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ORNAMENTAL DESIGN,

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THE ANATOMY OF PATTERN.

THE PLANNING OF ORNAMENT.

THE APPLICATION OF ORNAMENT.

BY

LEWIS F. DAY.

WITH ONE HUNDRED & FIFTEEN
FULL PAGE ILLUSTRATIONS.

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LONDON:
B. T. BATSFORD, 52, HIGH HOLBORN.
1888.

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Pt. I III

TEXT BOOKS OF ORNAMENTAL DESIGN.

THE ANATOMY OF PATTERN.

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BY

LEWIS F. DAY,

AUTHOR OF 'EVERY-DAY ART,' ETC.

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PREFACE.

There was a time in my own struggling for artistic existence, when I should have been so grateful for any practical teaching in ornament, that I fancy there must be students who will find it helpful to have set plainly before them what I have had to puzzle out for myself. Hence this series of Text Books of Ornamental Design; in which I have amplified and illustrated the substance of a series of Cantor Lectures delivered in December last before the Society of Arts.

I have assumed no great amount of technical or artistic knowledge on the part of the reader—only that he wants to know. And, elementary as my subject is, I have taken some pains to save him all unnecessary effort in following my meaning.

The illustrations are to be taken literally as illustrations, and not by any means considered as ornamental addenda to the book.

It is only as diagrams that they have any claim to insertion; although, as an ornamentist, I have naturally made the necessary diagrams as interesting as under the circumstances was feasible.

I have tried to make each one of the plates, as far as possible, explanatory in itself; so that from the study of them alone, apart from what I have to say, a fair idea of the construction of pattern might be gained.

LEWIS F. DAY.

13, *Mecklenburg Square, London, W.C.*
March 30th, 1887.

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TABLE OF CONTENTS.

PAGE

I.—Introductory 1

II.—Pattern Dissection 8

III.—Practical Pattern Planning 25

IV.—The "Drop" Pattern 34

V.—Skeleton Plans 40

VI.—Appropriate Pattern 47

DESCRIPTIVE LIST OF PLATES.

1. THE CONSTRUCTION OF GOTHIC TRACERY PATTERNS—Showing the square, diamond, hexagon, circular, or other plan on which elaborate tracery is built.

2. THE SQUARE—Checks and other diapers built on cross-lines.

3. THE LATTICE AND THE DIAMOND—Plaids, zigzags, &c., built on cross-lines.

4. FRETS, &c.—Showing their construction on a network of cross-lines.

5. ALL-OVER PATTERN—Showing the cross-lines upon which it is planned.

6. THE TRIANGLE—Diapers of star, hexagon, and lozenge shapes, built up on the lines of the equilateral triangle.

7. THE TRIANGLE—Diapers composed of the equilateral triangle and its compounds.

8. THE HEXAGON—Honeycomb and other diapers based upon the hexagon and its compound.

9. THE OCTAGON—Simple octagon diapers and the lines of their construction.

10. ARAB LATTICE PATTERNS—Dissected, and their anatomy laid bare.

11. CURVILINEAR PATTERNS—Showing the construction of the wave, the ogee, the net, &c.

12. DIAPERS OF CIRCLES—With lines showing the points from which they are struck.

13. OTHER CIRCULAR DIAPER FORMS—Produced by intersecting circles.

14. FREE JAPANESE DIAPER—The repetition of geometric forms not geometrically disposed.

15. THE SCALE PATTERN—Together with ogee, cusped, and other shapes derived from it.

16. A STAR PATTERN—Showing six different ways of arriving at a simple diaper.

17. ITALIAN DAMASK—Showing its construction upon the lines of the scale pattern.

18. HENRI II. BOOK-COVER—Showing result of reversing, and again reversing, the pattern.

19. SOME PATTERN PLANS—Showing (A) the square plan, (B) the dropped parallelogram plan.

20. SICILIAN SILK—With the cross-lines on which the design is built, and the diagonal lines it assumes.

21. TAPESTRY OF THE XVTH CENTURY—With the rectangular unit of repeat, in which the pattern is turned over, after the manner of the weaver.

22. LATE-GOTHIC VELVET—Showing horizontal effect of pattern constructed upon the lines of the ogee or hexagon.

23. WALL-PAPER PATTERN—Showing ogee lines on which it is planned.

24. A DROP-PATTERN—In which the construction is not at first apparent.

25. MAP—Showing three plans, on either of which the same simple pattern may be produced.

26. VARIOUS DROP PATTERNS—Showing the effect of the drop according to its length, &c.

27. DIAGONAL DAMASK PATTERN—Showing its construction on the diamond, which is not apparent.

28. ARAB TILE AND LATTICE PATTERNS—Showing the simple means by which intricacy is produced.

29. DESIGN — Exemplifying the intentional confusion of forms.

30. WALL-PAPER DESIGN — Showing a "drop" in the ornamental scroll, whilst the grotesque creatures introduced follow the lines of the square block.

31. PERSIAN TEXTILE—Showing the lines of the double square on which the pattern is constructed, as distinct from the lines it takes.

32. FOLIATED SCROLL—A design made on square lines, yet assuming an ogee shape.

33. ITALIAN SILK—Showing ogee, hexagon, or diamond plan.

34. SET PATTERN—Explanatory of economy in weaving.

35. DAMASK—On the plan of waved upright lines, crossed by horizontal bands of rosettes.

ERRATA.

Page 36.—Line 14, *dele* from "When" to "upright line."
,, 37.— ,, 2, *dele* from "But" to end of paragraph.

THE ANATOMY OF PATTERN.

I.

INTRODUCTORY.

The dictionary scarcely helps us to a definition of the word pattern, in the somewhat technical sense in which it is used by the designer.

Inasmuch as a pattern signifies a "specimen," one might argue that repetition is implied in ornamental pattern. But inasmuch as any "shape or model for imitation" is quite as strictly speaking a pattern, one cannot exactly define pattern as repeating ornament.

Nevertheless, pattern mostly comes of repetition. Many a pattern bears on the very face of it the evidence that it grew directly out of the necessity of repetition.

It is more than probable that some mechanical necessity gave rise to all geometric

pattern ; certainly it is impossible to plait, net, knit, weave, or otherwise mechanically make, without producing pattern. It may be so small, as it often is in weaving, that the warp and weft are invisible to the naked eye ; but it is there ; and all that remains for us to do is to efface it all we can, or to make the best of it.

Out of the determination to make the best of it has grown much of the most beautiful pattern-work. To neglect this source of inspiration, therefore, to say nothing of the attempt to suppress it, would seem to be wasteful of opportunity to the very last degree.

The very repetition of parts, then, produces pattern ; so much so, that one may say wherever there is ordered repetition there is pattern. Take any form you please, and repeat it at regular intervals, and you have, whether you want it or no, a pattern, as surely as the recurrence of sounds will produce rhythm or cadence.

The distribution of the parts need not even be regular. The wave marks on the sand, the veins of marble, the grain of wood, the crystallisation of the breath upon the window-

panes, the curls of the hair, the very features of the human face—resolve themselves into pattern. So distinctly is this last the case, that the ornamentist finds himself continually devising, *malgré lui*, patterns that remind one of faces. There is even room for speculation whether it may not have been with a view of escaping this danger, or anticipating it rather, that the designer first took to the deliberate use of those masks and grotesque heads, which form so prominent a feature in certain styles of ornament.

The popular idea of the process of ornamental design is, that the artist has only to sit down before a piece of paper, and, like a spider, spin out the fancies that may crowd his fertile imagination. Indeed, there is scope in design for all his fancy ; but he is no Zeus that ornament should spring, Athena-like, full-grown from his brain.

Ornament is constructed, patiently (I will not say laboriously, for the artist loves the labour), patiently built up on lines inevitable to its consistency—lines so simple, that to the expert it is not difficult to lay bare its very skeleton ; and just as the physiologist divides the animal world, according to anatomy, into

families and classes, so the ornamentist is able to classify all pattern-work according to its structure. Like the scientist, he is able even to show the affinity between groups to all appearance dissimilar ; and, indeed, to point out how few are the varieties of skeleton upon which all this variety of effect is framed.

Before enumerating these varieties, let us suppose for a moment a man to imagine (and this is by no means an imaginary case) that he will make to himself a repeating pattern without regard to its logical construction—as though in his domain there should be no skeletons. That would be, from my point of view, a profoundly foolish thing to do ; but, more than that, it is impossible. He may design a unit in which there is no repetition, and no formality, but the moment he repeats that unit, the very order of its repetition proves to be, if I may call it so, the cupboard in which the skeleton will be found.

It might be imagined that by designing in some such haphazard fashion as I have just supposed, the artist would secure to his design a freedom of line, an absence of formality, not readily to be obtained by adopting the more systematic method. But this is not by any

means so. If, indeed, the design be of that absolute uniformity all over, that there is no one feature in it more pronounced than another, it may pass muster, notwithstanding the want of backbone. But that is not to claim much for it as a design. And it was scarcely worth the pains to take exceptional measures merely to this insignificant end.

If, on the other hand, a design be above the level of insignificance, there must be in it some dominant feature or features, which, when many times repeated, will appear more prominent than ever. It is to these features that the eye will irresistibly be drawn; and it is the lines they take in relation one to another, which will assert themselves. It is hardly to be expected that, if these lines have never been taken into consideration, they should come out very satisfactorily—and, as a matter of experience, they always come out awry. Every one must have suffered more or less from wall-paper, and other patterns, in which certain ill-defined but awkward stripes impressed themselves upon him; and he may have imagined possibly, if he thought about it, that this effect of stripes came of working upon vertical, horizontal, or diagonal lines.

It was much more likely, the result of not working upon definite lines at all. A designer who knew the A B C of his business, would make sure of lines not in themselves offensive; he would counteract a tendency to stripes in one direction by features directing the attention otherwards; and he would so clothe any doubtful line that there would be no fear of its unduly asserting itself, as in its nakedness it might. He foresees the danger (it is a danger even to the most experienced) and he is fore-armed against it. The mighty man of valour who disdains to be trammelled by principles, or any such encumbrance, is without defence against contingencies practically certain to arrive. It is only by a miracle, or a fluke, that he can escape failure. The overwhelming odds are, that the petty considerations he has despised, will be quite enough to wreck any venture he has dared in defiance of them.

