, and the sound of the waves. But Europa herself bore a basket of gold, a marvel well worth gazing on, a choice work of Hephaestus. He gave it to Libya, for a bridal-gift, when she approached the bed of the Shaker of the Earth, and Libya gave it to beautiful Telephassa, who was of her own blood; and to Europa, still an unwedded maid, her mother, Telephassa, gave the splendid gift.

Many bright and cunning things were wrought in the basket: therein was Io, daughter of Inachus, fashioned in gold; still in the shape of a heifer she was, and had not her woman’s shape, and wildly wandering she fared upon the salt sea-ways, like one in act to swim; and the sea was wrought in blue steel. And aloft upon the double brow of the shore, two men were standing together and watching the heifer’s sea-faring. There too was Zeus, son of Cronos, lightly touching with his divine hand the cow of the line of Inachus, and her, by Nile of the seven streams, he was changing again, from a horned heifer to a woman. Silver was the stream of Nile, and the heifer of bronze and Zeus himself was fashioned in gold. And all about, beneath the rim of the rounded basket, was the story of Hermes graven, and near him lay stretched out Argus, notable for his sleepless eyes. And from the red blood of Argus was springing a bird that rejoiced in the flower-bright colour of his
HERE FOLWEN THE WORDES BITWENE
THE HOST AND THE MILLERE

WHAN that the Knight had thus his tale y-told,
In al the route nas ther yong ne old
That he ne seyde it was a noble storie,
And worthy for to drawen to memorie;

And namely the gentils everichoon.
Our Hoste lough and swoor, ‘so moot I goon,
This gooth aright; unbokeled is the male;
Lat see now who shal telle another tale:
For trewely, the game is wel bigonne.
Now telleth ye, sir Monk, if that ye conne,
Sumwhat, to quyte with the Knightes tale.’
The Miller, that for-drónken was al pale,
So that unnethe up-on his hors he sat,
He noylde avalen neither hood ne hat,
Ne abyde no man for his curteisye,
But in Pilates vois he gan to crye,
And swoor by armes and by blood and bones,
‘I can a noble tale for the nones,
With which I wol now quyte the Knightes tale.’

Our Hoste saugh that he was dronke of ale,
And seyde: ‘abyd, Robin, my leve brother,
Som bettre man shal telle us first another:
Abyd, and lat us werken thriftily.’
‘By goddes soul,’ quod he, ‘that wol nat I;
For I wol speke, or elles go my wey.’
Our Hoste anwerde: ‘tel on, a devel wey!
Thou art a fool, thy wit is overcome.’
‘Now herkneth,’ quod the Miller, ‘alle and some!
But first I make a protestacioun
That I am dronke, I knowe it by my soun;
And therfore, if that I misspeke or seye,
Morris modelled his type upon the first Romans he did not allow for the spreading of the ink, consequently, his printing shows a double spreading and is to some extent an exaggerated copy of his carefully selected models.

Now in the best Old Style Romans now in use, following but improving upon those of Jenson and his contemporaries, the design is broad and open allowing for ample space in the internal areas; further, the contrast between major and minor lines is small while there are no hair lines. In Modern Romans the letter is taller and admits less light while the contrast between major and minor lines is so great that each letter is not a unit as it ought to be but conveys a separate impression for each white area enclosed by two major lines of the type design. e.g. a small 'M' consists of two portions.

An exaggerated respect for the historic models has its practical dangers as may be seen from a careful and unprejudiced inspection of the products of some of the private and semi-private presses of the period following the efforts of William Morris. Many of these "artistic" founts of type have a staring effect which is not conducive to restfulness in reading. The exaggerated fulness of the lower-case "o" and "u" as well as the "o" occasionally gives the impression that the printed page is filled with holes; and when the double "o" occurs, as in the word "groove," or the above-named three letters fall in one word as in "colour" the effect is somewhat startling, holding the eye by its strangeness in a way which no word ought to do.

It must be noted, moreover, that the "o" and the "u" of this particular word are not letters which call for the
reader's special attention. While it is true that the eye of the trained reader takes in a word or phrase as a whole, it does not dwell equally upon every letter, but picks out the phonographic outline which is mainly consonantal. It is noticeable that this over-elaboration of the vowels is not to be found in the original founts cut by William Caslon though he modelled his types upon those of Jenson and his contemporaries.

A careful study of late fifteenth century books emphasises the important fact that a type face designed for restfulness must not be too precise and clean in general effect however carefully each individual letter is shaped. Machine-like precision and absolute mechanical perfection tire the eye as readily as the steady contemplation of an unbroken row of area railings or of spikes upon a garden wall, two things quite perfect of their kind. In the type of Jenson and others of his period there are many small irregularities which please the cultivated eye not merely because of their "quaintness" and historic interest but because they are restful. The physical reason for this is that the changed form or slight irregularity stimulates a fresh set of nerve terminals and gives the others a rest, just as relief is found in a broken railing or an iron standard of different shape and heavier build. These typographic changes, however, must not be so-called "artistic" embellishments like that tied letters of the old founts of type but slight irregularities in the type design itself. Caslon type is perfect enough, letter by letter under the glass, but in the page it appears to possess that slight irregularity which means restfulness for the reader. It is not easy to say how
this effect has been obtained, but it is one of the marks of a masterpiece in typography.

In the library of Edinburgh University there are two volumes of the Biblia Latina de Lyra cum Postillis printed at Nuremberg by Anton Koberger in 1487. The books are not brilliant examples of typography but, taken together, they show in an excellent manner, by force of contrast, the optical value of the second colour in printing. In the first of these two volumes spaces have been left for the initials to be inserted by hand but the work has been left undone as in so many others of the incunabula. In the second volume the coloured initials have been inserted by hand and the effect, in comparison with the companion volume is more than pleasing. It is distinctly helpful to the eye of the reader, for the reason already given, that the occasional occurrence of clear bright colour in the black type stimulates at intervals a new set of nerve terminals. The revival of this plan of printing in two colours in ordinary books of the present day would greatly help in the attainment of restfulness in reading.

It was with great reluctance that the early printers gave up the idea of competing with the colour work of the manuscript books. Schoeffer and Fust printed more than once in black and red and even (greatly daring) in black, red, and blue; but the more usual practice was to leave spaces for the initials to be put in by the "rubrisiner." A small lower-case key letter was inserted by most early printers as a guide to the rubrisiner and this practice made the book typographically complete so far as the reader was concerned. All the great printers, however, did not follow this plan. I have examined Psalorum Codex, 1457 - 1459 (John Rylands).
books by Anton Koberger and Adolf Rusch (known as the "R" printer from the peculiar shape of this particular letter in his fount) in which the spaces for initials are left quite blank.

If the practice of using coloured initials is more largely adopted in modern books for optical reasons apart from considerations of taste, printers of to-day would do well to study the incunabula. They will find that in the best examples the top of the initial is never below the line to which it belongs as it is so often in books issued even from some of our foremost printing presses. This is a seemingly small but really important matter in which the early workers rarely erred. If there is room above the line, the initial may stand so that the top is above the word to which it belongs but when this is the case, the letter will be handsomely placed so that the centre of the outside curve, say of a "D", is opposite the end of the line of which it forms a part, but in no example which I have examined does the top of the letter fall below its line. This is a good typical example of the manner in which a study of the incunabula would help those who have in any way the oversight of printing.

There is another important matter in connection with two-colour printing in which the early books might well be taken as a guide. After the lapse of more than four centuries the colours of the painted initials and of the printed or handwritten rubrics in the incunabula are wonderfully clear and bright. The craftsmen who made these additions to the printed book understood perfectly that if colour is to make itself felt among black type it must not only be vivid in character
but must also be carried by a letter of much greater size than the type itself. In this matter also present day printers might learn from the early masters of their art. There is nothing more ineffective than the attempt to obtain variety by merely printing a headline or capital in a bright colour without increasing the weight of the letter. The second colour most commonly used in the early books is a brilliant scarlet. Bright blue and purple are also frequently employed and the paint is then laid very thickly upon the paper, as if the rubriisher was fully conscious of the fact that beside the black type any colour but red was more or less ineffective.

As a rule the incunabula set us the example of a sparing use of colour in typography; but the copy of the 
Aberdeen Breviary printed by Walter Chepman in 1509, now in the University Library at Edinburgh, though a splendid piece of two-colour typography, is useful rather as a warning showing clearly the disadvantage of red type for the body of a book. The eye is at once repelled by the pages of this book which are set completely in red type, and when raised after a few minutes reading is at once conscious of the complementary colour. The smaller red insertions are, however, very helpful optically, and are handsomely placed on the page.

The sacerdotal direction in the missal, breviary, or other service-book of the Church has appropriated the name of "rubric" though it is now rarely printed in red. But the rubriisher who undertook the hand-work in the early printed books, or the printer who was enterprising enough to print in more than

\*\*The Book of Hours printed at Paris in 1549 by Reginald and Claudius Calder is a good example of early printing in two colours. (British Museum)\*\*
one colour used the red and the blue for other insertions besides the instructions for ritualistic observance. The page headline is often inserted in red as well as the number of the folio. In the copy of the Mazarin Bible we have in brilliant scarlet such legends as *Incipit liber quem nos Exodi dicimus* without any space between the end of Genesis and the beginning of Exodus, while the Latin "titles" of the Psalms, e.g., *Nisi Dominus Frustra* are treated in the same manner.

Headings of chapters and sections are often inserted in red, while the latter may be underlined in the same colour, as in the *De Civitate Dei* from the press of Johann Mentelin in Edinburgh University Library. Other good examples of scarlet paragraph headings are to be found in the *Decretorum Codex*, printed by Jenson himself, in the Hunterian Collection at Glasgow. Books which are annotated employ the red letter or red underlining for facilitating reference. Many of the incunabula have all the smaller capitals touched with red and occasionally with yellow. In some cases this gives a spotty effect which is by no means pleasing but in the hands of a master the device conveys an impression of light and warmth which is optically very help-ful and restful.

It will be seen, therefore, that the red or blue was used to afford variety, and to serve the same purposes as the occasional italics, heavy-faced letters and other typographic devices which are now part of every complete font of type. It may be true that the rubriser had in view only the production of an attractive page in his use of a second and a third colour, and regarded as pictures many of the pages of the incunabula which are set in Gothic type and enriched with other colours.
are very handsome indeed. But the addition of the red had a more practical significance for the reader of the book, affording that change of optical impression which, as we have already shown, is of distinct hygienic value, provided that the colour is clear and its strength is sufficient to stand out among the black type.

To sum up, then, on the matter of the type face, it seems to be certain that the most restful types for purposes of sustained reading are those modelled, more or less closely, upon the earliest Roman founts of Jenson and his contemporaries. There are now many varieties of these types, but one of the most satisfactory is that which was originally cut by William Caslon of London in the early part of the eighteenth century and has been modified to suit more modern requirements. A special feature of this type is the length of the ascenders and descenders which not only add grace and beauty of proportion but also serve a more practical purpose, for they are of great assistance to the eye in differentiating the letters and picking out the phonographic outline of any word or phrase which, as we have seen is mainly consonantal. The difficulty of reading a page of type set entirely in capitals is largely due to the lack of ascenders and descenders while type in which these features are short is less easily read than the Caslon variety.

It must be noted that in the matter of typography the feeling of the present time is utterly opposed to fancifulness and eccentricity even of the mildest character. The appeal to the eye must be simple and direct and there is a desire to find through utility the satisfaction of the artistic instinct. In this respect our own time resembles that of the
incunabula. The earliest master printers did not strain after the "artistic". The Gothic letter now used for display, was in its time the easiest formation possible to the hand of the scribe - a row of firm, black, upright strokes was converted by a few practised touches into a line of readable letters, entirely lacking in unnecessary lines or curves. At a later date it was found that Roman types were more easy to read than the Gothic in the smaller sizes and this discovery was more or less promptly followed by a general adoption of the founts of Jenson and the men of his time.

In spite of the existence and wide use of such a masterpiece of typography as that cut by William Caslon and others of a similar character, the task of the type-designer is not by any means complete for he has still to solve several problems of utility and to meet fresh demands on the part of the reading public. Experiments might, for example, be made with the object of imparting a more distinctive character to the lower half of the letters g, p, j, and y. The possibility of confusing certain letters and combinations such as a, c and o; i and l; h and k; a and s; h and b; m, mn, nu, nv, w, and m opens out another field for investigation and trial, while further attention might be devoted to imparting unmistakable individuality to the lower-case "s". Caslon made this particular letter so much out of keeping with his general design that it becomes almost an eccentricity, but the part which it plays in creating the impression of pleasing irregularity is not inconsiderable. His capital "s" however, in a short headline is not pleasant.

With all his services to printing as a fine art,
specimen from Clark, set in 14-point Caslon type, June 1914—the meadows near the salt sea they set forth, where always they were wont to gather in their company, delighting in the roses, and the sound of the waves. But Europa herself bore a basket of gold, a marvel well worth gazing on, a choice work of Hephaestus. He gave it to Libya, for a bridal-gift, when she approached the bed of the Shaker of the Earth, and Libya gave it to beautiful Telephassa, who was of her own blood; and to Europa, still an unwedded maid, her mother, Telephassa, gave the splendid gift.