Since, then, it is practically inevitable that there shall be definite lines in ornamental design—seeing that if you don't arrange for them they arrange themselves—it is the merest common sense to lay down those lines to begin with, and, in fact, to make them the skeleton

or framework upon which you build up your pattern.

You will see, when they are laid bare for you, that these skeletons are after all very few.

II.

PATTERN DISSECTION.

Repeated pattern may be classified according to its structure, I said.

First in order of obviousness comes *the stripe.* It comes also very early in order of invention: the loom must from the beginning have suggested the stripe-pattern, which practically grows out of it.

The stripe, however, carries us only a very short distance in the direction of design. For immediately you make any break in the repeated line, the recurrence of that break gives other lines in the cross direction.

Suppose a series of horizontal bands broken at equal intervals by a series of rosettes. It is clear, that if the rosettes fall one under the other, they give upright lines; or if they are shifted you get diagonal cross lines. If the line itself is broken, as in the case of a series

of waved lines, or, still more plainly, in a series of vandykes, the turn of the wave, or the point of the zigzag, when it is repeated, gives the cross line just the same.

And so we come at once to the vast order of patterns constructed upon *cross lines*.

This is probably quite the first in point of time, arising as it inevitably does out of the very primitive art of plaiting. You have only to interweave strips of two different colours, and you get at once a *check*, or what is familiar to us in black and white as the chess-board pattern. (Plate 2.)

Suppose the interwoven strips were all of one colour, then *the lines of intersection* would make a *lattice* or basket-work pattern.

The simplest form of check or lattice is when the crossing is at equal intervals and at right angles. Vary the interval, and you have all manner of plaids and tartans. Alter your point of view (or turn the design 45 degrees round) and you get the diamond. The difference in point of view makes no real difference in plan: a stripe may take any direction, but it is always a stripe. But if we alter the angle at which the lines cross, we get not only a fresh variety of

shapes, but we get also a diamond shape which, for the sake of clearness, I will call *the* diamond, which plays a very important part in the next order of patterns, at which however we have not yet arrived. Various plaids, diamonds, and other developments of the lattice are exemplified in Plate 3.

In the case of a regular network of cross-lines there is no particular reason why they should always be filled in alternately *à la* chess-board. They may just as well be grouped in twos, threes, fives, and so on, resolving themselves into patterns of great variety and even of intricacy, as may be seen in Plate 2.

This theory, however, must not be pressed too hard, or you may squeeze something very like a false idea out of it. It might be contended that all patterns are formed on the square, or all patterns, at least, that can be woven, the threads forming the squares on which the design is laid. This is obviously absurd. The only patterns built on the square are those in which the artist (consciously or not) worked upon those lines. The actual squares apparent in a coarsely-woven scroll, or in the old-fashioned sampler,

belong, not to the pattern, but to its translation into a textile fabric.

If instead of the chess-board we take the *lines* of the lattice, and work upon them, we get, without departing from those lines (only intermitting them) a wonderful range of interlacements and the like; some of them of exceeding intricacy, as in the case of the "*fret.*" A number of these are shown on Plate 4. There seems no limit to the ever-increasing range of pattern-work thus disclosed, all built upon the same constructional scaffolding.

From the intermission of the lines results a kind of spot pattern, more or less free, which might be mistaken for a distinct order of design. But it is only a variety.

It really matters little whether a design is constructed on geometric lines, or only arranged so that it falls within them. The skeleton, when you come to dissect the two, is the same in either case. Our theory of construction, therefore, applies quite as much to sprigs, spots, and all so-called free patterns, as to those in which the constructional lines actually occur as lines. You have not done away with construction when you have succeeded in keeping the scaffolding out of

sight. Again, the use of the broken line instead of the straight, or of the curved (which we shall have to consider more particularly further on), makes no difference except in effect. The skeleton is the same, though you show no lines at all, as in the "all over" pattern on Plate 5, which is planned on the parallelogram given by lattice lines.

So far we have had to do only with the simplest of all possible schemes, in which at most two series of lines intersect one another. The introduction of a third series of cross lines constitutes a new departure, and a most important one.

Cross the square lattice by a series of diagonal lines bisecting the right angles—cutting the squares in half, that is to say—and we have a new form to work upon, the *triangle.*

If instead of the square lattice, one starts with a lattice of diamond shape, a third series of cross lines bisecting the angles of the diamond produces equally a diaper of triangles.

And if the diamonds of the lattice be of a certain proportion—if, that is to say, two sharp angles be together equal to one of

the blunter angles, you have only to bisect the blunt angle of the diamonds by this third series of cross lines to arrive at the *equilateral* triangle, which of all triangles is far away the most useful in design.

By merely grouping the equilateral triangles, as in Plate 6, we get the hexagon (a group of six triangles), the star (a group of twelve), and other shapes, such as that on Plate 7, which is made up of seven triangles (i. e. three diamonds and a triangle); or that on Plate 8, which is composed of eighteen triangles or three hexagons.

A glance at the three Plates 6, 7, 8, will show how immensely the designer's scope is now widened.

We have already the basis of all that infinity of geometric pattern which we find in Byzantine mosaic inlay, and in the Moresque tile-work derived from it. It will be seen that the hexagon, the star, and other compound shapes, themselves form exactly-fitting diapers.

By the use of a fourth series of cross lines another new shape is evolved. Returning once again to the square lattice, if we cross it diagonally *both ways*, cross it by itself,

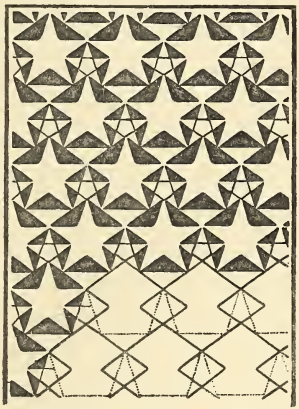
that is, so that each square is cut up into four, you get out of those lines the *octagon* (Plate 9); but not an equal-sided octagon; that is, built on a cross lattice of different proportions.

The octagon, however, is not a unit which will of itself form a diaper, as the hexagon will. It is only in connection with a square, diamond, or other four-sided figure, that it will repeat. Place side by side a series of octagons, and there will appear four-sided gaps between (Plate 9). Nevertheless, this new series of lines gives us new varieties of radiated patterns: witness once more the elaborate interlacings of the Arabs; all of which, even the most magnificent, are closely related to the seat of a common cane-bottomed chair.

It is possible to carry the principle of *radiation* further still. You may, for example, cross this more elaborate lattice by a lattice like itself; but you get by that means rather intricacy than variety—especially when the intersecting lines are in part interrupted. In certain Arab patterns, where this ultra-elaboration of lines is employed, it appears almost as if a new principle had been introduced (Plate 10); but upon analysis the designs

resolve themselves into the elements with which we have already had to deal—so few are the plans upon which pattern is constructed. Already we have come to the end of the straight-lined family.

Why, it may be asked, can you not make a diaper on other lines, on the lines of the pentagon for example? Well, you may put together so many pentagons—and a very respectable diaper they form—especially if you further enrich the pentagons with five-pointed stars. Not long since I came upon just such a diaper, which, for a moment, promised to upset all my neatly arranged theories on the subject of pattern anatomy. However, I had only to dissect it, to discover that it was our old friend the diamond in disguise; but so artfully made up as at first sight to deceive. There it is. It consists of



Pentagon diaper and its skeleton.

pentagons put side by side, the interstices between them ingeniously filled with stars and triangles, much as the pentagons themselves are filled—so that one does not readily distinguish between the parts. It wants no telling that shapes of any kind may be put together to form a pattern ; but that does not alter the fact that the *lines* on which they are arranged, or into which they fall, must be those I have already laid down ; which are indeed the base of all possible pattern.

For further variety in design, we must resort to the use of the *circle.* The circle itself must, indeed, be arranged on one or other of the foregoing plans. It must be struck, that is to say, from centres corresponding to the points of intersection of lines, such as have already been described. In so far it is only one of the innumerable arbitrary shapes that may be so arranged. But the circle is so important a feature in itself, it so entirely alters the scope of geometric pattern, that it deserves to be considered apart. One cannot simply ignore the element of curvilinear design in ornament.

Whether or not the idea of flowing patterns originated in the circle, is of no great conse-

quence. Instinct must have preceded geometric principles in the mind of man.

One may very easily deduce many of the common curvilinear patterns directly from *angular* motives. (Plate 11.)

The wave, for example, is a zigzag, just blunted at the points. Soften the lines of the hexagon, and you have the ogee. Interlace straight rods, and you get waved lines, as may be seen in the perspective view of the common hurdle. Round the corners of the hexagon or octagon, and you arrive at a rude circle. The relation of the hexagon or octagon diaper to the diaper of circles is obvious. Presumably, the busy bee, if one may suggest such a thing without irreverence, only works in a circle, and the hexagonal form of the cells of the honeycomb is simply the result of gravitation; just as you find that cylinders crowded all become hexagonal prisms.

The circular form is familiar to man from the moment he first sees the sun or moon like a disc in the sky, as also the principle of radiation is perceived in the stars. For all we know, the very first pattern ever traced by human hand may have consisted of circles. The primeval artist had only to pick up the

nearest dry twig and indent the damp earth with the end of it, to get a series of round impressions, which would pass for a very respectable diaper. I don't say that was so. I only mean to insist upon it, that the ways in which patterns are formed can be reduced to the simplest; and that they practically force themselves upon the workman—making him, as it were, an artist in spite of himself.

The circle, with its segment the curve, and its compound the spiral, assumes extreme importance when we come to the consideration of the scroll (with which just now we are not concerned); but it will be seen that even in mere diapers it leads to an apparently new order of things.

The simplest form of circle diaper is when the circles are arranged on the *square* or the *diamond* plan; and so as to touch at the edges. By the intersection of the circles, one by another, an effect of much greater elaboration is at once obtained; and it makes all the difference whether you determine the proportions of the circle according to the lines on which they are struck (as in Plate 12) or not (as on the upper part of Plate 13).

Out of the circle, or its segments, we get also the trefoil, the quatrefoil, and all manner of cusped shapes (Plate 15), which also must needs be put together on one or other of the plans already propounded.

Further, out of the segments of the circle you can construct the scale pattern, which (as you may see on Plate 15) might equally have been derived from the scales of a fish or the plumage of a bird's neck. The scale may also be considered as a translation of the diamond into curved lines. Re-arrange the scales and you have a more graceful, as well as a more complicated, diaper (same plate)—in which appears the ogee shape, once before referred to as being a curvilinear modification of the hexagon.

The hexagon itself may be deduced from it. Suppose a network of interlacing wave lines or ogee shapes—it amounts to the same thing—and the result is a series of six-sided figures (Plate 11), very nearly approaching the straight-lined hexagon.

In this way the straight-lined series might be derived from the curved ; and so once more, by a very different road, we reach always, in this maze of pattern-work, the same point,

which is, the limited variety of the skeleton on which pattern is built.

From the combination of straight lines with curved (Plates 12 and 13) result all manner of new diaper forms; which, however, present nothing very new in the way of skeleton.

You might start a scroll pattern, such as was common in the sixteenth or seventeenth centuries (Plate 17) on the lines either of the hexagon or of the ogee, or of a mixture of curved and straight lines which I may call the broken ogee; and in the end it would not be very clear which of them you had taken for a groundwork; or even whether you had not founded your design upon the diamond—such close kindred do those various skeleton lines betray.

I have dwelt at some length upon rudimentary diaper forms, for reasons quite apart from anything intrinsically interesting or beautiful in them, although they may be both one and the other. More especially is this likely if tender colours be employed to soften the forms, or if the colour variations do not quite follow the pattern, as in the case of marble inlay, where the accidental colour of the material is a relief from the geometric

monotony of the shapes. The Japanese sometimes go so far as to interrupt the pattern, wiping out a bit of it here and there, anticipating, indeed, the softening effect that age might impart to it. (Plate 14.)

But it is more as a *basis of design* that we have at present to consider geometric forms. The basis of all repeated patterns is, as I said, geometric. And, this being so, it is as essential that the designer should be acquainted with simple geometric principles, as it is that a figure draughtsman should have some knowledge of superficial anatomy.

For all the simplicity of the skeleton lines he has to deal with, the pattern designer's art is not such a simple thing as you might suppose. He has not merely to invent pretty patterns, but patterns that can be conveniently worked—and the lines mapped out for him by the conditions of his work, are, in most instances, not just those which beauty would have decreed.

They prove, however, to be identical with the lines already shown to be the basis of all recurring pattern-work ; and so we begin to see that, had there been no such thing as pattern design before, and no traditional forms of

design for us to follow, those very forms must have been evolved as certainly out of the more complex conditions of modern manufacture as they were out of the simple contrivances of primitive handicraft. That is to say, that the lines first given to us by the primary processes of netting, plaiting, and so on, would equally have been prescribed by the printing roller or the power loom.

It is one of the most interesting points in the analysis of pattern design to see how regularly we work round, again and again, to identically the same shapes. You cannot safely dogmatise as to the origin of this or that pattern; there are always so many ways in which it might have been suggested. Put side by side a series of waved lines so that their curves are opposed (Plate 11) and the effect is exactly the same as though you had opened out an ogee diaper; you can deduce either pattern from the other. Or, again (same plate), if the ogees interlace, it is impossible to say whether this was the outcome of the ogee, or of waved lines, or simply of the process of netting.

On Plate 16 are shown six different ways in which one and the same simple star pattern may be arrived at.

1. By the juxtaposition of stars and the addition of cross-lines.

2. By the juxtaposition of diamonds and the addition of cross-lines.

3. By the juxtaposition of right-angled diamonds, each occupied by a star.

4. By the interlacing of two series of octagons, and the addition of cross-lines.

5. By the crossing of two series of zigzag lines, and the addition of cross-lines.

6. By the crossing of two series of diamonds or lozenges, and the addition of cross-lines.

And this does not by any means exhaust the number of ways in which the same result might have been reached.

To take another instance, of a very different kind, you know how common it is to see a waved line with leaves alternating on each side of it. It appears on the face of it, a quite mechanical and arbitrary arrangement; but you have only to note how, in nature, the alternate leaves on a slender stem, pull it out of the straight to see the natural and inevitable origin of the idea. By merely exaggerating the slight wave of the natural stem, you get one of the most conventional of ornamental border patterns.

So it would seem that, whether you begin with mechanical construction or with nature, it works round, in the hand of an ornamentist, to the same thing in the end—only in the hands of an ornamentist.

III.

PRACTICAL PATTERN PLANNING.

Pattern design is very seriously affected by the circumstance that the possible lines of construction are not in all cases practicable.

In practical design for manufacture the limitations are strict ; and it is only by submission to them that success in ornamental design is possible. Nor is it only the style or character of the design that is affected, but its plan also.

The Oriental mind, delighting in geometric intricacy, has availed itself largely of the triangular unit, and has built up with it all manner of delightfully elaborate patterns. The modern European finds it more convenient to him to adopt the simpler parallelogram. He may now and then use hexagonal or other many-sided tiles, but he prefers the square. So also the weaver's cards are inevitably in the shape of parallelograms, and the printer's blocks ; and though

the printer make use of the roller instead of the block, the conditions of design remain unaltered; for the roller is, for all practical purposes of design, only a block bent round in the shape of a cylinder.

Even the bookbinder of the Renaissance, who was comparatively free to do what he liked in the way of "tooling," was led, whether by instinct or by his tools, to adopt a rectangular repeat, as in Plate 18; in which also is exemplified what may be done in the way of reversing, and again reversing, the unit of design—so as with comparatively little drawing to produce the effect of an extensive pattern.

We have, ordinarily, to reconsider the possible lines of pattern construction in their relation to the rectangular figure, which is the repeat determined for us by the conditions of nearly all modern manufacture.

The base of our operations is then usually a parallelogram.

Furthermore, this parallelogram is in all cases restricted in size, and in most cases of more or less arbitrary proportions.

For example—in the case of wall-paper printing, it is practically determined for us

that the printer's block shall be rectangular. Custom has further fixed its width at 21 inches. And, since a block of greater length than that would be unwieldy, we are restricted to a square of 21 inches by 21 inches.

The block may represent a fraction only of the design, which can theoretically be made up of as many blocks as you please. But in practice the expense of such a proceeding would make the paper-hangings cost more than paper-hangings are ordinarily worth; and, apart from commercial considerations, which would be enough to prevent that kind of extravagance, it is contrary to craftsmanship so to misapply labour. The most capable artist is he who can apply his art to most purpose, and get full value out of his materials.

As a matter of fact, the wall-paper designer has to content himself, then, except in very few instances, with a repeat of at most 21 inches square.

Within those limits he is comparatively free; but, as I have already shown, do what he will, his repeated pattern *will* fall into geometric lines, if only those of the parallelogram on which it is built. A pattern, such as

A, on Plate 19, may seem at first sight to conform to no conditions of restraint; but the actual lines of the repeat are apparent on closer inspection in any single feature whose recurrence is to be traced. It is based, you will find, upon the square.

Apart from the conditions of actual manufacture it is found commercially expedient to adopt certain fixed dimensions for the tile, block, roller, or whatever it may be—and we are thus constrained to design tiles (if they are to be of any use) on the usual three, six, eight-inch or other accepted scale; textiles to a width fixed by the loom, and a length controlled by the consideration of economy; block-printed fabrics under very similar conditions; and roller-printed to a length as well as a width prescribed. The proportion of the parallelogram within which our design must be confined varies, that is to say, with the manufacture for which we are designing. An experienced designer could often tell, from its proportion and scale alone, for what particular manufacture a design was made. And it is in the impracticability of his ideas that the novice most infallibly betrays his lack of experience.

There is no occasion to enter more fully into all the various technical reasons for the limitations to which the designer is subject. The practical convenience of them, however, is patent. It is as desirable that the architect, for example, should know what sized tiles may be available, as that he should be able to reckon upon the "bond" of his brickwork; and it is equally clear that without some uniformity in the width of materials (such as silks, velvets, carpets, chintzes, and so on), it would be difficult to estimate, off-hand, the relative cost of each.

As it is, the public is not seldom misled in that way. The difference between 18 and 21 inches in width, is not so apparent to the eye that the purchaser of a French wall-paper need realise, when he selects it, that it is actually nearly seventeen per cent. dearer than an English paper nominally at the same price! Something very like a swindle is perpetrated when facts of this kind are deliberately kept from the buyer. There is a further fraud in withholding from him the information that certain foreign goods sold *by the piece* are only about three-quarters of the length of English goods competing with them.

To return to the subject—the upshot of it is, that the designer has habitually to shape his design according to a rectangular plan, and that of limited, if not fixed, dimensions.

It becomes, then, a very serious question with him how far he can avail himself of any other basis.

The student might with advantage set himself to tabulate the possibilities in the way of adapting the various units of repeat to repetition, within the square. It would then be seen that, though all things are possible, there are schemes the artist would like to adopt, which, in order to be brought into the repeat permitted, would need to be worked out upon so small a scale as to become quite too insignificant for use.

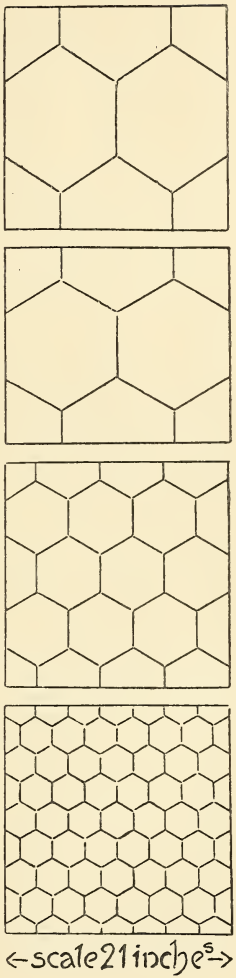
One instance of this it may be worth while to give.