Many bright and cunning things were wrought in the basket: therein was Io, daughter of Inachus, fashioned in gold; still in the shape of a heifer she was, and had not her woman's shape, and wildly wandering she fared upon the salt sea-ways, like one in act to swim; and the sea was wrought in blue steel. And aloft upon the double brow of the shore, two men were standing together and watching the heifer's sea-faring. There too was Zeus, son of Cronos, lightly touching with his divine hand the cow of the line of Inachus, and her, by Nile of the seven streams, he was changing again, from a horned heifer to a woman. Silver was the stream of Nile, and the heifer of bronze and Zeus himself was fashioned in gold. And all about, beneath the rim of the rounded basket, was the story of Hermes graven, and near him lay stretched out Argus, notable for his sleepless eyes. And from the red blood of Argus was springing a bird that rejoiced in the flower-bright colour of his feathers, and spreading abroad his tail,
NOTE BY WILLIAM MORRIS
ON HIS AIMS IN FOUNDER THE KELMSCOTT PRESS

BEGAN printing books with the hope of producing some which would have a definite claim to beauty, while at the same time they should be easy to read and should not dazzle the eye, or trouble the intellect of the reader by eccentricity of form in the letters. I have always been a great admirer of the calligraphy of the Middle Ages, & of the earlier printing which took its place. As to the fifteenth-century books, I had noticed that they were always beautiful by force of the mere typography, even without the added ornament, with which many of them are so lavishly supplied. And it was the essence of my undertaking to produce books which it would be a pleasure to look upon as pieces of printing and arrangement of type. Looking at my adventure from this point of view then, I found I had to consider chiefly the following things: the paper, the form of the type, the relative spacing of the letters, the words, and the
Morris did not leave a Roman fount which could be used for the collected edition of his own works, in which the Caslon letter is handsomely used by the Arden Press. These books in their simplicity and lack of unnecessary ornament are truly representative of an age which in typography demands absolute directness and clearness; and here we see, at least at second hand, the result of Morris' own method and teaching. His invariable practice in reviving any craft was to go back to the time when it was exercised in its highest perfection and in the case of printing his studies were concerned with the work of the first and greatest printers. He examined the best examples and then endeavoured to apply the lessons he had learnt from them to existing needs and circumstances so far as was compatible with good taste and good workmanship. He was, however, hampered by the fact that he was an executive, and not merely a potential artist, with all the limitations which technical ability appears to impose upon the critical faculty. It must be set down to his credit, however, that he did not adopt the long lower-case "s", or the tied letters or any of the abbreviations so common in the incunabula, or the catch-word at the foot of the page.

Of the types used by private and semi-private presses since the time of Morris, one of the best is the Riccardi fount of Mr. Herbert Horne which is excellent in the smaller size for books to be read continuously, while the larger size seems to be better suited for "companion books" which have attained to the distinction of being read for meditation. This distinction, by the way, between the two classes of books is
SPECIMEN PAGES OF THE COLLECTED EDITION OF THE WORKS OF WILLIAM MORRIS EDITED BY MAY MORRIS FROM "THE HOLLOW LAND" AND "THE EARTHLY PARADISE"

Set in the Caslon Italic as the best available for the work of the man who revived Printing as an Art and yet did not leave a working font to perpetuate his efforts.
The town, and the town stood on a hill overlooking the rich autumn country: it was girt about with great walls that had overhanging battlements, and towers at certain places all along the walls, and often we could see from the church yard or the Abbey garden the flash of helmets and spears, and the dim shadowy waving of banners, as the knights and lords and men-at-arms passed to and fro along the battlements; and we could see too in the town the three spires of the three churches; and the spire of the Cathedral, which was the tallest of the three, was gilt all over with gold, and always at night-time a great lamp shone from it that hung in the spire midway between the roof of the church and the cross at the top of the spire.

The Abbey where we built the Church was not girt by stone walls, but by a circle of poplar trees, and whenever a wind passed over them, were it ever so little a breath, it set them all a-ripple; and when the wind was high, they bowed and swayed very low, and the wind, as it lifted the leaves, and showed their silvery white sides, or as again in the lulls of it, it let them drop, kept on changing the trees from green to white, and white to green; moreover, through the boughs and trunks of the poplars we caught glimpses of the great golden corn sea, waving, waving, waving for leagues and leagues; and among the corn grew burning scarlet poppies, and blue corn-flowers; and the corn-flowers were so blue, that they gleamed, and seemed to burn with a steady light, as they grew beside the poppies among the gold of the wheat. Through the corn sea ran a blue river, and always green meadows and lines of tall poplars followed its windings.

The old Church had been burned, and that was the reason why the monks caused me to build the new one; the buildings of the Abbey were built at the same time as the burned-down Church, more than a hundred years before I was born, and they were on the north side of the Church, and joined to it by a cloister of round arches, and in the midst of the cloister was a lawn, and in the midst of that lawn, a fountain of marble, carved round about with flowers and strange beasts; and at
the edge of the lawn, near the round arches, were a great many sun-flowers that were all in blossom on that autumn day; and up many of the pillars of the cloister crept passion-flowers and roses. Then farther from the Church, and past the cloister and its buildings, were many detached buildings, and a great garden round them, all within the circle of the poplar trees; in the garden were trellises covered over with roses, and convolvulus, and the great-leaved fiery nasturtium; and specially all along by the poplar trees were there trellises, but on these grew nothing but deep crimson roses; the hollyhocks too were all out in blossom at that time, great spires of pink, and orange, and red, and white, with their soft, downy leaves. I said that nothing grew on the trellises by the poplars but crimson roses, but I was not quite right, for in many places the wild flowers had crept into the garden from without; lush green briony, with green-white blossoms, that grows so fast, one could almost think that we see it grow, and deadly nightshade, La bella donna, oh! so beautiful; red berry, and purple, yellow-spiked flower, and deadly, cruel-looking, dark green leaf, all growing together in the glorious days of early autumn. And in the midst of the great garden was a conduit, with its sides carved with histories from the Bible, and there was on it too, as on the fountain in the cloister, much carving of flowers and strange beasts.

Now the Church itself was surrounded on every side but the north by the cemetery, and there were many graves there, both of monks and of laymen, and often the friends of those whose bodies lay there, had planted flowers about the graves of those they loved. I remember one such particularly, for at the head of it was a cross of carved wood, and at the foot of it, facing the cross, three tall sun-flowers; then in the midst of the cemetery was a cross of stone, carved on one side with the Crucifixion of our Lord Jesus Christ, and on the other with Our Lady holding the Divine Child.

So that day, that I specially remember, in autumn-tide, when the church was nearly finished, I was carving in the cen-
Ogier the Dane

In those first hours of his fair life were shed
He took unwitting, and unwitting spent,
Nor gave himself to grief and discontent
Because he saw the end a-drawing nigh.

Where is he now? in what land must he die,
To leave an empty name to us on earth?
A tale half true, to cast across our mirth
Some pensive thoughts of life that might have been;
Where is he now, that all this life has seen?

Behold, another eve upon the earth
Than that calm evening of the warrior's birth!
The sun is setting in the west, the sky
Is bright and clear and hard, and no clouds lie
About the golden circle of the sun;
But East, aloof from him, heavy and dun
Steel-grey they pack with edges red as blood,
And underneath them is the weltering flood
Of some huge sea, whose tumbling hills, as they
Turn restless sides about, are black or grey
Or green, or glittering with the golden flame;
The wind has fallen now, but still the same
The mighty army moves, as if to drown
This lone bare rock, whose sheer scarped sides of brown
Cast off the weight of waves in clouds of spray.

Alas! what ships upon an evil day
Bent over to the wind in this ill sea?
What navy, whose rent bones lie wretchedly
Beneath these cliffs? a mighty one it was,
A fearful storm to bring such things to pass.

This is the loadstone rock; no armament
Of warring nations, in their madness bent
Their course this way; no merchant wittingly
Has steered his keel unto this luckless sea;
Upon no shipman's card its name is writ,
Though worn-out mariners will speak of it

220
not sufficiently observed by master-printers. Mr. Ashbee used Caslon type in the earlier publications of the Essex House Press, and so also does Miss Yeats in the books of the Cuala Press, a double proof of the high merits of this letter. The type of the Doves Press was of Jenson origin while that of the Vale Press was also founded on Venetian models. Mr. Daniel revived the types of Bishop Fell for the Clarendon Press but these, though related to Caslon type are as jumpy as Caxton's letters.

Mr. Rogers of the Riverside Press has shown what fine personal taste can accomplish in the matter of finished production by the use of the ordinary commercial founts and gives evidence of a careful study of the incunabula. An interesting typographical experiment was made in 1912 for a monthly publication known as "The Imprint." This was the cutting of a fount of type which follows the general design of Caslon but shows even less contrast between the major and minor lines and is considerably heavier in general effect, showing also a marked difference in the width of body lines in straight and round characters. In this fount the "s" is broader than that of Caslon but the "o" is narrower, a good point following my contention that this comparatively unimportant letter is too prominent so far as the reader is concerned. The cross-bar of the lower-case "t" is set considerably lower, making the letter, on the whole, more legible. This fount recalls the best traditions of the fifteenth century, though it lacks some restful companionable quality either inherent in the Caslon type or the product of use and association.
A NOTE ON THE SPECIMENS OF LETTERING, ILLUMINATION, PRINTING AND BOOKBINDING SHOWN AT THE EXHIBITION OF ARTS & CRAFTS HELD AT THE NEW GROSVENOR GALLERY, BOND ST., LONDON, W.

The Exhibition of Arts and Crafts nothing gives such complete satisfaction as the fine specimens of writing done by Mr. Edward Johnston and by Mr. Graily Hewitt, and other disciples of the school of lettering which he has established. The importance of these exhibits is, of course, not to be gauged by the actual beauty of the specimens themselves, though in many cases that is very great indeed. If we encourage fine writing, it is not because we wish to hang on our walls written and gilded texts from the Psalms, or to treasure in our cabinets finely illuminated passages from Keats or from the Book of Job; it is because fine writing will give us fine lettering, wherever lettering is used, whether in our printed books, or on the hoardings in the streets, or in the advertisement columns of our newspapers, or on the monuments and memorials in our graveyards and churches. It is the chief glory of the school that the fine lettering which is taught there has already begun to penetrate to all these places. It is also finding its way into the typefounders’ specimen books, and it is well for the future of printing that it should do so. Just as in the first years of printing the typefounders produced beautiful letters because the fine writing of their day gave them their inspiration and their models, so in this modern school of writing we have the best hope for the inspiration and the models which will enable our typefounders to give us fine letter in the future. The value of the work of the school to the printer is shown at the Grosvenor Gallery in the versal and initial letters written for the splendid quarto Virgil printed by Mr. Hornby at the Ashendene Press, in the fine books from the Doves Press, in the exhibit of type-letter designed by Miss Zompolides and used at the Arden Press in printing their folio volume on “The Gold and Silver of Windsor Castle,” and in other works of merit.
specimen from Clark, set on 14-point Imprint type, June 1914—the meadows near the salt sea they set forth, where always they were wont to gather in their company, delighting in the roses, and the sound of the waves. But Europa herself bore a basket of gold, a marvel well worth gazing on, a choice work of Hephaestus. He gave it to Libya, for a bridal-gift, when she approached the bed of the Shaker of the Earth, and Libya gave it to beautiful Telephassa, who was of her own blood; and to Europa, still an unwedded maid, her mother, Telephassa, gave the splendid gift.

Many bright and cunning things were wrought in the basket: therein was Io, daughter of Inachus, fashioned in gold; still in the shape of a heifer she was, and had not her woman’s shape, and wildly wandering she fared upon the salt sea-ways, like one in act to swim; and the sea was wrought in blue steel. And aloft upon the double brow of the shore, two men were standing together and watching the heifer’s sea-faring. There too was Zeus, son of Cronos, lightly touching with his divine hand the cow of the line of Inachus, and her, by Nile of the seven streams, he was changing again, from a horned heifer to a woman. Silver was the stream of Nile, and the heifer of bronze and Zeus himself was fashioned in gold. And all about, beneath the rim of the rounded basket, was the story of Hermes graven, and near him lay stretched out Argus, notable for his sleepless eyes. And from the red blood of Argus was springing a bird that rejoiced in
A Page from an English Psalter of 1284 showing how the lines were filled up with decorative material.
(2). Inter-linear and Inter-verbal Spacing.

A careful student of MSS books and incunabula cannot fail to be impressed with the fact that the early workers took every opportunity of economising space. The scribe filled the rectangular space of his page either with letterpress or ornament and indulged his passion for symmetry to such an extent that he even filled up the short lines in the manner shown in the accompanying plate. The makers of block books followed the MS tradition. In the British Museum copy of the Ars Moriendi the lines which fall short are filled with dragons or floriated ornament.

The printers of the early books seem to have been filled with the same desire to fill in the whole of the space allotted to the letterpress. It may have been the necessity for saving the precious paper or vellum which originally prompted this practice, but in the declaration of Caxton's old age that his "eyen were dimmed", not by contemplation of his jumpy black type, but by "overmoche lokynge on the whyte paper", we find a possible explanation of the desire to fill in the whole of the space allotted to letterpress. It is not the black type but the white paper which we "see" and the most successful typographer is the man who uses it most skilfully.

In the copy of the Mazarin Bible which I have in-
spected at the Advocates' Library, there is no pause at the end of a chapter, not even a line of space for the numeral; for example, the first line of Genesis XII runs:

\[ \text{DIXIT AUTE DNS AD ABRAM XII} \]

the initial of the first word and the numeral at the end of the line being scarlet in colour. Even a new Book of the Bible may begin at the foot of a page being introduced by a rubric, such as \[ \text{Incipit liber quem nos Exodi dicimus} \]. That masterpiece of early Scottish printing, Bellenden's translation of Hector Boece's History and Croniklis of Scotland, printed by Thomas Davidson of Edinburgh, shows the same economy of space.

The heading of a section or the title of a Liber may fall at the foot of a column, if there is room; if it must of necessity over-run, the space may be left but this rarely occurs. Paragraphs are also begun in the middle of a line with the section mark. The Virgil printed by Ulric Gering at Paris in 1484, a copy of which is in the Signet Library, is widely spaced between the lines, but this is for the practical purpose of allowing for the insertion of an interlinear translation. Caxton is less economical of space and breaks up the page in the modern manner. For example, in Higden's Polychronicon he begins a new Liber on a new page and he spaces chapter headings.

We see, then that the masters fully grasped the significance of the typographic problem which was to attain to restful legibility by keeping down the white. While the reader was engaged in the business of reading, his eye was to be con-

*So also the two copies of the Mainz Psalter in the Rylands Library.*
cerned only with the type and not to be dazzled by super-abundance of light. The lines were to clear each other so that the reader could readily keep the place but when the page was completed, it was to be made up of a series of horizontal bars, not of staring white bounded by type but of type duly and efficiently separated by white. The printers of the best kind who used the Roman types, seem to have settled the important problem of interlinear spacing by using fonts designed on what may be termed a "head to heel" plan, the descenders and ascenders almost, but not quite, meeting each other. When type is designed, like the Caslon masterpiece and others of its kind, with due consideration for the value of these features, the question of inter-linear spacing settles itself for no "leads" are necessary to space out the type.