Suppose a square block of 21 inches, and you wish to adapt a hexagonal design to it. Only those who have tried the experiment have any notion how small the hexagons would come. If you made your hexagons $10\frac{1}{2}$ inches wide, so as to get two in width, they would not come true in the length ; they would be too long. If you made

them true, they would not fill the square, but only a space about 21 inches by 18.

Three and a half hexagons in the width would work, but only as a "drop" pattern: that would give hexagons of six inches across. In order to occupy the square with true hexagons repeating without a "drop," they would need to be reduced to half that size; that is to say, there would have to be seven hexagons to the width, measuring each only three inches across.

It will plainly be seen, in this instance, how very strictly the artist is bound by considerations which scarcely occur to the



uninitiated, considerations which have always had a great deal to do with the design of pattern-work. Fashion has had her say in the matter, too, no doubt—it is a wicked way she has ; but though certain lines have been generally adopted at certain periods and in certain countries, I think it will invariably be found that there was some technical or practical reason for their adoption in the first instance.

Out of the conditions of weaving came, for example, the adoption of upright patterns and cross colouring (as in the silks of Byzantine, Sicilian, and early Italian design), as well as the turning over of the design on the two sides of an upright stem, or purely imaginary central line. This is shown in Plates 20 and 21, the one taken from an old Sicilian silk—the other from a coarse woollen fabric of the 15th century.

In Plate 22 may further be seen what influence the material may exercise upon pattern. There was a whole class of patterns of this kind schemed in the 15th and 16th centuries, with the obvious purpose of disturbing as little as possible of the rich pile of the velvet for which they were designed.

The turning over of the pattern is essentially a weaver's device. In a pattern similarly planned for *printing* there is no occasion for that same rigid symmetry of the two sides. On the contrary, it is desirable rather to introduce some variations, as I have done in Plate 23.

IV.

THE "DROP" PATTERN.

The most useful skeleton to work upon, all things considered, is the diamond. For it is on the basis of the diamond that "drop" patterns are most readily designed.

The "drop" is a device by means of which the designer is enabled, without reducing the scale of his work, to minimise the danger of unforeseen horizontal stripes in his design, a danger which is imminent when the repeats occur always side by side on the same level.

The printer's block, we will say, is a square; or the roller is its equivalent; or the cards take that form. In the printed or woven strip, whether paper, cretonne, silk, or what not, the end of one repeat must tally with the beginning of the next, in order that the pattern may be continuous throughout the piece. Equally of course the design must

be so schemed that the right side of one piece of the stuff will fit on to the left of another, and so on.

But it is clear that the design may be so contrived that each succeeding breadth has to be *dropped* in the hanging.

If this drop were only very slight—say three inches—it would take seven breadths, in a pattern of 21 inches deep, before a given feature in the design occurred again exactly on the same level. There would be no danger then of any *horizontal* tendency in the lines, but, on the other hand, great likelihood of a *diagonal* line developing itself, with even more unfortunate effect. The design steps downwards; and the shorter the steps, the more noticeable is the line they take. This difficulty is avoided if you make the "drop" just one-half the depth of the pattern, so that every alternate strip is hung on the same level. Then the diagonal lines correct one another. If any line at all asserts itself, it is a zigzag (instead of a step), which, in connection with corresponding zigzags above and below, may very possibly form a trellis of diamonds.

There is good reason, therefore, for saying

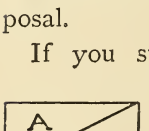
the diamond is a useful plan to work on; for upon it is formed the safest variety of drop pattern—that, namely, which drops one-half its depth.

Instances of drop patterns are given in Plates 17, 24, 29, 32, 33, and others.

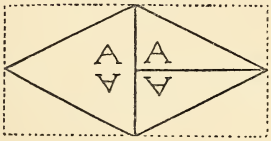
One has heard persons, more familiar with the forms of ornament than expert in practical design, complain of the difficulty they experience in scheming a "drop." If they would only think of the problem as the filling of a diamond shape, it would come very easily to them.

When the pattern within the diamond is symmetrically disposed on the two sides of a central upright line, the artist has the opportunity of working out a design which is apparently twice the width at his disposal.

If you subdivide a block of 21 inches thus, so that the two smaller divisions A and V together equal the larger division $\frac{A}{V}$, it amounts to precisely the same thing as though you designed upon the basis of a squat diamond 21 inches high by 42 inches wide. You have only to



transpose the component triangles to produce the squat diamond. But, in order that the design shall be practicable, it must be symmetrically disposed on either side of a central line: the one side of it must be an exact reverse of the other, or it would not work.



The advantage gained in this way is, of course, only apparent—what is put into one strip is taken out of the other—but in the case of a pattern appearance goes a long way. From the practical point of view, it is difficult to over-estimate the value of this expedient in design, the common property of designers for all manner of fabrics, but undreamt-of in the philosophy of the amateur.

Theoretically, it is all the same whether you design a drop on the lines of the square, on the slant, or on the diamond, you may arrive in either case at identically the same result. This is plainly shown in Plate 25, in which the dotted portions of the ground will explain how the same pattern might be built on either one of three plans. You might snip

pieces from the four corners of the square and make with them the diamond ; or if you dispose them differently, you might produce the oblique shape ; which last would amount to the same thing as though you had cut off only two corners and transposed them.

For all that, it makes practically all the difference in the world which plan you adopt. Your design must be influenced to a very considerable degree by the shape you set yourself to fill. It would never occur to you, for instance, to stretch a festoon, or wreath, across a width of space you did not see before you. So it may be fairly said, that such extension of the design, beyond the width of the material, is the direct result of working on the lines of the diamond : whilst you are designing within the lines of the square, you have naturally no impulse to go beyond its limits.

In designing for tiles and such like, where the material is not continuous, the conditions are somewhat different, and the possibilities accordingly. Where the unit of design can conveniently be turned round, or half-way round, or three-quarters of the way, the scope of the designer is increased — out of four

repeats of a six inch tile he can get, for example, a circular design 12 inches in diameter. So again, the bookbinder, with a comparatively limited set of tools, has very considerable scope in design ; but even then the lines he can work upon are always the same —although more of them may be open to him than to another.

V.

SKELETON PLANS.

The designer finds it ordinarily more convenient to design at once upon the diamond lines, because their simplicity enables him better to keep in view the effect of his pattern in its repeated form than any other lines (there are others) on which the "drop" can be worked.

Even though one may have no intention of taking advantage of the full width of a block, it may still be found convenient to design within the diamond, if only in order to economise design: and, mind you, economy is an absolute necessity of the case. But for economic reasons there would be no weaving, printing, stamping, and so on; we should confine ourselves to embroidery, tapestry, painting, and other work of our own hands.

If you begin by dividing the width of 21 inches into two, and make your pattern a "drop," 21 inches long by 10½ wide, it is the same as though you had worked upon a

diamond 21 inches from point to point, as may be seen at B in Plate 26, although, as I said before, the same pattern would probably not have occurred to you in either case. Designing on the diamond such a pattern as the last-mentioned might very likely occur to one; on the lines of the dropped parallelogram, more likely such a one as B on Plate 19.

Again, if you divide the width of 21 inches into three (A, Plate 26) and on those lines set out a series of diamonds 21 inches long by 14 inches wide, so that the block contains one and a half in the width, this will work as a drop (to fall one-half its depth) if only the diamonds were all filled alike. Variously filled diamonds would not repeat.

If you still divide your 21 inches into three, and institute a series of stripes or panels of seven inches wide, each of which drops at the same interval (whatever it may be), it is likely to result in a diagonal stripe more or less pronounced; which might, of course, equally have been designed upon diagonal lines. (D, Plate 26.)

If of the three stripes only one were dropped, the design would also hang as a

drop, revealing very likely a zigzag line on the principle already laid down. (C, Plate 26.)

Further explanation of the ways in which a given space may be subdivided (what is said of the supposed 21 inches applies equally to any given parallelogram) would be superfluous. Enough has been said to show how by such subdivision the utmost variety of scale may be obtained.

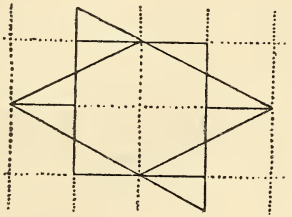
Although, however you start, you come back always to the same few schemes; and although in any case your pattern might equally have been designed upon other lines, working on those lines it never would have occurred to you.

The diagonal stripe pattern on Plate 27 resolves itself into a diamond repeat, but it is tolerably certain that the designer did not work upon the lines of that diamond, but probably upon a network of diagonal and horizontal cross-lines—as did also the inventor of Plate 20.

The inevitable influence on your design of the lines upon which you start, is the excuse, and the only excuse, for puzzling over all the various skeletons upon which pattern can be laid out.

It is a good test of your design, when you have roughed it out on one plan, to make the finished drawing on another. By that means you see it, as it were, from two points of view, and can form a very fair idea as to how it repeats, without drawing much of the repeat.

The practical designer, who has learnt not to attach great value to the appearance of his design as a drawing, often cuts it up deliberately, and re-arranges the parts, in order the better to prove his repeat. A design on the square he cuts into four equal parts, and re-arranges the quarters, so that what were the corners of the design come together and form the centre, and so on. The accompanying diagram shows how the parts of the diamond may be re-arranged.



But the best of all possible tests is to cut ever so rude a stencil of the broad masses of the design, so as roughly to multiply it indefinitely. A child can be taught to apply that test for you; and it is infallible.

Whatever the lines of the skeleton, in any important work they are usually disguised. Sometimes (as often in Arab art) they are so crossed and interlaced that it is difficult to follow their intricacy. The really very simple patterns on Plates 1, 10, and 28 are at first sight very puzzling.

Or the lines may be interrupted so that you lose the thread of the design. Or, again, two or more schemes of ornament may be, so to speak, interwoven, the one asserting itself here, the other there, so that neither thread of idea is too conspicuous. The effect of this is to be seen in Plate 29, a drop pattern, in which the attention is diverted from the formal lines of the scroll by a conventional growth of much freer character overrunning it.

Further, features may be introduced of such importance in the design that the eye is drawn to them, and fails to perceive the connecting lines between them.

In Plate 30 the strongly marked bird-forms counteract to some extent the simple ogee or diamond lines on which the pattern is set out. In fact, the birds emphasise the actual repeat of the block, just as the scroll

reveals the unit of the ornamental repeat ; and out of the two contrasting schemes arises a certain confusion, which is of some artistic account in design.

Obviously, however, the most effective way of disguising the skeleton is to clothe it, as nature does; and the most natural way of doing this is, with something in the nature of foliation ; beneath which the bare constructional lines are as little noticeable as the stiff branches of a tree under their burden of leaf and blossom. (Plates 31, 32, &c.)

By this means, you get at once life, interest, and variety so great, that one might continue this already lengthy explanation until it became tedious, and yet fail to make the sceptic quite believe in the absolute simplicity of the skeleton forms underlying all pattern.

The foliated scroll, as you see it, for example, in Roman or Renaissance Arabesque (or even in Plate 32), looks almost as though it were impossible of geometric construction. And, of course, it never is mathematically built up. But, for all that, it falls into the familiar lines. The spiral itself is only a series of segments of circles ; and if you dissect any

repeated scroll-pattern, you will find most likely that its back-bone is a wave line or spiral. Certainly you will find it has a back-bone. Pattern is a vertebrate thing; and in a scroll the spinal cord is very decidedly pronounced. You can easily see when a scroll is broken-backed.

VI.

APPROPRIATE PATTERN.

It is only by experience that a designer learns to know what may, and what may not, be done within given lines. Many a notion which one had a thought of adopting, turns out to be practically quite unamenable to existing conditions.

You cannot draw a bold, flowing scroll without considerable allowance in the way of length in the blocks, cards, or whatever it may be ; nor can you well avoid a certain upright tendency in patterns where the width is very much restricted. The fact of the matter is, the characteristic lines of time-honoured patterns are mainly the direct result of the restrictions under which the craftsman was working.

It is owing to the facility with which triangular cubes of tile can be manipulated, that the peculiarly geometric character of

much Oriental ornament is due. So also with us, the proportions of the square tile have resulted in a distinctly characteristic form of ornament.

I do not pretend to say whether the turning over of the design which prevails in early silks, was suggested by the fact that such turning over could be so readily done in weaving ; but it looks, at all events, as though the Sicilians, and, in fact, weavers generally, until comparatively recent times, adopted that plan of design, because by means of it they could at once double the scale of their pattern.

In the Renaissance silk, figured on Plate 33, and in all such reversible designs planned upon the diamond, hexagon, or ogee, one-half the labour of designing and card-cutting is saved. Naturally, the nineteenth century manufacturer has not been slow to adopt a plan so obviously economical. It has been said, that the idea of reversing a pattern owes its origin to the circumstance that you may double a sheet of paper, and so, with one action, cut out the two sides of it. If that is not so, it well might be—except that, probably, reversed patterns were common long before paper was. Very possibly it is derived

from the practice of folding or doubling. One may put together, for example, several sheets of veneer, or even several planks, and, with one action of the saw, fret all of them alike. That facility gave rise at all events to Boulle's characteristic inlay patterns; and in the balconies of Swiss châlets one still sees a very effective kind of pierced pattern-work, which is accounted for in a similar way.

Bands or stripes of different colours are so common in Eastern curtains, blankets, &c., because they can be so easily woven. Even in more elaborate silk and other designs, certain of the colours are very often distributed band-wise. The variety of colour so obtained, is obviously due to the ease with which the weaver can change his shuttle.

At the same time, economy is thus often effected. If in such a design as that on Plate 34 the flowers were meant to appear in gold, or only the eyes of the flowers, the gold thread need only be used in the bands where the flowers or eyes actually occur. You have but to look at the back of any old piece of many-coloured silk damask to see the changes of the shuttle very plainly marked. The aim of the designer is usually to

disguise them more or less in his pattern. But in the early days of silk weaving the unsophisticated artist had no fear of a horizontal line. In such a pattern as the Sicilian silk in Plate 20, he would boldly make the various bands of animals in various colours. He would sometimes even carry bands of colour straight *across* the animals, regardless of their shape. And the effect of this rough-and-ready proceeding, in the silk itself, certainly justifies him.

In early examples of weaving both the turning over of the pattern, and the banded arrangement of the colour are very frequent; indeed, so much so, as to form quite marked features in the design of the eleventh and following centuries, whether Sicilian or Italian. (It was from Sicily, you know, that the art of weaving was introduced into Italy.)

Designers would be the more ready to adopt, and to adhere to, the plan suggested by the loom, in that the horizontal line, due to it, was not anyways injurious to the effect of a fabric meant to fall in folds. The dim vertical line, which was also likely to occur from the turning over, was calculated to lose itself in the more strongly marked verticality of the

folds; and the horizontal band emphasised by the change of the shuttle had an absolute value in marking the fulness of the hangings.

In flat decoration the horizontal band is less unobjectionable; and it is for that reason that so many of the wall-paper patterns, borrowed or stolen from good old stuffs—by their stripes you shall know them—are altogether unsatisfactory on the wall. To me, horizontal stripes always suggest the ample hanging, and seem to want the folds.

The bold and beautiful effect of such a damask pattern as that in Plate 35 would be lost if it were rendered in flat decoration, especially without the charm of the texture of the stuff: those waving lines and bands of big rosettes would be unendurable. That pattern, by the way, although it actually works on the principle of the parallelogram—was obviously arrived at by carrying across a series of waved upright lines a broad horizontal band of rosettes.

Many an admirable textile pattern, otherwise in every way suitable, is inapplicable to flat decoration, whether in the shape of silk, or chintz, or wall paper.

Some persons appear to be of opinion that,

a pattern, according to Dr. Johnson, being "something to be copied," design consists therefore in copying what has been done before. That is all very well so far as concerns the definition of the word pattern; but how about the meaning of the word design? I would go beyond the lexicographer, and say: *not every pattern* is an "exemplar."

In adapting a design, from one material to use in another, it is not enough to copy it, it needs to be translated; which translation is not so easy, but that an artist gifted with any invention of his own, will find it, on the whole, better worth while to say what it is in him to say for himself, and not go on harping on the old, old tunes, melodious though they be.

The most perplexing thing about modern design is that we are asked to design, to-day under these conditions, to-morrow under those. We have no traditions and no style. And yet in the very variety of the efforts demanded of us there is relief of a kind; and in the presence of difficulties our ingenuity, if we have any, is excited. The more difficult the conditions, the more they provoke solution. A designer must have in him something

of pugnacity; he must enjoy attacking a rough problem. A man proves himself a designer, not when he has somehow arrived at a design, but inasmuch as out of unpromising material and untoward circumstances he can shape a thing of beauty.

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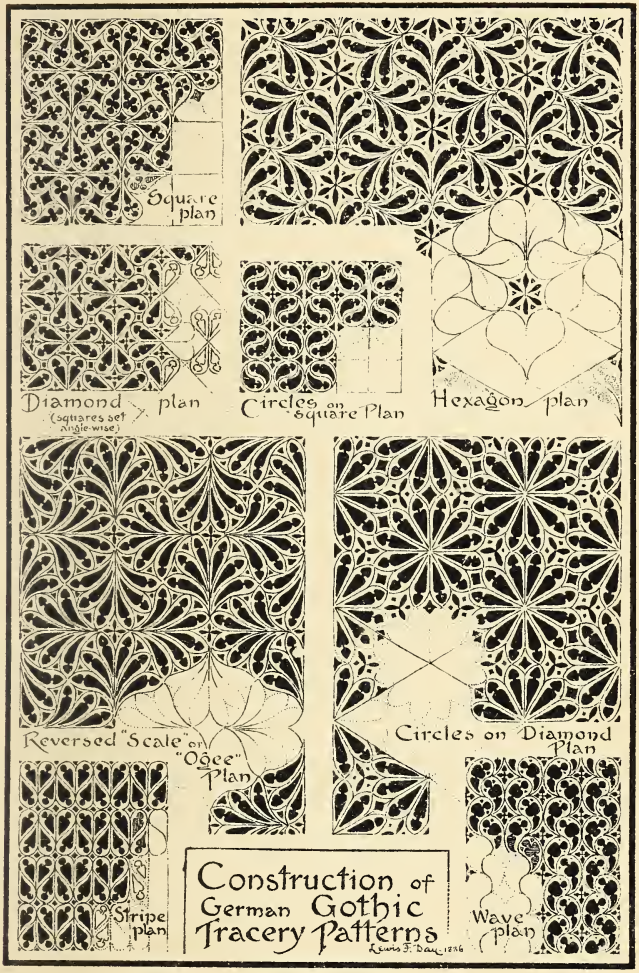

Square plan
Diamond plan
(squares set Angle-wise)
Circles on Square Plan
Hexagon plan
Reversed "Scale" or "Ogee" Plan
Circles on Diamond Plan
Stripe plan
Wave plan
Construction of German Gothic Tracery Patterns
Lewis F. Day. 1896

Plate 2.