From a close study of the incunabula we can also formulate the rule that no more space should be used between the words than just clearly cuts them off from one another. This rule is followed by the best modern printers who find a "two-to-em" space most restful to the eye of the reader. This applies only to hand-set type. In much of the machine work of to-day a number of words in succeeding lines may so end as to produce a continuous "river" of white down the page. This glaring and unforgivable typographic fault is not found in the work of Gutenberg, or Sweynheim and Pannartz, or Nicolas Jenson, or Aldus Manutius, or John of Spira, though Caxton's books are not free from it. It was not found in the manuscript books and with these works as models, the earliest printers almost unconsciously avoided an error which is largely the product of machinery. It must not be forgotten, however, that
they could not solve the insistent problem of justification by means of frequent abbreviations which are not permissible in modern type-setting. We see again in this matter also, the recognition by the best craftsmen of the necessity for keeping down the white. Provided always that words are adequately marked off by white space, the whole of the rectangular space on the page allotted to letterpress must be occupied by type.

The modern method of commencing a new chapter one third of the distance down the page leaving un-filled space above appears to be sanctioned by custom. When such a page faces another on which stands the conclusion of the preceding chapter with a very wide space beneath it, we have an opening of the book which is neither restful nor tasteful. Something, which is not letterpress is necessary to carry the eye across these gaps, and experiments are desirable on the part of book-designers with a view to creating a better impression in this respect.

It is interesting to note the example of Aldus Manutius in this particular matter. In the Aristotle which he printed in 1495 he begins a new chapter about one fifth of the distance down the page but fills up the rectangle with a decorative headpiece in perfect typographic balance with the Greek letterpress. When a chapter ends short he arranges the last few sentences in the shape of a funnel, so as to carry the eye almost to the foot of the page, and then inserts in capitals the inscription

Τέλος τοῦ δευτέρου κ.τ.λ.
In the Book of Hours printed at Paris in 1549 by Reginald and Claudius Cælder the page marked hiii falls short and is tastefully "filled" by an arrangement of black and scarlet leaves which resemble a falling shower and serve to carry the eye to the foot of the page.

(3). Length of Line and Depth of Page.

Throughout the history of civilization, it appears to have been tacitly agreed that an average of about 45 characters to the line and 32 lines to a page is the standard for comfortable reading. The line of the papyrus roll contained about 45 letters counting one for each inter-verbal space. The best examples of the manuscript books were planned on the same length of line except those in double columns in which the lines were naturally shorter. The incunabula of handy size have lines of 53-55 letters, counting inter-verbal spaces as letters, the increase in the number of characters being due to the smaller space required for the printed as compared with the written letter.

The Report of the British Association of 1912 suggests a length of about $3\frac{1}{2}$ inches for the comfortable line set in ordinary readable type and in such a line we find an average of 42 characters. According to the leading oculists, the limit of distance which the eye swings laterally from the centre without strain upon the optical muscles and without any side move-
ment of the head is approximately 2½ inches. The line of 4½ inches seems therefore to be scientifically permissible, but seeing that the "normal" eyes of the oculist are really the exception, it would be safer to regard this as too long for ordinary cursive reading, and to adopt the British Association limit of 3¾ inches as supported by science, historic custom, and commonsense. According to Albert Maire in La Technique du Livre the length taken in at a single glance at the ordinary reading distance, is 12 - 15 mm or with practised readers 16 mm. It would be difficult to design a more uncomfortable page than that of the ordinary "large-paper" edition with a line of 7 to 8 inches. No student of the incunabula could ever be responsible for such a page as this. The early masters would use the two-column arrangement in a folio volume.

In the fifth century MS of the Gospels recently added to the Washington Collection and now shown in facsimile at the British Museum there are 30 lines to the column.

With regard to the depth of page, it is remarkable how general is the practice in the smaller manuscript books and incunabula of limiting the number of lines to about thirty.

In considering and determining of length of line, we must take account of received practice not because of any claim of tradition but because of heredity. Readers of to-day come of ancestors whose eyes were accustomed through long generations to swinging easily over a distance of about four inches. A habit practised through such an extended period must have affected the physical conformation of the eye of civilized nations, and, if so, this will account for the strain experienced in reading any page of printed matter in which the line is considerably shorter or longer than traditional length.
With a line of about $3\frac{1}{2}$ inches the general feeling is that the depth of the printed page should be about $5\frac{3}{4}$ inches, while a 4 inch line is usually found in a page of 6 inches in depth. A page which departs to any appreciable extent from these proportions is felt by the careful student to be wrong, annoying, and self-conscious. Ulric Zel, Jenson, Wendelin of Speier, Johannes Bonus, Johann and Conrad Hist, Antonio Miscomini, and Giovanni Razzo, to name only a few of the early printers find these proportions satisfactory in portable books, and I may cite as a pattern page that of the *Tractatos de Ente et Essentia* of St. Thomas Aquinas, printed at Venice in 1488, now in the British Museum. Right down through the history of printing the practice continues, until the proportion has become a custom, satisfying to the taste and comfort of the reader. The practised printer, however, of the present day pays some regard to the design of the type in settling the proportions of the page. The tall Bodoni letter and the Modern Romans based upon its general design, look best in a page more or less elongated while the Old Style designs require a somewhat broader page, though a squat appearance is to be rigidly avoided.
(4). The Disposition of the Margins.

From observation of a large number of the more portable manuscript books and incunabula, the recognised rule of the margin followed in the best period, appears to have been, that the inner edge next the binding must be the smallest of all, the top margin must be larger, the outer side margin about double the inner and the foot margin double that at the head. This applies mainly to the books set in Roman type, the folios in the Gothic letter usually having the printed matter centred between left and right while the ratio of bottom to top margin is two to one. In making these statements with regard to the incunabula, it must not be forgotten that in many cases the binder has cropped the pages in such a ruthless manner that it is difficult, and often indeed impossible, to discover the intention of the printer with regard to the position of the letterpress on the page of the book. Moreover, it is only in the case of comparatively thin books which open quite flat that we can really judge the imposition of the typographic rectangle. When a book is of considerable thickness, the pinching of the binding usually renders reading impossible, and, defying tradition, the student is at times forced to the conclusion that the hinder edge ought to have been the broadest margin of all.
The margins recommended by Morris after prolonged study of the incunabula.
Leaving this matter for a moment, the student cannot help noticing that the best examples of early printing have twice as much margin at the foot as at the head. This is an arrangement which appears to have become an absolute rule and is felt to be right for comfortable reading. It allows space for holding the book, obviating the necessity for raising the volume to an uncomfortable height in order to read the lines near the foot of the page. If the typographic rectangle is placed exactly in the centre of the page, it appears to have dropped below it, and the eyes as well as the muscles of the neck, experience distinct discomfort in looking downward. Here at least we are upon undeniable ground.

With regard to the side margins, William Morris, following the example of the mediaeval scribes and printers, never wearied of insisting upon the compositor regarding the double page as the unit. The two rectangles of type were to be placed as in the diagram herewith, each of the outer side margins being equal in width to the whole of the space between the two type pages. To the reader of cultivated taste this arrangement looks "right" chiefly because he has become used to it, but the convention overlooks certain hygienic requirements on the part of the reader which it is absolutely necessary that the book-designer should satisfy at the outset, for art cannot be based upon discomfort.

The double page may be the unit for the designer, but it is certainly not the unit for the reader, who, as reader, is concerned with one page at a time. For restfulness in reading it would be better if the other page were out of sight altogether, and in the case of a limp book or magazine the ordinary
reader is only too glad when he can obliterate it and bring the page he is actually reading evenly before his eyes. In fact the ideal method of reading, so far as optical restfulness is concerned, was the use of the papyrus roll on which the typographic rectangle was centred between the hands and no other printed matter was allowed to come, either consciously or sub-consciously before the eye of the reader.

It is impossible, of course, to adopt such a plan at the present day but this is no adequate reason for placing the two type pages in such a position that a portion of the second page comes within the field of vision as type when the first is being read. If there is to be equality of margins, there is more hygienic justification for the arrangement shown in the diagram, immediately following.

It ensures the printer's work emerging victorious from the pinching hands of the binder "that enemy of the human race." It pushes the second page of printed matter into such a position that the eye of the reader is only conscious of it as a grey mass breaking the white glare of the paper. For it must not be hastily assumed that it is better to leave the second page blank. This would mean to dazzle the eyes with white rays of light, and so long as the second rectangle of type is not allowed to come too near the first its presence is preferable to a blank page. This point is well illustrated in the copy of the Decretals of Gregory IX printed by Schoeffer in 1473 and now in the Edinburgh University Library, in which the smaller type of the commentary surrounding the text forms a restful grey border to the latter, breaking the white of the
margin in a very effective manner. Of course, such an arrangement as shown in the diagram is at present a violation of good practice but it would not be long before it looked as "right" as that which now appeals to printers and writers of cultivated taste. It would, at least, clear the typographic rectangle of the curvature which appears to be necessary in any bound book of appreciable thickness and which serves to distort the letters in a manner most injurious to the eyes of the reader.

"Whether margins are small or large," writes Morris, "they must be in proportion to the page of text"; and the British Association Report lays down without discussion that "wide margins are restful to the eye." The proportion of space on the page to be occupied by the typographic rectangle is important for the reader's comfort. After careful measurement of selected examples of the incunabula, I find that the ratio of text to page which appears to satisfy the conditions of restfulness is 5 to 9 or 11 to 20. The office of the margin is to cut off the type matter from surrounding objects and it ought to be of such dimensions that it performs this duty and no other. If it comes self-consciously into the reader's vision it dazzles the eye, and dwarfs the face of the type.

The wide outer margin had a utilitarian value in many of the manuscript books and incunabula. It was often used for illustration or annotation, occasionally also for side headings. An example of the former use is shown in Euclid's Elements printed by Ratdolt at Venice in 1482, now in the British Museum; while marginal side-headings are found in Cicero's De Natura Deorum printed by Wendelin of Speier in 1471, now in the Signet Library at Edinburgh. If it is intended for either of these
uses it is still permissible and desirable, provided always that the inner margin allows for pinching in binding and for clearing the typographic rectangle of the page curvature already mentioned.

A highly interesting volume in this connection is the **Medals** of Antonio Zantani printed at Venice 1548. The type is a beautiful Roman font of the style of Jenson which is placed on an octavo page with side and top margins of the same width but with a very broad bottom margin. The book is thin and the typographic rectangle is not curved in the least. The centring of the type in the page is specially noteworthy at this period in a book of this size. The press-work is excellent and the paper of a fine subdued white.

There is, however, no absolute rule of the margin. Each book must be built according to the purpose for which it is intended. The mediaeval use of the broad outer margins for small illustrations has been recently revived both in this country and in the United States, chiefly for children's books, and the results are pleasing enough when the work is well planned with careful avoidance of freakishness.

This is only one of the many ideas for present day practice which can be drawn from the manuscript books and incunabula.

* In the 1957 Edition of the *Psalmodicos Codex* in the John Rylands Library, the printers have centred the typographic rectangle.
(5). Typographic Colour and its artistic Significance.

While it is not the first business of the typographer to produce pretty pictures or perfect geometrical designs, he must carefully consider the general aesthetic effect of the page of letterpress upon the reader of cultivated taste. For the eye must be prepossessed with the appearance of the type page and with its relation to the surrounding margins. Otherwise the reader comes with prejudice and irritation to the task of focussing the eye upon the type itself. As I have endeavoured to show, the main guiding principles must be hygienic in origin; but having once attended to the matters already detailed, the printer has still to consider aesthetics.

We might sum up this matter by saying that the "colour" of his page must be right. Technically speaking, "colour" is the summation of all the factors in the general appearance of the type-page, including the tint of the paper and the design of the letter. Perfect normal colour requires a correct relationship between the weight of the design proper and the tint of the paper behind the design. Typographic colour can be modified by a change in the character of the serifs and by variation of contrast between the main and minor lines of the type face. The flat lines, pointed serifs, and sharp contrast of line of the Modern Romans intensify the tint of the paper
(known as the "non-manipulated colour") behind the type-design with the result of magnifying each separate letter to a remarkable degree. On the other hand the blunt serifs, rounded lines, and smaller contrast of major and minor lines of the Old Style Romans subdue the non-manipulated colour. If the paper is inferior in tone and texture, therefore, Modern Romans will make the best of it from the point of view of clarity so that printers of the newspapers and cheaper books and magazines of to-day wisely adopt these founts, as well as the advertizer who is more concerned with attention value than with visual restfulness.

The best of the incunabula show a richness of typographic colour which is satisfying and restful in the highest degree. Leaving out of consideration for the moment those books printed on vellum, we may safely assert that this is partly owing to the excellence of the paper which was rag-made, crisp, tough, and flexible, pleasant to the hand as well as to the eye. Taking into consideration the lapse of time, the paper shows marvellous durability. As a rule it is creamy in tint rather than white, and there has been comparatively little fading, so that the term "yellow with age" does not apply to the incunabula. Up to the end of the fifteenth century no inferior paper was made; and all paper was hand-made for two hundred and fifty years later. We had to wait for the advent of the nineteenth century to usher in the period of machine-made paper and the history of the industry shows a steady decline co-incident with the advance of popular education.

There is, however, considerable lack of clarity when Old Style Romans are printed on modern paper of the tint
familiar to the student of the best of the incunabula; for this modern material is usually machine made from vegetable fibre, and disagreeable both to hand and eye. In the absence of a hand-made rag paper, it is better to use for Old Style Romans a paper of a dull or subdued white. This prevents the rounded line and blunt serif from merging into the non-manipulated colour behind the design at the expense of clarity. Paper of a creamy tint when good in quality gains in typographic effect when a second ink, preferably scarlet is used. A page of the Caslon letter on cream paper with red initials has a brilliance in the mass which is largely owing to the presence of the second colour. The same page on a brilliant white paper has too much attention value for typographic restfulness.