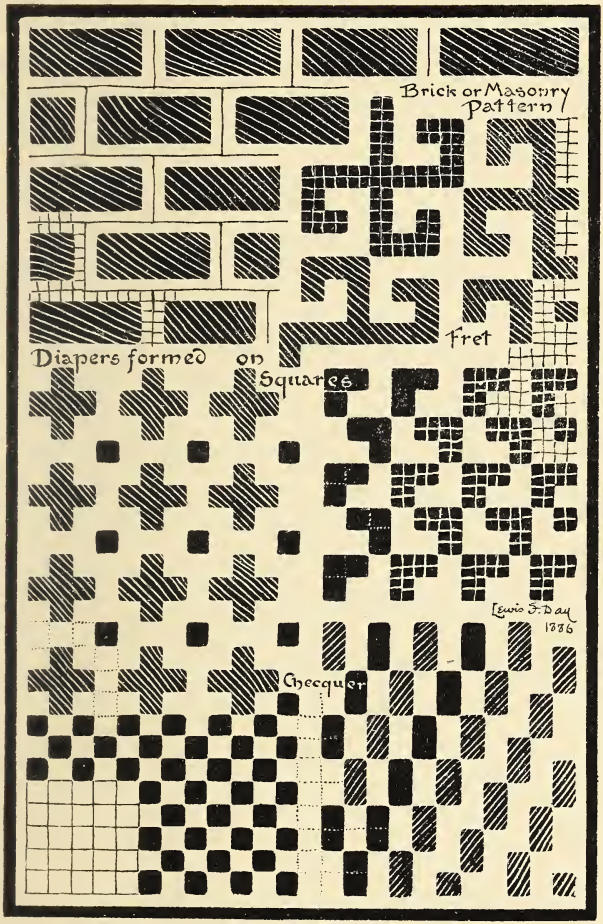

Brick or Masonry Pattern
Fret
Diapers formed on Squares
Lewis F. Day 1886
Chequer

Plate 3.

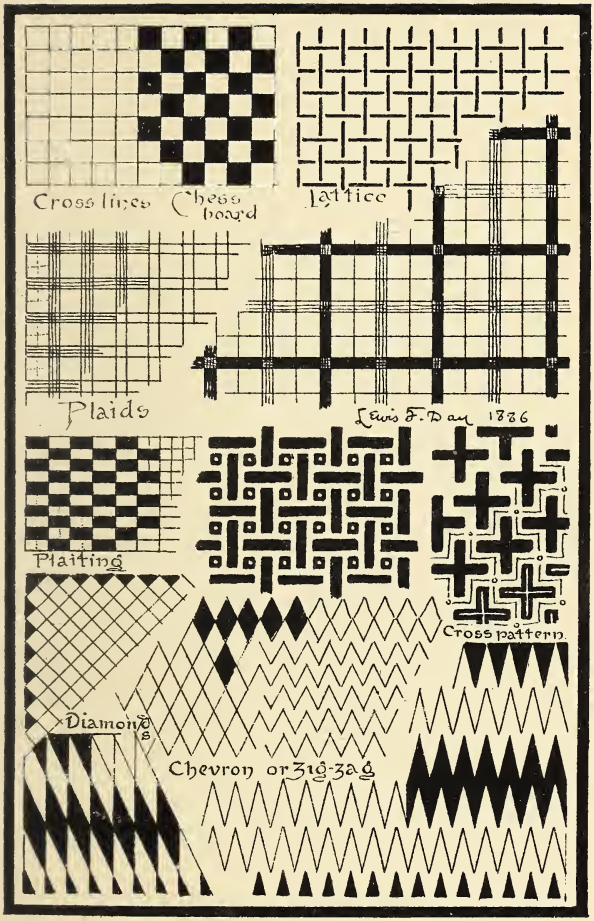

Cross lines
Chess board
Lattice
Plaids
Lewis F. Day 1886
Plaiting
Cross pattern
Diamonds
Chevron or Zig-zag

Plate 4.

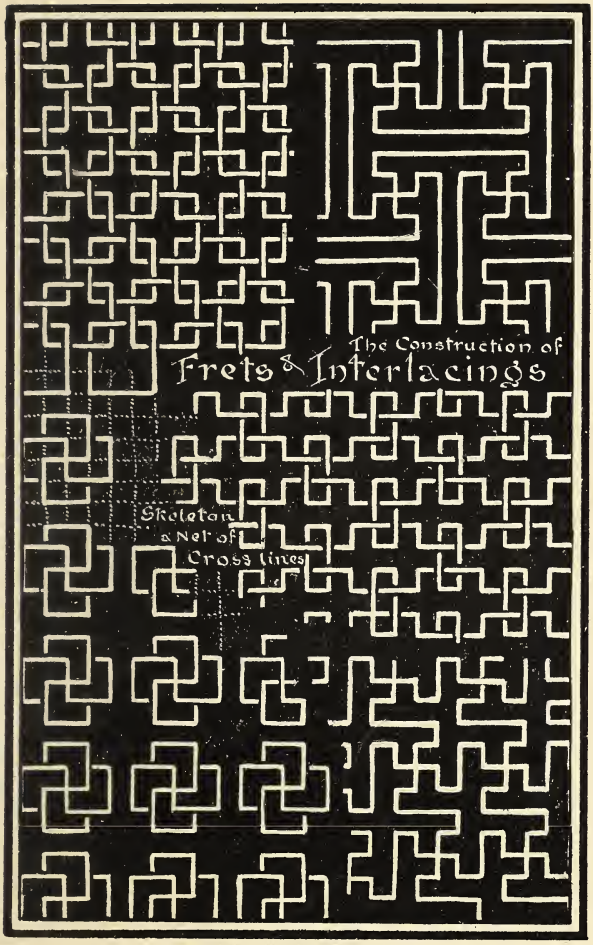

The Construction of
Frets & Interlacings
Skeleton
a Net of
Cross lines

Plate 5.

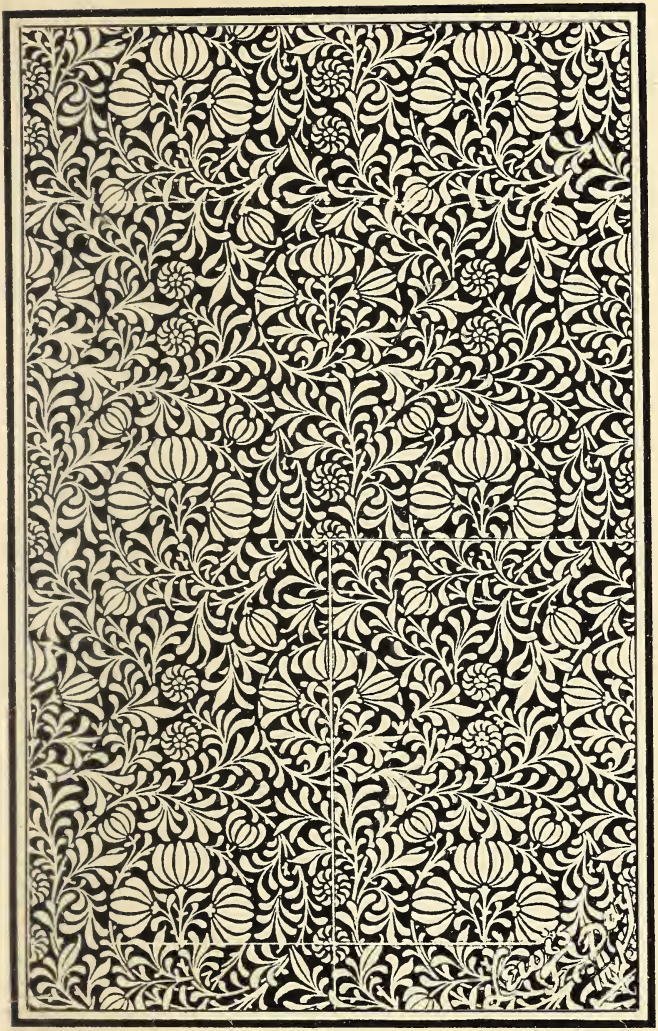


Plate 6.

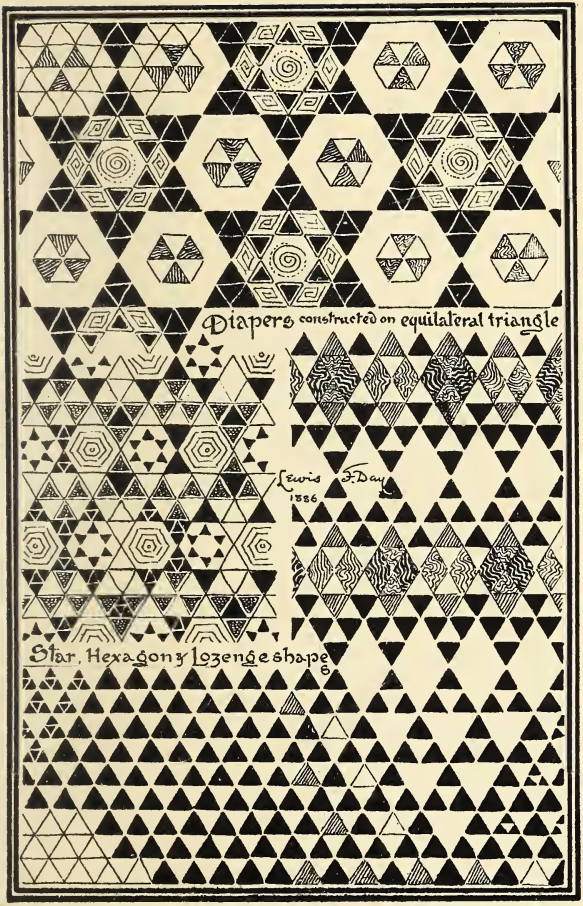

Diapers constructed on equilateral triangle
Lewis F. Day
1886
Star, Hexagon y Lozenge shape

Plate 7.