Paper with a bright, heavy mechanical coating, known as "art" paper, should never be used in typography. It is offensive to the hand, dazzling and hurtful to the eyes, friable and very perishable in a damp atmosphere.

Steady contemplation of the incunabula creates the impression that present day printing lacks depth and warmth and that the letters are faint and comparatively ineffective even when Old Style Romans are employed. This was obviously felt by William Morris and his immediate followers who thought that the corrective was the production of books of heavy black type and blacker ornament, while what was really wrong with typography was the lack of blackness in the ink, a fault which still dominates all our books. The inks of the modern typographer are grey or brown, not black, the negation of light, and this has more to do with present day injury to eyesight than the size of the type, the interlinear spacing, or the length.
of line. Even a "wiry" letter like that of Plantin can be made pleasant if the ink is actually black.

The use of really black ink for typography is concerned with the theory of complementary colours, which may be defined as any two which in combination make white; thus red and green are complementary as well as yellow and blue, and or greenish-yellow and purple. When the eye has looked steadily for some time at a particular colour it becomes fatigued with respect to that colour more than with respect to any other. Consequently, if the observer then looks at a white sheet of paper or other white surface he sees the form of the former object but in the complementary colour. The physical explanation of this phenomenon generally given is that the relatively great fatigue of the eye with regard to the real colour of the object leaves the retina more sensitive with regard to the other component colours of white light and consequently the complementary colour is seen. This explanation is by no means satisfying or conclusive. It is more helpful to the student of typography to conclude that colours which cause the second image to appear in the above manner ought to be avoided for the body of the letterpress and used only sparingly for variety, decoration, or emphasis. Steady contemplation of blue type will lead after a time to the appearance of a yellow colour within the spaces of the type design; red type will create a green impression as the eye traverses the white, and so on.

Recent observations with regard to the attention value of two-colour combinations have resulted in the formation of the following table which is arranged in descending order:-
Black on Yellow. Yellow on Black.
Green on White. White on Red.
Red on White. White on Green.
Blue on White. White on Black.
White on Blue. Red on Yellow.
Black on White. Green on Red.

Red on Green.

It is worth noticing that Black on White takes a middle position in this table of results, and when we remember that restful typography is the matter in question, we gain support from this enquiry for the contention that restful typography is literally a matter of white and black, of paper which reflects rays of pure but subdued white light, and ink of such a depth of blackness that it permits no rays of light to pass to the eyes from the type design itself. For we are not here considering that arresting attention value so much sought by the advertiser who would, if he could enlist the forked flash of the lightning in his service, but who forgets that even his ulterior purpose is not attained if, having gained attention by means of a visual shock he cannot hold it by imparting continuous pleasure to the observer.

Taking into consideration the elementary nature of the mechanical appliances of the earliest period of printing, the press work of the incunabula is remarkably good. The best examples show an evenness of impression and care in inking which constitutes an important factor in the production of
correct typographic colour. In this matter, also, any modern printers of repute might learn a lesson from the fifteenth century printers.
PART II.

ILLUSTRATION.

1. Examination of the Available Material

The illuminated manuscripts must be the starting point for any consideration of book illustration; for they presented, before the Invention of Printing, an almost perfected art and they set the ideal before the book-maker that nearly all illustrations properly so-called ought to be in full colour. This ideal was realized in the MS. period and it is now becoming, almost daily, more and more capable of realization, by the employment of mechanical means of reproduction; between these two extremes there appears to be a great gulf fixed but the modern book producer who wishes to make the best of his task from the artistic point of view must learn the lessons of the illuminated manuscripts; for, allowing for changes of method and alteration of modes of pictorial presentation, these books are on the whole his pattern and exemplar.

The first and foremost of these lessons is the necessity for the observance of artistic unity, for organic connection and balance between typography and illustration. In a
study of the best examples of illuminated MSS. in the British Museum whether English, Byzantine, French, Flemish or Italian, we get a definite impression of scribe and illuminator working hand in hand (in some cases the scribe would be his own illuminator) to produce a real book instead of a mere album. The picture does not outweigh the text nor the text the picture.

We have also in these books a manifestation of brightness and light, of richness and depth of colouring which are practically undimmed after the lapse of five or six centuries. It is said that when St. Boniface the Saxon missionary who gave his life to the conversion of Germany wrote to ask a certain Abbess Eadburga for a missal he desired that the colours might be gay and bright "even as a glittering lamp and an illumination for the hearts of the Gentiles." The story is significant. The books of that day were to be used to please and allure adults who were intellectually children and effort was therefore exerted to make that appeal to the eye which not only pleases the aesthetic sense but which can be used as an incitement to intellectual and spiritual activity.

Intellectually and artistically the present age of material progress is not so very far advanced. "The picture

* The following are cited as particularly interesting examples:-

Book" writes Morris, "is not, perhaps, absolutely necessary to man's life, but it gives us such endless pleasure, and is so intimately connected with the other absolutely necessary art of imaginative literature, that it must remain one of the very worthiest things towards the production of which reasonable men should strive."

This brightness and forcefulness of colour is characteristic of the historic period in which the MS. books were produced. The mediaeval mind had as little fear of vivid presentation in the sphere of pictorial art as it had of bluntness and plain truth in the sphere of morality or of quick reprisal in the sphere of action; it brooked no "shades" or low tones, no veiled innuendo, no waiting upon Nemesis. Mediaeval colour is, however, as a rule rich and tasteful however bright it may be and the illuminators of the manuscript books seem to have known the secret of producing an orange red which appears to have baffled almost all colourists since their time. A rich, deep and lustrous black is another artistic achievement of the same period.

It is true that experiments were occasionally made with fewer colours in the MS. books, as in the French work of Guillaume de Deguileville entitled "Les Trois Pelerinages" done about the year 1400 which contains 146 illustrations in outline slightly touched with colour; also in Les Commentaires de la

The word is here used in its primary sense and must not be understood, when unqualified by an epithet, to carry a technical meaning as it does when employed by the typographer or the artist who works in monotone.
A good example of a MS. picture showing “realism dignified by selection and touched with by emotion”. The modern method of reproduction only approximate to the beauty of the original which is to be found in a Flemish Horae of the 16th century in the British Museum.
Guerre Gallique of 1520 which includes a number of miniatures of great refinement done in grisaille a kind of greyish-green wash relieved with white, picked out with pencil touches of gold and set in gold borders; while in the Life of St. Guthlac of Croyland we find 18 delicate outline pen drawings slightly tinted. But books of this kind are not truly characteristic of the mediaeval period and these methods of conveying pictorial notions must have been felt to be somewhat of a makeshift in the eyes of readers accustomed to rich reds, purples and greens, set in a framework or background (solid or trellissed) of gleaming gold.

It is, of course, undeniable that these pictures show a greater desire and ability on the part of the illuminators to exhibit brilliant colour schemes, and literally to make of the written page "a glittering lamp" than to "hold the mirror up to nature"; but it is easy to deprive the mediaeval artist of credit which is due to him in this respect. He lived in an age which was highly coloured both physically and metaphorically. He moved in a world of pageantry, of royal and noble pomp and blazonry, of marked distinctions in dress and appearance among the various classes of the community and his pictures are in these matters the faithful mirror of his time. As for inanimate nature he preferred to represent it with the sun shining but when he did so as in the pictures in some of the French and Flemish HORAE he could make a sunlit landscape which lacked nothing in point of truth touched with imagination.

We have then, in the best of these illuminated MSS., the illustrated books which appeal to what R.L. Stevenson calls
"the unplumbed childishness of man's imagination" and the models for all time. After a steady contemplation of them we feel that any picture which is to be entirely satisfactory must be in colour even if it be a picture of night or of a London fog. Monotone, whether line or mass, or a combination of both, must always be a makeshift, a convention which may achieve commendation for ingenuity but which can never to any degree represent things as they really are to the eye of an artist of imagination. Colour shows light, shade, distance, modelling and atmosphere. We see nothing in sharp lines, not even a row of area railings or the edge of a dark picture against a white wall; and in a beautiful monotone drawing we can only admire grace of form and the cleverness which can approximate so nearly with such an imperfect equipment to the effect of full colour. The fact that the beautiful woodcut showing St. Jerome in the British Museum copy of A Treatise on Contrition by Vivaldus is hand coloured with flat tints is significant of the medieval feeling concerning the unsatisfactory character of a monotone illustration.*

The physical conditions of production of the MS books made it possible to approximate without very great effort to the two ideals of (1) balance between lettering and illustrations and (2) a full scheme of colouring in the pictorial portion of the work.

As we have already said the scribe was sometimes his own illuminator and, if this more or less ideal condition did not exist, the artist was able to work with the letterpress at the side of or surrounding his picture so that the black letter-

* Sir Francis Drake spent his spare time on ship-board colouring. In a copy of Francis' "Book of Martyrs."
ing unconsciously blended with the general effect of the picture itself, and we have few examples of books in which the illustration greatly overshadows the text or vice-versa. Moreover, this does not apply only to the books written in the heavy Gothic letter for the skilful miniaturist knew how to make a picture in a book, written in lighter characters. See, for example, the drawing of St. Peter in the Exposition of the Creed in the British Museum.

With regard to colouring also, the illuminator was as little restrained by any mechanical considerations as the painter of a picture intended for wall decoration. He knew how to prepare the surface of the paper or vellum to take any pigment and free play was thus given to his artistic fancy and to his power of arranging and blending together all the colours which go to make up a natural scene or a brilliant group of Scriptural characters or mediaeval notabilities. I do not find among the pictorial MSS. any recognised rule or practice upon which a general theory of illustration can be formulated. The illuminators of MSS. were working for men and women many of whom however wealthy and high-placed they may have been, were merely children in matters intellectual and artistic, and the aim of the picture varies not only with the subject but also with the personality of the artist. At one time we have a faithful, detailed representation of an interior as absolutely true to "life" as a Teniers or a Hoogh, selected with artistic perception and finished in points of detail with the care which is necessary for contemplation at a distance of about fourteen inches as in The Exposition of the Apostles' Creed in the British Museum already mentioned (Rothschild Add. MS. 35320) which
shows a picture of King Charles VIII of France receiving the
MS. from the author. At another time we are given an inter-
pretation of some well-known passage in Scripture conventional
enough so far as colour and draughtsmanship are concerned, but
full of life, suggestion and occasionally of unconscious humour
as in the pictures of the Apocalypse in the British Museum (Add
MS. 35766). Again we have a representation of a beloved apostle
glorious in diapered gold, rich purple, red, blue and green
with occasional effective fine white lines as in the eleventh
century Greek Gospels in the British Museum or the Apostles'
Creed which shows a perfectly finished representation of St.
Peter as unlike the rugged apostle in appearance and surround-
ings as could possibly be imagined. And yet again we are
shown glimpses of real everyday life which have little connect-
ion with the text as in the Museum copy of the Luttrell Psalter
of 1340, a manuscript volume which provides a perfect mine of
pictorial information concerning the costumes and country life
in England during the first part of the fourteenth century.
The illuminated Horae and Missals show the same variety of pur-
pose and treatment, the former containing exquisite pictures
of natural scenery used as a background for a representation of
human activity in which a very definite endeavour is made to
exhibit things as they really are when the moment for pictorial
treatment has been selected by the mind of an artist. For
the true artist must exhibit Nature and life with that flash of
insight which helps the observer to see into the inner life of
things and in a mood which, when recalled, will compensate for
the garish hours when the outer world is seen, as it were, with
a photographic coldness and harshness of outline.
The decline of the illuminated book after the invention of Printing was very rapid. At first, the printer left spaces for the insertion of coloured miniatures and initials and these were filled in by the artist or rubrisher. A good example of a smaller printed book with hand illustrations is the *Epigrams of Martial*, printed by Aldus in 1501, in the British Museum while numerous folio Bibles of the best period were decorated in a similar manner as well as the copy of the *Decretals of Gregory IX* in Edinburgh University Library. This method, however, spoilt the book for the ordinary buyer who was not wealthy enough to have his copy illuminated and had to content himself with a book filled with staring white spaces each of which carried in the centre the key initial which was intended to be covered up by the illuminator or rubrisher.

Then began the practice of illustrating books in black line, a natural expedient in monotone already adopted, possibly before the actual invention of printing, in the block books such as the *Ars Moriendi* and the *Biblia Pauperum* both in the British Museum, and in the rough pictures of incidents in the lives of saints sold for a few pence to the unlearned in the fairs of the northern cities. It was at Augsburg in the early seventies of the fifteenth century that the cutting of wooden blocks for book illustration first flourished and other woodcutters' shops were soon at work in Ulm and other German towns in the Low Countries, in England (to a very limited extent) and at Paris.

* Also a Horae from the Aldine Press in 1529, now in the John Rylands Library; and a folio Missal printed at Venice in 1496.
* Like the woodcut representing St. Christopher of 1472 which is in the John Rylands Library at Manchester.
I select the following typical examples of northern illustrated books which I have personally examined before attempting to sum up the chief characteristics of the products of the industry which came to its zenith under Wohlgemuth and his more famous disciple, Dürer. The last named of the following books is in the Hunterian Collection at Glasgow University while the others are all in the British Museum:

Boccaccio's *De Claris Mulieribus* printed at Ulm in 1473 by Johann Zainer.

*Peregrinationes in Montem Syon* printed at Mainz in 1486.

*Speculum Humanae Salvationis* printed at Augsburg in 1472.

*Virgilii Opera* printed at Strassburg in 1502 by Johann Grüninger.

*Schatzbehalter* printed by Koburger in 1491.

*Nuremberg Chronicle* printed by Koburger in 1493.

Caxton's *Aesop* of 1484.

Caxton's "*The Game and Playe of the Chesse*" of 1481.

*The Book of St. Alban's* printed by Wynkyn de Worde in 1496.

Caxton's *Speculum Vitae Christi* of Bonaventura printed in 1488.

*L'Art de bien vivre et de bien mourir* printed at Paris in 1492.

Caxton's *Golden Legend* printed in 1483.

These books belong, roughly, to the last quarter of the fifteenth century and they contain illustrations which range in artistic quality from the coarse childishness of the Caxton woodcut showing the fox and the grapes to the finish...
Theoure ought not to compare hym self to hym which is rych and myghtye. As saith this fable of a frog whose age, which was in a medow, where she aspye and saide on one which pastured. She woode make her self as gre as and as myghtie as the one and by her grete pryde she le ganne to swelle againste the one. Andy summouned of his childe ren of she was not as gre as the one and as myghtie. Andy their children answered, Andy sayd, may moder. For to hose any teholon on the one; if someth of poth to be notspuge. Andy thonne the frogge beganne more to swelle. Andy wher the one sawe her pryde, he thunde and threved her with his so te andy take her self. Therefore hit is not good to the poure to compare hym self to the rych. Wherefore men sayn, comply. Swelle not thy self, to thende that thou haste not.

There synnyedy the secondy booke of Espe. Andy after begynnest the regystre or table of the thryd boke of Espe.

Specimen of Caxton’s type

Contrasted specimens of Caxton’s and Duer’s wood cutting. (The latter much reduced)
Albrecht Dürer

St. Michael fighting the Dragon, from the Apocalypse, 1498
displayed by the craftsmen who immediately preceded Dürer. I find in nearly all this northern work a hard angularity of outline, a prevailing greyness of general effect and as time went on a too ambitious endeavour to make the woodcut rival and replace the picture in full colour. The German endeavour was to make a picture of the line illustration and in the steady progress of the black and white art up to the best work of Schongauer and Dürer we see a determination to nullify, if possible, the severe limitation imposed by the necessity for the use of simple line and monotone and to produce by means of shading of various kinds, the insertion of very occasional solid blacks and by the use of simple instruments like the crible the effects of light and shade, modelling and perspective, which only colour in mass can adequately exhibit.

The final result of all this endeavour bears marvellous testimony to the ingenuity and determination of the woodcutters of the northern towns, as a very cursory examination of a typical Dürer woodcut will show. Here we have form and modelling, light and shade, perspective and atmosphere as well as monotone, "colour" and life, which have never been surpassed in pure line. But with all this technical excellence the result when compared with the best illustrations in colour of the MS. books was a mere makeshift.

After gaining a European reputation as a wood-cutter
and metal "engraver," Dürer paid a visit to Venice in order to paint, whence we find him writing to his friend Willibald Pirkeimer in the following terms:

"Know that my picture says you would give a ducat to see it. It is very good and beautiful in colour.... I have silenced all the painters who said that I was good in engraving but that in painting I did not know how to use my colours. Now everybody says they never saw more beautiful colouring."

This extract shows in a flash the feeling of the artist with regard to the new type of "picture" which was produced in the manner of the woodcut and the metal engraving and which substituted monotone for colour. This is scarcely surprising when we remind ourselves that the following great masters in the Art of Painting flourished in or about the period of the best printers - Fra Lippo Lippi, Verrochio, Botticelli, Dominico Ghirlandajo, Leonardo da Vinci, Raphael, Titian and Michael Angelo.

The Ashmolean Museum at Oxford contains a good collection of engravings and woodcuts by Dürer and of engravings by Martin Schongauer showing in an excellent manner the technical perfection of this art as well as certain superiorities in the work of Schongauer over that of Dürer in the matter of modelling.
Before the visit of Durer to Venice, however, Italy had begun the work of illustrating printed books with pictures in black line, produced either from blocks of wood cut with the grain or of soft metal, probably pewter. But the Italian woodcutter or metal block designer did not attempt to rival the picture in full colour. How could he, with such glorious examples of painting before him? He appears to have been firmly imbued with the idea that the line illustration was to be a mere convention and with unerring artistry, the chief element of which was severe restraint, he made it within its acknowledged limits a thing of perfection. It could show or at least suggest, gracefulness of outline, and especially of the human form, so we have Botticelli-like figures unhampered by distracting surroundings of quasi natural scenery or detailed architecture, set simply on a white background with deftly placed solid black patches throwing out with precision the single idea which the picture was intended to convey. Such a medium could never satisfy the eye accustomed to contemplate the glorious paintings

---

I do not think that many of the smaller line cuts such as those of *The Epistles of St. Jerome* printed at Ferrara in 1497 (British Museum) or of the *Malermi Bible* printed in 1490 were produced from blocks of wood cut with the grain. The detail is so fine and the curvature of line so good that the material must have been metal. It seems physically impossible to cut wood in such fine detail even under a glass.

It is said that Raphael made the designs for the *Hypnerotomachia* of Poliphilus.
Nach dem aber und er ten weg nahend hagm mit dem unschuldigen kind komen was/ und sich allent halben ob in jemand mit dem kind lade vmsliebe: Da sach er einen lewe zu der linchen seiten arretend Er eschreck seutacht von stand mit dem willen kind vont sich der lewe mit seine gesicht abkerte/ Er hüd sich schnell auf sein steh und sprate mit dem kind zu dem haws des iuden Samuels/ und schlappte das mit im hin ein in das haws.

[Der Samuel als er das schon kind amblickte/ als ein tiger tier/ begerte er des blüres des unschuldigen

A German attempt at the use of the solid black patch.

"Geschicht von dem Seligen Kind Symo." 1475.
of Italy in matters of atmosphere, perspective and distance of general vraisemblance, consequently, these things are, on the whole, left severly alone and the designer contents himself with a suggestive conventionality which partakes of the beauty inherent in lowly artistic service rendered with a single aim.

Further, the printer of the time as I have already said in connection with typography, used inks which were really black and paper of excellent quality and we have in the best Italian line cuts a brilliance of contrast between white and black which is marked characteristic of these illustrations when compared with the general greyness of the line pictures of northern printed books.

We occasionally see these solid black patches in northern productions but they are on the whole a characteristic of Italian and especially of Florentine and Venetian line cuts of the last decade of the fifteenth century and the earliest years of the sixteenth century; and another leading feature of these southern book illustrations is the black frame with floriated ornament or figures and other conventional designs in white, serving the same purpose as the cleverly placed black patches of the drawing itself, namely, to throw into relief the idea of the picture. Here again we see the influence of the fresco, the majesty of which was largely dependent upon ornament and setting.

The Book of St. Albans printed by Wynkyn de Worde in 1496.
The Game and Playe of the Chesse printed by Caxton in 1481.
Geschicht von dem Seligen Kind Symon printed by Zainer about 1475.
Egloga of Theodulus printed by Conrad Kachelofen in 1489.
VII. 9. FLORENCE, LIBRI, ABOUT 1495
WOODCUT FROM TITLE-PAGE OF 'LA FESTA DI SAN GIOVANNI

Showing the clearness imparted by the use of the black frame.
Examples of Florentine line cuts which show the above general characteristics in a marked degree are to be found in the following printed books:

1. **Fior di Virtù Historiato** printed in 1498; especially the illustrations to chapters XXI, XXV, XXVI, XXVIII, and XXXI.

2. **Storia di Ippolito Buonelmonti e Dianora Bardi** printed in 1495. The panel picture on the title page is, however, overweighted by the border showing candelabra.

3. **Devote Meditazione Soprala Passione del nostro Signore** by Bonaventura, printed in 1498.

4. **El Quattriregio del Decors del Viva Humana**, printed in 1508.

5. **Compendio di Revelazione** of Savonarola. Printed in 1499; particularly the picture on folio facing ci.

6. **Epistle Evangelii Et Lectioni Vulgare** in Lingua Toscana, printed at Florence in 1515. (S. Vincinetti)

In the British Museum copy of the *Laudi* of Jacopone da Todi, printed at Florence in 1491, there is a single woodcut showing the saint kneeling before the Madonna. The picture is in fine outline without perspective or black relief and surrounded by a delicate triple rule, and the balance with the facing page of petterpress is perfect. The illustration shows the simplicity of Florentine work without the other characteristic of black contrasts. This quality is also shown in many of the Venetian books of the corresponding period as well as in some of those printed at Verona and Ferrara, the blacks occurring only at intervals, though a framework if often added consisting of a firm black rule. Examples will be found in the following volumes:
FROM LORENZO DE' MEDICI'S LA NENCIA DA BARBERINO, S.A.
1. **DE RE MILITARI** of Valturiius, printed at Verona in 1472.

2. **HYPNEROTOMACHIA**, printed at Venice in 1499.


4. **BOCCACCIO'S DECAMERON**, printed at Venice in 1492.

5. **BIBLIA VULGARE ISTITIATA** printed at Venice in 1490.


7. **NOVELLINO OF MASSUCIO**, printed at Venice 1492.

8. **TRACTATOS DE ENTE ET ESSENTIA** of St. Thomas Aquinas. printed at Venice in 1488.


In the Trionfi of Petrarch printed at Venice in 1488 we have an interesting example of simple outline proving, after a time, monotonous to the eye of the designer who gradually introduces solid blacks and finally uses them in a startling and somewhat theatrical manner. The Venetian missals show occasional black relief, the following being good examples:

1. **ANNONCIATION IX.** Miss Rom. fol. 1st April, 1530.

2. **VOCATION OF ST. ANDREW.** Miss Rom. fol 20 Nov., 1501.

3. **TRIOMPE DE CHRIST.** Miss Rom. fol. 1577.

I have already spoken of the simplicity of idea presented by these Italian woodcuts, and it is here that the best of the southern artists show their masterly conception of their task, though I do not assert that they worked on any conscious theory. Their pictures were so simple in outline
Portato l'hai ch'el quale dicefle ch'el suo padre e lui tuo se non è d'essere Abastoffe e guardo dentro dal monumento & uide duei angeli uffirsi di bi anchoscendenti uno dal capo & uno a li piedi due era posto el corpo de' iefu, al quale dicono gli. Femia tu piagi: il pechela liqii diffi leiniperho che hano tolto el signor mio & no so doue li habiano posto.

Dito che l'hebe lei queste cose fe voluto adrieto & uide iefu fiate li & lei no fapeua che egli e iefu, a la qual dice iefu. Femia tu piagi: il pechela. Quella immagi nado che la sifice ertolare dice a lui. Mesfere fe tu lhai portato Maria dimo doue lhai posto & io nel terro Diceli iefu, Maria uolta quella liqii dicefle, dabbene che dicefse maestro. Diceli: fe, No mi uole t'ocare sperho chio anche no fon afcefo al patre mio. Ma tu uatine a li fratelli mei & digli, io afceo al patre mio & patre uo'dro dio mio e dio uo'dro. Vene ma ria magdaletina sancinacde a li dicipuli chio ho ucduo el signor: & queste cose a me ha ditto. Essendo dano che el primo de il fabbato la sera & essendo chiude le porte doue erano raundni li dicipuli li p paune de uidei uenene iefu & fetette in mezo & a lor diffe. Sia a uo pace. & havendo ditto queste cose fe mostrato a lor le mane & el coftato; Furono adunno que ralegrati li dicipuli ueduto che lor hebero el signor. Et a lor difse unaltra fiata. A uoi fi pace. se cono che me maibo el patre & io maibo uoi. Et po-fcia che ditto hebe quelle cose isoffio i lor & diffeli Togliete el spirito fanto. le peccata de quelli uoi pordonate a lor siano pordonat& liqii retenerete sino retenuti, il che thomas che dicelle, didimo uno di dodeci no era egli e costi guado uenene iefu, Diffe dounque a lui li altri dicipuli. Habiamo ueduto el signor & egli a lor difse. Se io n'edero ne le ma ne fue le fixure de' iochi & poga el deto mio nel loro co di iochi & pona la mano mia nel coftato fuo io no lo credero. Da po fica otto giorni erano etia li dicipuli foi dentro: & erai thomas co costi. Ve-

mafo & diffe. Tu fei el signor mio & dio mio. Dice li iefu, ipho che tu thomaso me hai ueduto me hai creduto. Beati color che no hano ueduto & hanno creduto. Molti altri cerve sette iefu nel co®ere de dicipuli suoi liqii no son scripti in questo libro. Ma queste sono scripti acio uoi crediate che iefu egli & figliolo de dio & acio che credendo nel no me fuo uita habiate.

Oppo unaltra volta manifettose iefu al mare de thiberia & i tal guifa egli se manifettu. Erano signi Simone pie- tro & thomaco ditto didimo & nathan-naeel elqii era da chana de galiea & li figlioli de zebdeo & uoi altri de dicipuli suoi aliaquil dicit Si mon piéto, Vo a pecare. Al qui dicono unum eti am noi teo. Et ulcitero & salirono fu la nauicella & in quella nota nulla prefera, ma fatta la matina fette iefu nel lito no huanogosceri li dicipuli che egli e iefu. Diceli dunque iefu. O puti hauet uoi alcuna coasa che se pofige coate p maducare. Al qui lor respore no, None, Dicegli a quelli. Mandarin la rate dal lato dritto de la nauicella & retrouare; Lou adudo cofe secero & gia non poutereuano trare quello p li molti pefci che uierano. Dice dun que a pietro quel dicipulo elqii iefu lamuau. Egli & el figuro. Oldédo symone piéto che egli era el figuor sottofige l'go dellaiperbo che egli era nudo & messa nel mare. Et laftri dicipuli uenero & la nauicella laiperbo che loro no erano losani da te tram erau quali per ducedo cubiti trahedo la re-the da pefci. Polcia dico che furono defcefi i ter-ri uitero le brafe del fuoco poife & di sopra posto el pece & el pane. Aliqii dice iefu, Portate qui de pe fei liqii hauet hora pigliati Andofiane symne pie- tro & traffe la rette e terra piena de' gradi pefci che furono cecinonata tre & essendo corato no fe fe- so la rate Diceli iefu uenire & disfare & nullo di se dèi a disfare hauet ardir di domandarlo in quel qual secapedo che egli el signor. Et uenene iefu & tolle el pane & porgelo a lor & finemamente eti el pece. Quefia teria fiata manifettose iefu a li dicipuli suoi essendo gia refuistato da morte. Hauendo dun que uinato difse iefu a tymon piéto, Symon de lo anneami tu me piu de quetti? Et egli li dice. Etu si

Venetican. Malermi Bible. (Giumta) 1490.
and so direct in appeal that the observer after having con-
templated them for a comparatively short time was able to
retain a clear remembrance of their contents when he had closed
the book. This is not the case with an elaborate woodcut of
the German kind, least of all in connection with the finished
work of men like Schongauer and Dürer. The contents of a line
illustration must be so clear and simple, the Italians said
in effect, that it will easily adhere to the mental vision, for
its very conventionality and limited artistic purpose preclude
it from that continuous contemplation which the finished pic-
ture in full colour demands, warrants and satisfies.