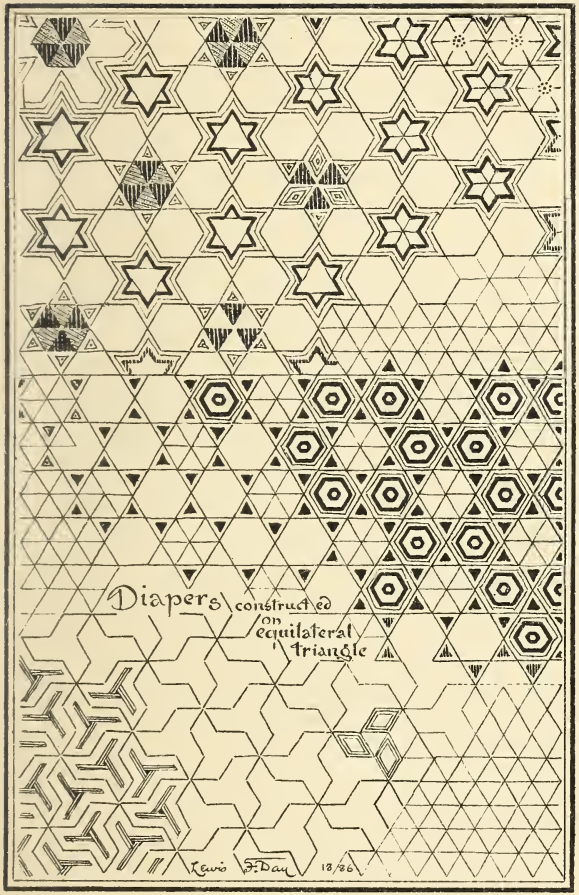

Diapers constructed on equilateral triangle
Lewis F. Day 12/86

Plate 8.

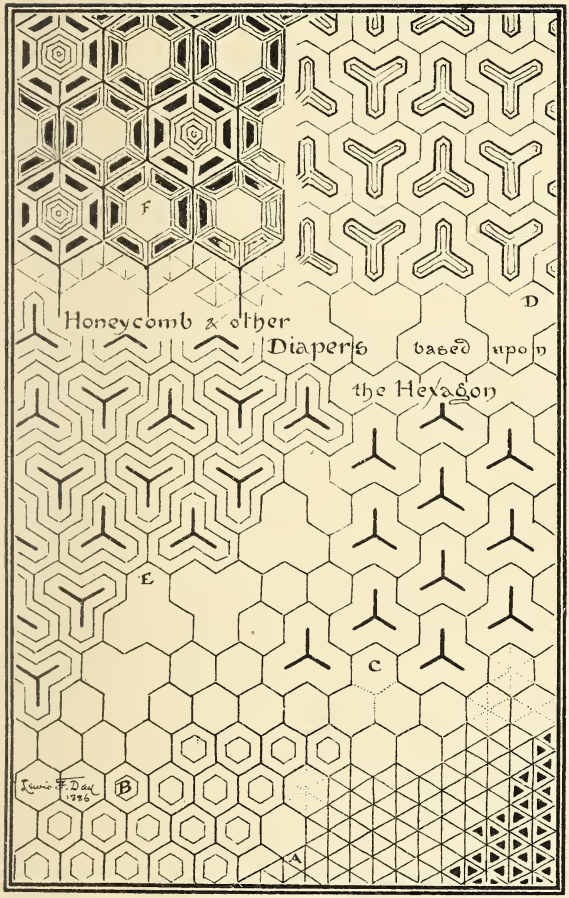
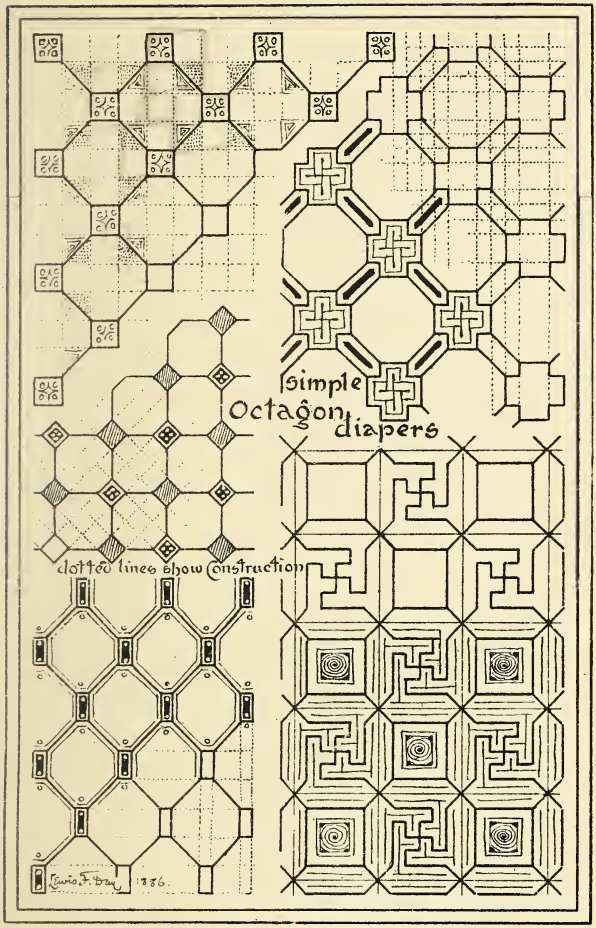

Honeycomb & other
Diapers based upon
the Hexagon
F
D
E
C
B
A
Lewis F. Day
1886

Plate 9.



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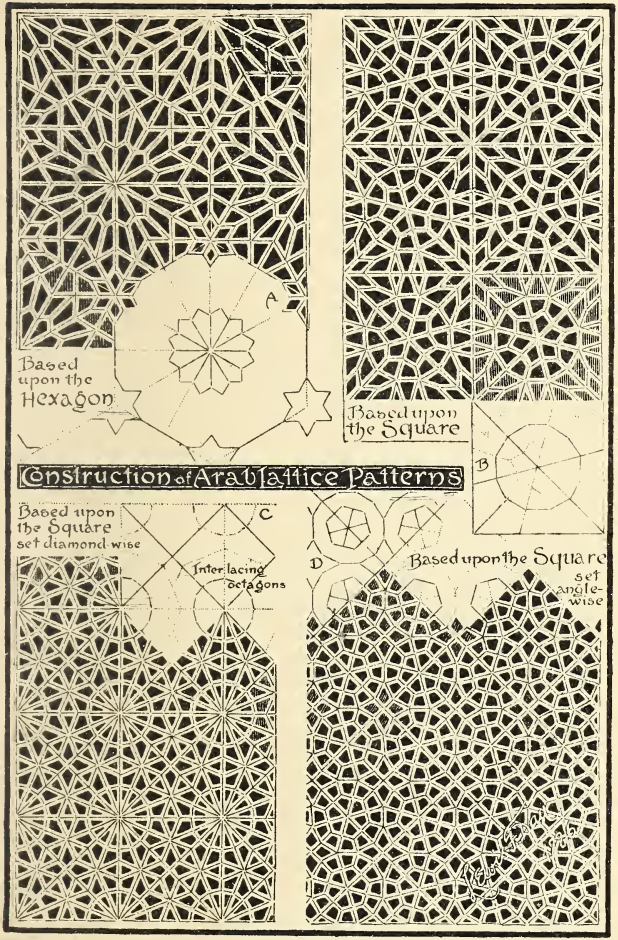

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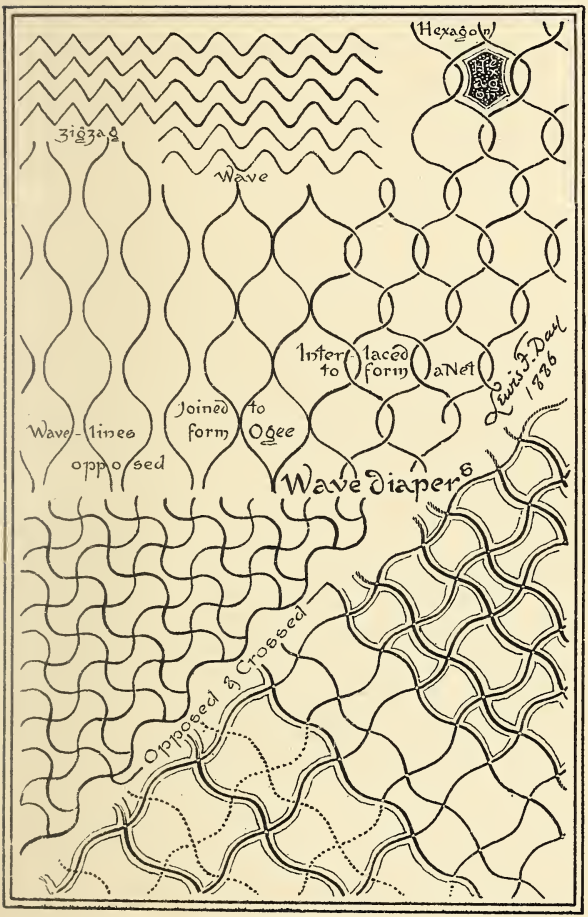
Plate 11.



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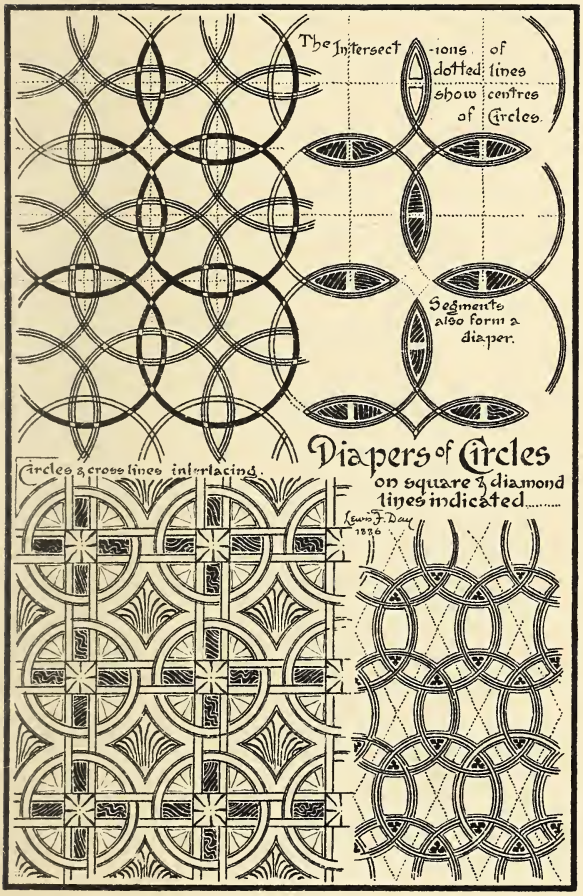