Here then we obtain from the work of the best men
some general guidance as to the use and purpose of the illust-
ration in black line for books of to-day, namely, to convey a
single pictorial idea to the mind of the reader, either
illustrating the matter under consideration by the author at
the moment, or provoking some thought in close connection with
his theme and providing opportunity for a pause, but not a
complete cessation, in the work of assimilating the contents
of the book, just as a bar of rest in music allows the melody
to be suspended but does not let it die. It is worthy of
special notice that these Italian line cuts are mostly small
and form an integral part of the page of letterpress while
German woodcuts are generally of full-page size. To the
southern book illustrator the small line cut was not a picture
properly so-called but an opportunity for that change in con-
templation which rests while it charms the eye of the reader.
The illustration shown on the opposite page is a good example.
cum religioso tripudio plaudendo & iubilando. Quale erano le Nym- 
phae Amadryade, & agli redolenti fiori le Hymenide, riunite, salendo 
tocando d'inanti & da questo lato del floreo Vertunno stretto nella fron-
te de purpurante & melinema rote, cum el gremio pieno del odoriferi & spe-
etatissimi fiori, amanti la festa del lanofo Ariete, Sedendo ornate fo-
pra una uettrella Veha, da quatro cornigeri Fauni tirata, Inuinculati de-
strophi de nouelle fronde, Cum la sua amata & bellissima moglie Po-
mona coronata de fructi cum ornato de fluo degli biol fissimi capigli, pa-
re a ello sedette, & a gli pedi dellaquale una coetilia Clepsydria iaceua, nel
le manetenute una fitpata copia de fiori & maturati fructi cum
imixa fogliatura. Precedette la Veha agli trahenti Fauni propinqu; due formose
Nymphae digni, Vna con uno haftile Trophao gerula, de Ligonibus den-
tiari, & falcionetti, & una appendete tabella abaca cum tale titule.

INTEGRIM CORPOR. VALITVDINEM, ET
STABILE OBVR, CASTASQUE MEMSAR, DEI
TIAS, ET BEATAM ANIMI SECVRITA
TEMVLTOR.IBM.OFFER.0.

VII. 4. VENICE, ALDUS 1499
PAGE FROM THE 'HYPNEROTOMACHIA' (REDUCED)
Incomincia el libro nominato baruch. Ca. I

T'è fente le parole del libro le quale scrisse baruch figliolo de neria figliolo de maafa figliolo de fedechia figliolo de fedei figliolo de elchia essendo in babylonia nel quinti aano nel septimo di del mefe nel tepo che

Li calde pigliaron iherufalé & abrusaron la colfo
codiche Baruch legette le parole de qfto libro a le orechies de lechonias figliolo de Joachim re de iuda:
& a le orechies del uniuerse populo che uenian al li-bro & ale orechies de poten figlioli di re & ale ore-
chies di preri & ale orechies del populo dal minimi
fimo al magior: de tuti habitati i babylonia & egli
fedette al fiume liçi uedéo piagenuano: & tetunau-
no & orauano nel cósteco del signore. Et lor reco

VII. 3. VENICE, G. RAGAZZO FOR L. A. GIUNTA, 1490
PART OF COLUMN FROM MALERMI BIBLE

4. Venice, Aldus Manutius for Lionardo Crasso, 1499.—Hypnerotomachia Poliphili.

This is the most famous of Venetian illustrated books,
a romance, the authorship of which is revealed by a
It is drawn in simple line in perfect typographic balance with the letter-press, its weight being more or less in keeping with the minor line of the type design. It does not actually illustrate any incident or idea of the book itself but its contemplation provides that pleasant interlude or introduction of which I have spoken. A new book is to be begun and the scribe dips his pen to begin the task with the carefulness, deliberation, and physical ease which the reader would do well to acquire if he is to understand the full meaning of what is to follow. Thus the picture strikes the key-note of restfulness.

All this, of course, limits very severely the province of the illustration in black line but it shows a perfectly natural attitude on the part of the men to whom a picture meant a glorious painting by an inspired artist and a book "illustration" a carefully executed miniature in full colour in an illuminated manuscript. The latter was out of the question for the printer of the time but if a book had to be illustrated in black there was to be no attempt on the part of

The best example of balance between letterpress and decoration, as distinct from illustration, which I have encountered is the Opera of Aristotle, printed by Aldus at Venice in 1495. Headpieces and initials are of a very light and graceful character in perfect accord with the light-faced Greek font used by the printer who is also the editor of the work.
the block-maker to rival the work of the miniaturist. He must keep within his own particular sphere and win commendation for excellence of form, clarity, and unity of idea.

An interesting modern Japanese woodcut, showing the clever introduction of the solid black in the Florentine or Venetian manner.

There are interesting traces, however, that the Japanese conception of the black patch as the nucleus of the line cut is either the origin of the method of Florence-Venice or is in close connection with it; but this is another for separate research, possibly at Tokyo.

We are now in a position to obtain from the illustrations of the best of the manuscripts and the incunabula some definite guidance for the illustration of books of the present day. The rule may be stated briefly in the following terms. The true illustration must be in full colour; the passing pictorial comment must be in simple black outline occasionally relieved by solid blacks.

With regard to coloured illustrations we are now for the first time in the history of printing able to approximate to the method of illustration of the illuminated manuscript. This was, it will be remembered, to show the picture in full colour, painted upon the same material as that upon which the rest of the book was written, and maintaining a more or less exact physical balance with the text.

By the use of photographic and other processes we can now reproduce, more or less exactly, the appearance of a drawing made as a book illustration. But at present we cannot reproduce it on the same paper as that on which the rest of the book is printed. In order to obtain correct colour values and to do full justice to the work of the artist, we must use at least for photographic colour processes a highly-glazed paper which is very objectionable for the following reasons:
A tri-colour block on coated paper, unsuitable for letterpress - Note its clumpy thickness
With tint,

The same block printed over a white coating of the same dimensions as the blocks, i.e., four printings. This paper is more suitable for letterpress and is uncoated. The solution of the problem may have been indicated.
He met with a rat as he went on his way,
Heigh-o! says Rowley.
Well, Mr. Frog, and whither away?
Heigh-o! said Anthony Rowley.
Pray, Mr. Rat, will you go with me,
Heigh-o! says Rowley;
Pretty Miss Mousey for to see?
Heigh-o! said Anthony Rowley.
conjunction with the ink-manufacturer and consists in the production of paper which will show the result of a carefully finished plate printed in three or four colours without the offensive coating. The preliminary preparation of that portion of the paper which is to receive the impression of the blocks, either by coating or otherwise may solve the problem though not, at least for a time, for books published at a comparatively low price.

The example of the illuminated MSS. and of the comparatively few extant examples of hand-illuminated incunabula must not be followed blindly. We have accustomed ourselves in modern times to the contemplation of type of a comparatively light appearance and the coloured illustration must not be so heavy as to destroy the typographic balance. In book-illustration as in typography over-elaboration is alien to the spirit of the age. What we can really learn from the illuminated MSS. in this department of book production is to achieve that balance between letterpress and illustration which creates the impression that the volume is a unity. This means that the artist must pay some regard to the weight and character of the letterpress, even in the production of coloured drawings; and it means also that on the whole his general scheme of colouring must be lighter and more delicate than that of the pictures in mediaeval MSS. It need not be pale, colourless, tinted and vapid, but his bright colours must possess an almost transparent quality. It is for this reason that intaglio colour printing is unsuitable for modern book illustration; for even with the most careful printing we get an impression of blackness behind the
THE CONFERENCE
By Max Gaisser.
By the courtesy of the Storey Institute.
Printed by the Rembrandt Intaglio Printing Co. Ltd.

Intaglio colour printing, showing the black background which becomes a solid mass obliterating detail which the light from the right-hand would make clear.
colour which does not make for clarity.

We must now consider with some care the nature of that rapprochement between author and artist which renders possible the production of the ideal illustration. In a very real sense pictorial illustration of a work of devotion or imagination must always be more or less of an impertinence varying in degree with the reader's understanding and appreciation of the author's meaning. No artist can portray the scene in the Garden at Gethsamane to satisfy a mind that is truly devout. No painter can make a pictorial representation of Rosalind which will entirely satisfy a true lover of "As You Like It." Indeed the appreciative reader prefers the dimness of his own imperfect perception to any pictorial representation that could be made. His idea of a character, historical or imaginative, may be a poor thing but it is his own and he is only prepared to alter it as further study affords fresh light. There are, of course, exceptions to this rule. The most appreciative reader of "Alice in Wonderland" cannot take exception to the pictures of that well-known story; indeed he has come to regard them as an integral part of Lewis Carroll's work. Here, however, the pictures appeared with the first edition of the letterpress while author and artist, both representative men of their time worked hand in hand in almost perfect harmony. The arrangement seems to suggest the ideal method—that of contemporaneous production of letterpress and illustrations combined with personal collaboration of artist and author. The book then becomes a unity so far as the reader is concerned and he takes his pictorial impressions from it. It is to be doubted, however, whether the literary appeal is not hampered by such a method. An
association on almost equal terms like that of Tenniel and Carroll seems to be possible only once in a long period. The collaboration of Rossetti and Tennyson in the illustration of the poem on St. Cecilia resulted in the declaration of the poet that he never could see what the drawing had to do with the poem. The association of Dickens and Hablot K. Browne is interesting in this connection. It is an open question whether the air of extravagance and perpetual caricature of the novels is not due to the artist as much as to the writer.

We appear to have reduced illustration to a very low position in the world of art. Is it a matter for children only? Can the highly developed mind dispense with it altogether? Is it entirely separate and distinct from the best in art? Does it represent a sphere of work which the greatest artists disdain as something quite unworthy of their highest powers?

It must, of course, be admitted that the small size of a book illustration limits the scope of an artist and this fact has doubtless prevented many a man of real power from engaging in the work. A still more powerful reason, however, is the necessity for the intervention of another hand before the picture is presented to the public. However skilfully the wood-cutter or wood-engraver worked he produced a picture which bore not merely the impress of his hand but to a great degree the stamp of his artistic individuality including its limitations; and the greater his artistic powers, the greater was the possibility of the artist being misrepresented. Such a man as Dürer who combined high artistic power with the technical ability of the wood-cutter and metal engraver was, of course, an exception;
otherwise the ideal state of things in the matter of book-illustration would be within sight. Photographic processes of reproduction have not eliminated this objection; indeed many artists prefer the intervention of the engraver to that of the machine, however skilfully it is manipulated. The modern conditions of reproduction, however, have created a state of things which appear to afford an opportunity to a man of the highest gifts. Let it be taken for granted that half-tone or other modern colour reproduction will at its best only present an approximation to the artist's original work. The painter might however make a study of the technical method of reproduction with a view to finding out what must be done to make allowance for the inherent short-comings and peculiarities of the process. It may be that his picture will be a monstrosity as a picture but he would come to regard it as a stage in the process of producing a new type of work and to look upon the machine as something to be propitiated and conquered just as the great artist has to "manage" such soulless things as pigments.

If such a state of things is impossible of realization we must perforce relegate book-illustration to an inferior position in the world of art for the two reasons already given, and particularly because of the necessity for reproduction, which undoubtedly prevents the great artist from becoming an equally great book-illustrator; for in a sense all pictorial art is illustration. Each art gallery is to a well-read man a picture book recalling thought after thought which has somewhere found expression in the highest forms of literature; each sublime painting can be fitted with the winged word.

When this has been more generally recognised there may
possibly arise a school of illustrators in colour and line who will be content to regard the so-called "finished" drawing as merely a stage in the preparation of the book illustration. For the ideal illustrator must be a man of single aim. He must recognise very definitely that a picture intended for wall decoration is something quite different from a picture which is to be examined at a distance of fourteen inches and lying at an angle of about 45 degrees from the vertical.

In this manner and in this manner only we may hope to reproduce the conditions under which the best of the illuminated manuscripts were reproduced.

Such an attitude towards the use of half-tone or other colour-work in book-illustration rules out all reproductions from the works of great masters. However perfect the processes may eventually become there must always enter into them the mechanical element which is inherent in machinery, and which must be circumvented by the artist's power of manipulation. In this department we must be content with monotone when reproductions are required. They will at least serve to suggest and will partially satisfy without violently offending the eye of the man who knows the original in all its beauty.

Finally we must consider the place of monotone book-illustration, including engraving, half-tone pictures reproduced from wash drawings in one colour, and illustrations in black line.

Engravings from steel or copper plates must, of course, be inserted separately, thus destroying the unity of a book and really converting it into a kind of album. However excellent they may be as examples of black-and-white art these
pictures are out of place in a book. Dürer or Schongauer engravings such as those shown in the Ashmolean Museum at Oxford, for example, are not intended to form book illustrations. There are illustrations from engravings on copper in Bettini's "Monte Santo Di Dio," printed at Florence in 1477, and in Dante's "Divine Comedy," printed in the same city by Nicholas de Lorenzo in 1481, both in the British Museum. The engravings are printed on the same paper as the letterpress, forming an integral part of the book after the manner of the rest of the incunabula some of them occupying only a portion of the page. The general effect is ugly in the extreme, making full allowance for the early stage in the development of engraving in Italy. The combination of relief printing in the letterpress and intaglio printing in the pictures is incongruous both on aesthetic grounds and for mechanical considerations, the press-work being necessarily as bad as it could well be. The backgrounds are a dirty dull tone obscuring excellent draughtsmanship and true artistic feeling. The early printers felt instinctively that this method of book-illustration was not successful, and examples of this kind are neither numerous nor characteristic of the best period of printing.

The modern methods of monotone intaglio printing are equally unsuitable for book illustration. Even some of the best examples are distinguished by a blackness and obscurity which makes the picture unsuitable for the close contemplation to which book illustrations are necessarily subjected; and the external "balance" between illustration and typography necessary for the ideal book cannot be obtained when pictures of this
kind are included. Such illustrations must, moreover, be
inserted as separate plates usually consisting of thick paper
highly objectionable to both hand and eye.

Pictures reproduced from wash drawings and printed
in monotone must be printed on coated paper if they are to
appear to advantage; and this constitutes a very serious ob-
jection to their use for book illustration. A still more
serious objection lies in the fact that half-tone illustration,
in common with intaglio printing in monotone, collotype and
detailed wood-engraving is too ambitious, that it endeavours
to rival the effect which can only be produced by full colour.
This type of illustration has forsaken the frank conventionality
of Florentine and Venetian early wood-cuts, and can only win
commendation from the eye which has been trained to full
appreciation of Nature's tints and the colours, now glowing now
subdued, of human life for a certain power of suggestion which
can act as a spur to a well-developed imagination. What is this
world of black and white or of all-pervading greyness which we
are called upon to admire in that realm of art which eschews
colour? It can only be visualised by dropping a colour-effacing
veil between our eyes and all visible things, by wilfully making
ourselves blind to sunlight and spending our days in consistent
contemplation of the shadows of life.

We are driven, therefore, to that method of black-and-
white illustration or rather suggestion which the early
Florentines and Venetians instinctively chose, not as a substit-
ute for colour, but as a separate branch of the art of illustra-
tion, quite capable of winning a worthy place by its own inherent
qualities, one of the best of which was a steady refusal to
compete in any way with the "picture" as understood by students and admirers of the masters of oil and fresco. A clean outline strong and vigorous, based upon honest healthy study of natural form, lacking in everything which suggests the anaemic or puerile thrown into relief and beautified by sharp contrasts which convention permits, inserted in the text as an integral part of its weight and "colour", and serving now as pictorial helpful commentary upon the subject matter of the book, now as a pleasant more or less decorative relief to the eye in the contemplation of the letterpress. Such black-and-white "Illustration" can be made once more to conform with the canons of art and good taste which ruled the practice of the early Italian printers.

Practical use of this class of pictorial illustration might be made to fill up those spaces at the beginnings and ends of chapters which dazzle and offend the eye accustomed to the pages of the great printers, who following the MS, tradition, aimed consistently at keeping down the white of the printed page.
PART III.

BINDING.

1. Its Physical Aspect.

Book-binding as an art is chiefly, indeed almost solely, concerned with the cover decoration of the more or less expensive volume which is too often by the sheer weight of its external beauty extinguished as a book. But there is another aspect of this branch of book production which ought to have prior consideration.

There is no true art in book-binding which does not conserve the utility of the book as an intellectual companion or which produces the least amount of physical discomfort in the reader. When William Morris spoke of the binder as "the enemy of the human race" he was thinking chiefly of the propensity of that craftsman to bind so hard and fast that the book will neither open readily, nor lie open in the hand, while the two typographic rectangles are brought so close together on their inner edges that comfortable reading is impossible. He failed to see, however, that the arrangement of the margins which he advocated was one of the chief causes of the trouble. If the inner margin were broader, there would be some possibility of the typographic rectangle clearing the curvature of the page caused by the pinching of the binding, which it must do
if hygiene is to enter into the matter.

In the *Editio Princeps* of the Mainz Psalter in the John Rylands Library, the inner margin is so broad that the letterpress clears the slight curvature caused by the binding, and an occasional thin book among the incunabula opens flat; but on the whole the books of the Great Age of Printing are difficult to open and will not lie open. It is true that comparatively few of those which I have been able to examine have contemporary bindings, but this does not alter the fault of all book-binding. The problem of comfort has not yet been solved and the binder nullifies the best efforts of the printer. Book-binding as a mechanical art is yet in its infancy. Until this physical problem has been solved the decoration of the front cover has as little to do with book-production as the preparation of good designs for the decoration of various articles of use or ornament which take their place in our daily life.

2. *Binder's Tools and Printing.*

The method of decoration of a leather cover which is in every way most satisfactory is that known to the craft as tooling. This consists of impressing certain patterns by hand upon the surface of the leather with heated metal stamps or dies and either relying upon the play of light to show them up or filling the impressed pattern with gold leaf. Some of the most beautiful designs combine both blind and gold tooling, the former serving to set off the latter.
A splendid example of pure blind tooling is afforded by the cover of the manuscript *Phaenomena* of Aratus in the British Museum. The binding is in rich brown leather and the tooled design takes the form of a slender panel and border of interlaced cable pattern set with bead-like dots and minute roundels which gleam in certain lights with an almost metallic lustre. The whole production shows a perfect mastery of these tools which is of great interest in connection with the use of the first movable metal types. The work of blind tooling a leather book cover was only another application of the saddler's method of decorating a saddle or a holster, and some research in the history of the tools used by these craftsmen as well as those employed by goldsmiths will doubtless lead to the construction of the true story of the so-called invention of printing.

The cutting of metal dies was an ancient Oriental art which attained to a high state of delicacy centuries before printing was invented and the saddler used engraved or intaglio dies as well as stamps on which the pattern stood in relief. Goldsmiths, too, used similar tools of this character, and the specimens of their work in our museums dating from a period long before the invention of printing makes one wonder why the earliest printing was accounted such a wonderful thing. Gutenberg was assisted by the goldsmith Fust who probably cut the punches for the moulding of the metal type. As for the actual production of an inked impression there is no doubt that the saddler was used to "proving" a pattern on paper before applying it to the leather and after this one has only to

The first Florentine press was set up by Bernardo Cennini who in the *Divin poetic Divin Commentary* of Virgil describes himself as "Curelto."
suppose two or three stamps proved together to arrive at the second step in the evolution of the printing art.

3. The Expression of Unity.

There are many beautiful designs on book covers produced at various historical periods, and connected with several famous names; I have examined representative examples of these in the libraries, but have paid particular attention to those covers which were produced in the latest years of the fifteenth and the first half of the sixteenth centuries, extending my period in the study of this branch of book production somewhat beyond the limits set for typography and illustration.

I have particularly sought for evidence of that unity of purpose which makes a bound book a piece of harmonious work dominated and inspired by the author's subject. For the book is the author's, and the thought which he wishes to convey to the reader is the reason for its existence. In this conveyance printer, illustrator, and binder must play their helpful part always subordinated to the central idea of the book-designer.

I have found some evidence of this unity, but not a great deal in the bindings which are usually held up to admiration. Of the designs associated with the names of Grolier and Maioli I shall have occasion to speak later; for the present these book-bindings are ruled out of consideration because they
express owner-ship rather than authorship, and the place for this expression is in the book-plate within the cover even if the owner is a powerful monarch or a wealthy bibliophile.

There is in the British Museum a Greek Anthology printed in Florence in 1494 and bound, probably at the same time, in deep red morocco, very rich in tone. The design on the front cover carries concentric borders of the interlaced Arabic knots common to Italian binding designs of the time, and adopted from Oriental art, but modified so as to show some traces of the Greek key pattern. In the centre of the field are sunk cameo portraits of Philip of Macedon and Alexander the Great. Here we have some attempt at unity, the cover design affording a clear indication of the subject of the volume, which is noteworthy on this account.

The Aristotle printed and edited by Aldus Manutius in 1495 (British Museum) is remarkable also for the traces which it exhibits of the operation of a unifying hand. The work is in five folio volumes and is printed in the best style of this famous house, being set in a fine cursive Greek fount beautifully displayed though lacking in many qualities of legibility. There are decorative initials and chapter head-pieces in perfect typographic balance with the letterpress and the design of these decorations is in keeping with the blind or gold-tooled design, on the covers of the five volumes, for it is to be specially noted that the binding of the books is not uniform, so far as decoration is concerned. The front covers show delicate interlacing bands of leaves in concentric rectangles with traces of the Greek key pattern and each design
exhibits that restraint which distinguishes the work of Aldus and other Italians from that of later French binders. The evidence of unity in this book is not surprising when we reflect that the producer was also the editor, and a scholar as well as printer and binder. From the same press came in 1499 an edition of the Hypnerotomachia (British Museum) which is bound in light green morocco, blind tooled on the front cover with two concentric borders of Arabic knots within which lies a delicate gold-tooled design in simple right lines and curves. This design is in keeping with the fine lines of the illustrations within the book which are said to have been cut on wood from designs made by Giovanni Bellini. There is a delicate expression of unity here also.

The British Museum possesses a copy of the Statuts et Ordonnances de l'Ordre du Saint Esprit bound by Nicholas Eve in 1579 for Henri III of France (and Poland). The binding is of orange morocco of very fine quality. In the centre of the upper board are the arms of France impaling those of Poland, on the lower the arms of France alone. In each corner occurs the crowned cypher of Henry III and Louise de Lorraine, while the dove as the emblem of the Holy Spirit is shown four times about the royal arms. The ground of the panel is completely covered with fleurs-de-lys and tongues of flame. This is an excellent example of connection between the subject matter of a book and the design upon the binding. There is similar evidence of unity in another volume bound by Nicholas Eve for the same monarch entitled Histoire des Faicts des Roys et des Peuples de France from the press of Frederick Morel, Printer to His Majesty.
Failing a cover design which is in connection with the subject matter of the book, one looks for a clear presentation of the title of the volume. The stock designs of Grolier and Maiolica are beautiful in form as well as in variety, simplicity and restraint, but except that they are in delicate proportion to the size of the field which they occupy they might be designs suitable for any rectangular object which required artistic decoration. If they are to be accepted as book cover designs they must make allowance for the clear indication of the title of the book. This, however, is rarely the case in Grolier volumes, the mark of ownership "JO GROLIERI ET AMICORUM" and the Grolier motto "Domine sit in terra viventium" being, as a rule, much more prominent than the title of the volume.

To the student seeking for evidence of bibliographic unity the books issued from the press of Aldus Manutius offer the most suggestive and profitable field for research though it is not easy to tell which bindings are contemporary. Aldus appears to have retained the oversight of all branches of book-production. He was himself, as already noted, a scholar of some distinction for his time; he edited many of the classical texts which came from his press; his printing and decoration have provided models for all time; his illustrations are an inspiration; and he at least, supervised the binder's work, stamping his own individuality here also and by his connection with Grolier producing some of the most famous volumes known to bibliography.

The chief characteristic of the designs produced
under his influence is simplicity, and in this quality of restraint they appeal to the cultivated taste of the present day in matters of ornament. Moreover Aldus avoids the deadening monotony of a series. Each cover must have its own design so as to impart that individuality to the book which is one of its most abiding charms. The Aldine covers also lack the precision which distinguishes the work of the machine and deadens true art which must always depend upon the hand and show even its limitations.

4. GROLIER AND MAIOLUS.

Notable examples of books which show the Aldine influence are as follows:—

Petrarch's *Sonetti e Canzoni* printed at Venice in 1501. (British Museum) The pattern of this design is gold tooled on olive morocco and shows distinctive grace and restraint. The elements of the design are Arabic knots and the characteristic "Aldine" leaf, surrounded by borders of figured and knotted work, the whole being enclosed in narrow concentric circles which add height to the general effect. It is worthy of careful note that the Aldine binders sedulously avoid a squat appearance and were fully aware of the fact that the best way to do this was to incorporate in their designs the concentric rectangles, and as often as possible to break the horizontal lines.

The *Works of Suetonius*, printed in Venice in 1521.
This binding is beautifully simple with concentric gold tooled bands, enclosing the arms, crowned initial and device of Francois I. If the device were in keeping with the author's subject and not a mere sign of ownership, the volume would be a model for small binding.

*Ciceronis Orationes. Vol. I.* Printed at Venice in 1540. (John Rylands Library). The olive green binding of this small volume appears to be contemporary, the design incorporating the Arabic leaf and scroll-work surrounded by rectangles containing scroll-work of Oriental origin.

*Ciceronis Offici.* Printed by Aldus in Venice. (John Rylands Library). This cover is blind and gold tooled on roan calf, very simply and in exquisite taste. There are concentric rectangles with Aldine leaves at the corners, the inside rectangle containing simple foliated scroll work with an open medallion in the centre enclosing the title of the book, *viz.*, M.T.C. OFFICI in small but clear capitals. The under cover is a duplicate of the upper but in place of the title occurs the inscription

Fortuna nulli plus quam consilium valet.

*Terenti Comoediae.* Printed by the younger Aldus in 1541. The simple gold tooling on this cover is well executed, the finisher showing much skill in his use of a right line, three kinds of curve, a dot and a leaf. The design is marred by the inclusion of the coat of arms of the owner painted and gilded in the central medallion.
Aristophanes Comedias. This book was edited by Aldus and printed by him in 1498. The binding is in stained brown calf, gold tooled with a broad border of Arabic knots close set and very handsome, enclosing a central ornament lozenge shaped of similar design.

Among the cover designs influenced by Aldus we must include those which are grouped under the name of Grolier the famous bibliophile who was Treasurer of the Duchy of Milan and resided for many years in Italy. This man gave Aldus much encouragement as well as welcome financial support and it is possible that the renowned Grolier designs were as much the product of the taste of Aldus as of the Treasurer. The best of them exhibit the quality previously mentioned, that of simplicity and as already noted, it is in this characteristic that the Italian work differs from that of France.

The characteristics of Grolier designs were bold gold lines geometrically arranged with great accuracy crossing and interlacing one another and intermixed with small leaves or sprays which were either in outline or "azured", that is filled up with fine and closely set cross lines. He embellished some of his traceries still more by painting them black, green, red, and occasionally silver but whenever he did this the design was inferior to the simple gold toothing. The designer is particularly careful to break horizontal lines so as to add height and consequent gracefulness to the covers.

The following are noteworthy volumes:-

De Bello Punico Secundo by Silius Italicus, printed
at Venice in 1523. This volume is bound in citron morocco and is a good example of the restraint which is characteristic of the Grolier method.

Wittekind's Henry and Otto I. Printed at Basel in 1523. This is a large volume in citron calf measuring about 15" x 9" and the design is shown in the accompanying plate. The title of the book is tooled in relatively small capitals in the central portion of the design, while the Grolier inscription appears at the foot where it is less objectionable. We note here the concentric rectangle arrangement and consistent breaking of horizontal lines. The design is almost perfect in its skilful contrast of curves with right lines and angles.

Second only in repute among bibliophiles to the bindings of Grolier are those which bear the name of Thomas Maiolus. (circa 1555). His characteristic design consists of a richly floriated border forming a panel, in the centre of which is a cartouche usually stamped with the title of the book. This cartouche is too heavy and architectural and compares unfavourably with the restraint and simplicity of the best unpainted designs of Grolier. But Maiolus covers have the characteristic of independence from the conventional horizontal bands on the back binding which tend to dwarf the appearance of a book. A good example of a Maiolus cover is that of the Symbolicae Quaestiones of Achilles Bocchius, printed at Bologna in 1555. In this binding the border fillet is itself returned so as to form the cartouche. The leather is brown morocco, marbled with black, the grain of the skin being filled with
gold with very rich effect. This book bears the legend Thomae Maioli et Amicorum.

5. NATIONAL CHARACTERISTICS IN BINDINGS.

I find in these Italian bindings the best models, or more correctly, the best hints on method for designers of the present day. In their simplicity and evidence of individual hand-work they are far superior to the early bindings of Germany, the Low Countries and England. Early German bindings were usually blind stamped only, heavy, elaborated and forbidding, resembling a Prussian holster-case or military saddle, the arms of some robber baron forming the chief idea of decoration, with an occasional stamped portrait excellent, however, of its kind. There is, as a rule, no idea of bibliographic unity, though the Catechismus printed at Strasbourg in 1582 bears a gold stamped Crucifixion on the front cover.

In dealing with this matter on a national basis it is perhaps unfair to give all the credit for early model bindings to Italy. Grolier was a French nobleman, and some of his bindings were executed in Lyons, though the French workmen were instructed by Italian artists and craftsmen. The Guild of St. Jean Latran, instituted as early as 1401 included not only esrivains, enlumineurs, and libraires, but also relieurs. But as time went on the Parisian binders fell from their high estate as craftsmen being a part in book production under the guidance and patronage of the University. They magnified their own office, associated themselves more and more closely with the gilders, who gilded not only books but boots, and other
Oriental Book Cover with Interlaced Bands.

Early French Design

Showing Interlaced Bands copied from Oriental Design.
leather articles such as belts and caskets. So began the specialization which naturally resulted in over-elaboration of design and consequent deterioration of French bookbinding. The famous designs of the later sixteenth century and of the following century belong rather to the decoration of leather generally than to the history of the book as an artistic unity. The book was regarded as something to be bound rather than read, and it is significant that at the sale of the library of the Vicomte de la Croix-Laval in 1902, the books were not catalogued by the names of the authors but of the binders. M. Ernest Thoinan claims that "la reliure est un art tout Français" but he ought rather to speak of leather ornamentation by means of gilding.

Before the advent of this decadent over-elaboration, many books were bound in France which afford inspiration to students of the present time as well as a certain amount of warning.

The following are cited as good examples for study:

**Petrarca "Opere" 1525.** Bound in olive morocco by Geoffroi Tory. This famous binder was educated in Italy, and many of his productions resemble those of Grolier in their lightness and restraint. He is a good model for method in that he adopted Italian elements but combined them in a manner which produced a distinctive style of his own. This particular binding shows concentric panels with gold filigree stamping including the characteristic "pot cassé" device.

Petrarch printed at Venice in 1525, delivered to
Paris in sheets and bound by Geoffroi Tory. This design is in delicate gold filigree consisting of a large number of small curves mostly circular and embodying the "pot cassé" device.

_M. Moschopoli De Ratione Examinandae Orationis Libellus 1545_. This is a binding of Henry II. "ex officina Roberti Stephani typographi Regii-cum Privilegio Regis". The design shows concentric rectangles, one formed of interlacing scroll work of Arabic origin. The central panel contains the royal device blind-tooled surrounded by _fleurs-de-lys_, the royal crowned initial and the double "D" which is said to have been intended for a device of Diana of Poictiers. The title of the book is blind tooled at the top of the cover but is practically indistinguishable.

_Le Livre des Statuts de L'Ordre Saint Michel, 1550_. This is another book of Henry II. bound in calf and gold tooled in simple concentric rectangles, with the King's crowned arms in the centre and _fleurs-de-lys_ at the corners of the rectangles. An indication of the contents of the book in place of the royal device would have made this a model binding.

_Historia Veneta_ of Cardinal Petrus Bembus, printed at Venice in 1557 and bound in Paris for Henry II. The design is blind tooled on calf in concentric rectangles with central oval of darker leather bearing the crowned arms of the king in gold cut-line. There is little ornament except scroll-work the "design" consisting of repetition of the _fleur-de-lys_, the crowned "H", the double "D" and the three interlacing crescents. The title is gold tooled at the head of the top cover and
really distinct.

Works of Caesar, printed in Paris in 1564. Within a border of palm branches are gold tooled a series of ovals in the centre of which are flowers or oak sprigs. The central oval is larger than the others, and is tooled with a shield charged with three fleurs-de-lys on a bend; it is worth special attention as a graceful element of a new style of design.

Works of Horace, printed at Venice in 1581 and said to have been bound by Nicholas Eve for Henry III of France. The design is tooled on orange morocco, and is similar to that of the Histoire des Faicts ---- de France already mentioned except that the fleurs-de-lys are set rather closer.

Latin Psalter, printed at Paris in 1586. This volume is bound in the style attributed to Clovis Eve, and the design is similar to that of the "Caesar" described above, but the cypher of a collector occurs in the ovals. The general effect is very rich, but there is nothing in the design to show that this is a book of the Psalms. The gold tooling is done upon fine leather pasted over leather covered boards of orange morocco.

Historia Sui Temporis by De Thou. This was printed at Paris in 1604 and bound, probably at the workshop of Clovis Eve, for Henry IV of France. The cover is in red morocco, handsomely gold tooled in concentric rectangles with fleurs-de-lys at the corners and a crowned cypher.

There is not much inspiration to be gained from early English work in book-binding, which is, on the whole, very
heavy and clumsy. The Earl of Arundel relied upon Italian workmen for the binding of his copy of the Vulgate which was printed at Venice in 1544, and stamped with his device of the white horse; and such a well-known binder as Berthelet, who had a royal appointment, and worked for Henry VIII, Edward VI and Queen Elizabeth, shows his ideal of the work in his use of the phrase "gorgeous bindings" in one of his bills presented to the first named monarch; for the rest he imitated from Italian craftsmen when he essayed gold tooling, though he spoilt the designs by too much weight.

There are two Royal MSS. in the British Museum bound by Berthelet for Henry VIII, namely the Julii Claudii Iquini Oratio ad Henricum VIII ad Faciendam Expeditionem in Turcas Hortatoria and the Libellus de Tribus Hierarchiis which show very well the inferiority of the English work, the tooling being coarse in the extreme. The same general character is to be found in the following sixteenth century books which I have examined in the hope of finding some redeeming feature in this Tudor work.


**Opus Eximium de Vera Differentia Regiae Potestatis et Ecclesiasticae**, printed in London and bound by Berthelet in 1534. The cover is stamped with the arms and supporters of the King, but the gilding has been freely re-tooled at some intervening period with disastrous effect. There is a little similarity between internal and external decoration, the binder's
tool, a kind of Aldine leaf being used on the title-page.

_The Image of Governance_, by Sir Thomas Elyot, printed by Berthelet in 1541. This book is covered in white leather, probably doeskin, and richly tooled in gold with arabesques, surrounded by a border with floral decorations at the angles. The design incorporates the initials H.R. with the legend _Dieu et Mon Droit_, but there is no attempt to express the subject of the volume in the decoration or by a clear display of the title.

_La Geografia de Claudio Ptolemeo_, printed in Venice in 1548 and bound by Berthelet for Edward VI. This cover is tooled with the legend _OMNIS POT ESTAS A DEO_ and a single border line in gold. The edges of the leaves are painted with the arms and initials of the King in gold and colours. Here is a really note-worthy English book beautiful in its simplicity and recognising the secondary importance of the sign of ownership, though the geographical significance of the Latin legend is not very obvious.

_De Amplitudine Misericordiae Dei_, by Marsilo Andreasi, printed at Basle in 1550 and bound by Berthelet for Edward VI. This volume is bound in light brown calf and each cover bears the arms and initials of the King within a blind tooled fillet with gilt fleurons at the angles. The tooling might be recognised anywhere as British but the unusual restraint of the decoration is note-worthy.

_Historia Veneta_, by Cardinal Bemba, printed at Venice in 1551 and bound by Berthelet for Edward VI. This is another copy of Italian work with the usual British weight.
The field of each board is broken into circular and quadrangular forms by an interlaced fillet painted black. The arms of the King are tooled in the centre with the royal motto above, and the date MDLII. below, with the initials E.R. crowned on either side. The spaces are filled with tooled roses and arabesques.

Tractatio de Sacramentis by Johannes a Lasco, printed in London in 1552. This is a small book roughly tooled on white pigskin, in the Italian manner as interpreted by English craftsmen.

Flores Historiarum of Matthew of Westminster, printed in London in 1570. The covers are in brown leather, gold tooled with the arms of the Queen in the centre, and with azured corner-pieces at the angles of the panel; the field of the boards is powdered with triple dots. Surrounding the inner panel are white leather inlaid corner-pieces tooled with military trophies of all periods appearing at first sight to embody a real attempt to connect the design with the subject matter of the book. The binder, however, must not be given the credit of striving after unity, for the same design is used on the GOSPELS in Anglo-Saxon and English, printed in London in 1571.

Graecae Linguæ Spicilegium, by Edward Grant, printed in London in 1575 and bound for Queen Elizabeth. The cover is in brown leather, tooled in gold with the Queen's arms in the centre and azured corner stamps at the angles of the boards. The field of the board is sprinkled with small roses not in geometrical order.
Orationis Dominicae Explicatio, by Lambert Daneau, printed at Geneva in 1583. This was apparently bound for Queen Elizabeth probably in England. The cover is in black velvet embroidered with roses worked in gold and silver thread, ugly to contemplate and uncomfortable to hold.

VI. Hints for Cover Designers.

We return with relief to the more restrained examples of Italian and French-Italian bindings not in order to copy them but to gather hints as to the true method of working out a style of decoration worthy of our own time and of the dignity of a book. The lessons might be summed up as follows:-

1. That each book which is worthy of being well printed is worthy of its own individual binding. Nothing is more deadening to a book-lover than uniform library bindings, nothing more inimical to the cultivation of intellectual and spiritual companionship with a worthy writer. Perhaps one of the best ways to extinguish real living interest in a book is to include it in a series.

2. That the binding must be in a material which is serviceable and capable of hand decoration. In the Middle Ages leather was the recognised material and it still holds premier place for book binding. For the companionable book, however, cloth has now taken a recognised place, and if of good quality is capable of artistic decoration though it ought not
to be blind 

3. The design of the binding must express the author's subject and must be in keeping with the internal decoration, if any is used. It must not be so elaborate as to draw attention to itself as a piece of leather decoration. Its place is to conserve the purpose of the book as a whole.

4. If a design is not specially made to suit the subject matter of the book, the title of the volume must be very clearly indicated, or some appropriate smaller device suggesting the subject might be incorporated with the general design.

5. The design itself must be individual, and must only borrow the smallest elements from other periods or styles. The combination of these elements is the test of the designer's power of interpreting the worthy characteristics of the age in which he lives. He will be successful in exact proportion as he guides and follows the spirit of his time. Designs of periods are designs of men of genius who are the natural unforced products of those periods.

6. A feeling of restraint and simple dignity combined with decision would appear to interpret the feeling of the present time in the matter of design, and the manner of exercising this restraint can best be learnt from a careful study of select designs similar to those which are mentioned above.
CONCLUSION.

The variety of purpose and consequent modification of form in printed books, makes it impossible to formulate general rules for their external production. The would-be book designer (or publisher) must undergo a prolonged and well-directed course of study consisting of careful examination and contemplation of the incunabula and the illuminated MSS of the best periods. He must not do this in order that he may have material for copying or with intention to perpetrate revivals, but that he may be inspired with ideals of the work before him similar to those which moved the printers, illustrators, and binders of the Great Age of Printing.

He will then be prepared to deal in a worthy manner with the suitable presentation of a worthy book. Let us suppose that it is a work of imagination, devotion, or meditation. He will choose a type modelled upon the best of the Old Romans which will be set by hand with careful regard to spacing and margins, the latter being arranged to allow the binder to present a book which will cause no physical strain upon hand or eye. If illustrations are included they will be in full colour, printed on the paper which carries the letterpress, while any black pictures which may be included will be in line and in exact balance with the type face. These black drawings while necessarily following a convention and refusing to compete with
finished pictures will be devoid of eccentricity or distortion. The binding will be physically comfortable and restrained in the matter of external decoration which will be in unity with the subject matter of the book.

My subject has been merely outlined and it has many side issues of some importance in social history while it even throws occasional light upon so-called larger spheres of action. The present time has the opportunity of producing an approximation to the ideal book but only the student who knows the best manuscripts and the best incunabula is prepared for undertaking the work in a competent manner.

I do not think that anyone will quarrel with me for claiming professional rank for the book-designer. He must be at least a potential artist, and his work may be as disinterested as that of any member of a recognised profession. The desire to make books beautiful had its origin in something deeper than mere aesthetics. It was, in the first instance, an act of devotion on the part of the scribe and illuminator of the sacred page, which enshrined in visible form all that to him was most holy, most sublime, and most necessary for man's salvation. Even the art of healing had no more dignified genesis than this.