The Intersect -ions of dotted lines show centres of Circles.
Segments also form a diaper.
Diapers of Circles on square & diamond lines indicated.....
Circles & cross lines interlacing.
Lewis F. Day
1886

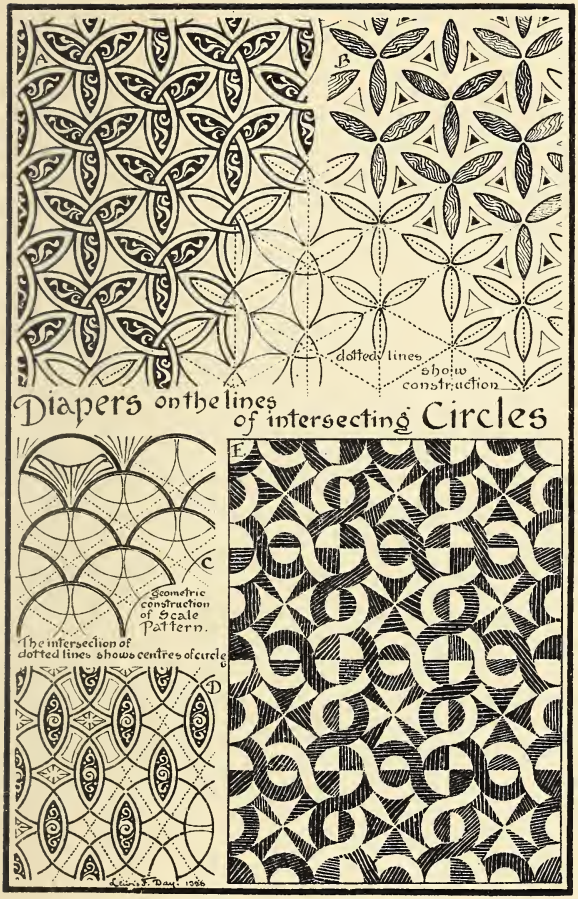

A
B
dotted lines show construction
Diapers on the lines of intersecting Circles
C
Geometric construction of Scale Pattern.
The intersection of dotted lines shows centres of circle
D
E
Lewis F. Day 1886

Plate 14.

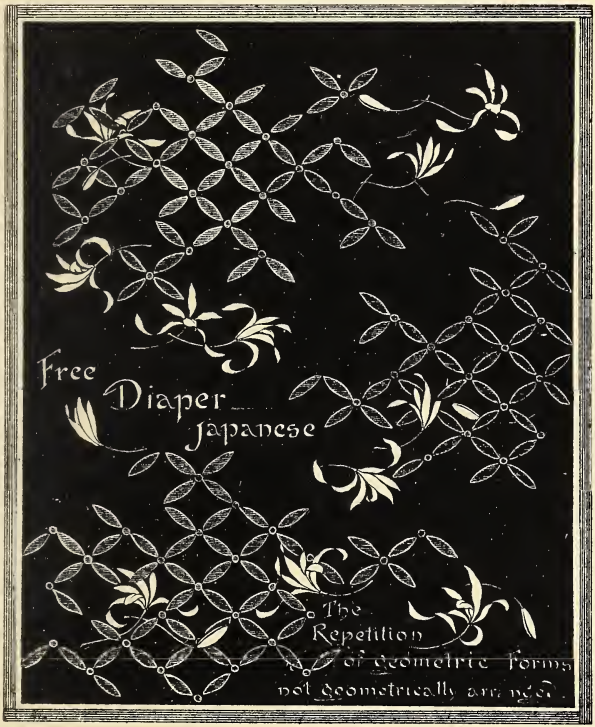

Free
Diaper
Japanese
The
Repetition
of Geometric forms
not Geometrically arranged.

Plate 15

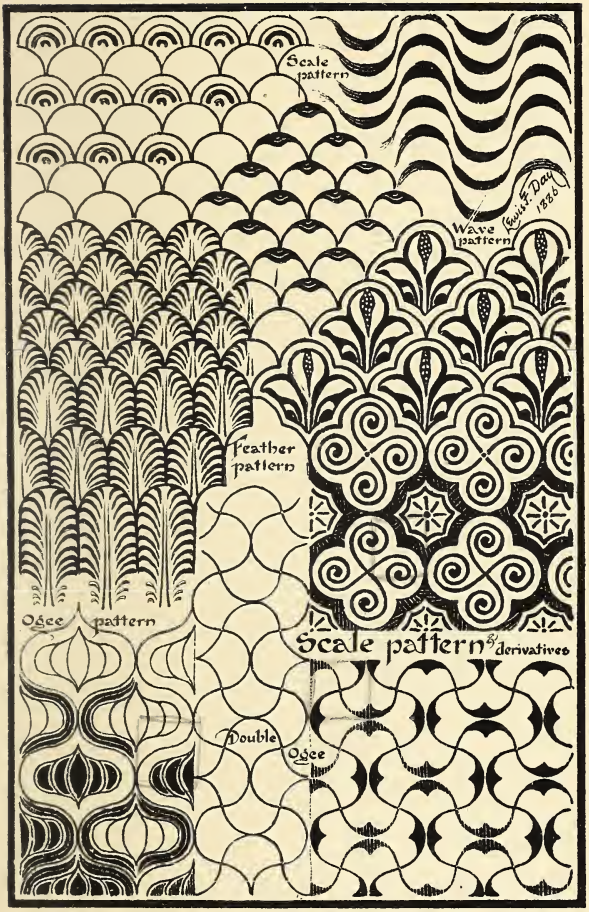

Scale pattern
Wave pattern
Louis F. Day 1880
Feather pattern
Ogee pattern
Scale pattern & derivatives
Double Ogee

Plate 16.

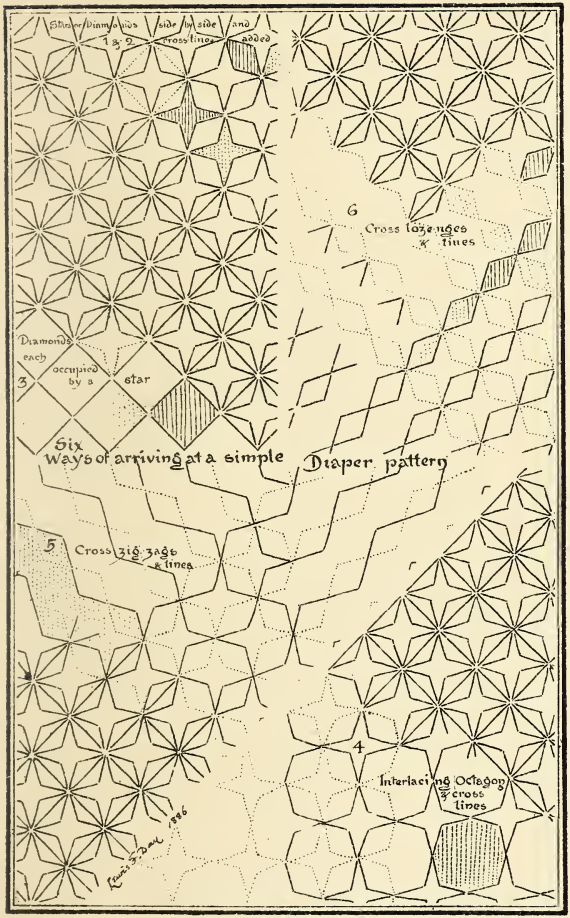
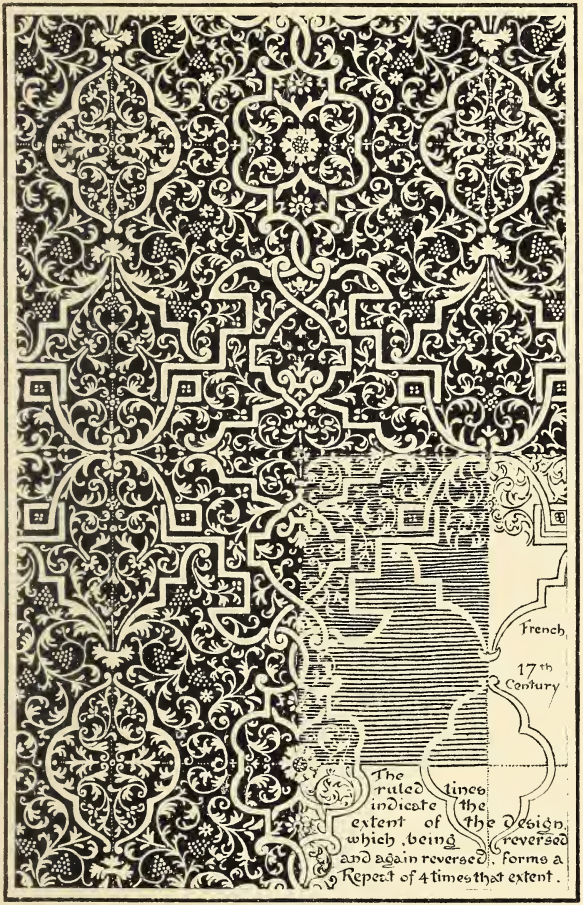

Sitting on Diamonds
side by side and cross lines added
1 & 2
G
Cross lozenges & lines
Diamonds each occupied by a star
3
Six Ways of arriving at a simple Diaper pattern
5
Cross zig zags & lines
4
Interlacing Octagons & cross lines
Louis S. Dow 1886

Plate 17.

C.F.H.B. Photo-Litho, 9 Rearoval St. Holborn, E.C.

Plate 18.



C. F. Hill, Photo-Litho., 6 Fleet-st. & Percival St. Holborn, E.C.

Plate 19.

C. F. Kell. Photo-Lith.

Plate 20.

J.T. & E.B. Photo-Litho., 9 Rowland St. Holborn, E.C.

Plate 21.

Plate 22.

C.F.Hall, Photo-Lith., Foreword & Holborn, E.C.

Plate 23.

Plate 24.

C. F. Kell Photo-Lith

Plate 25.

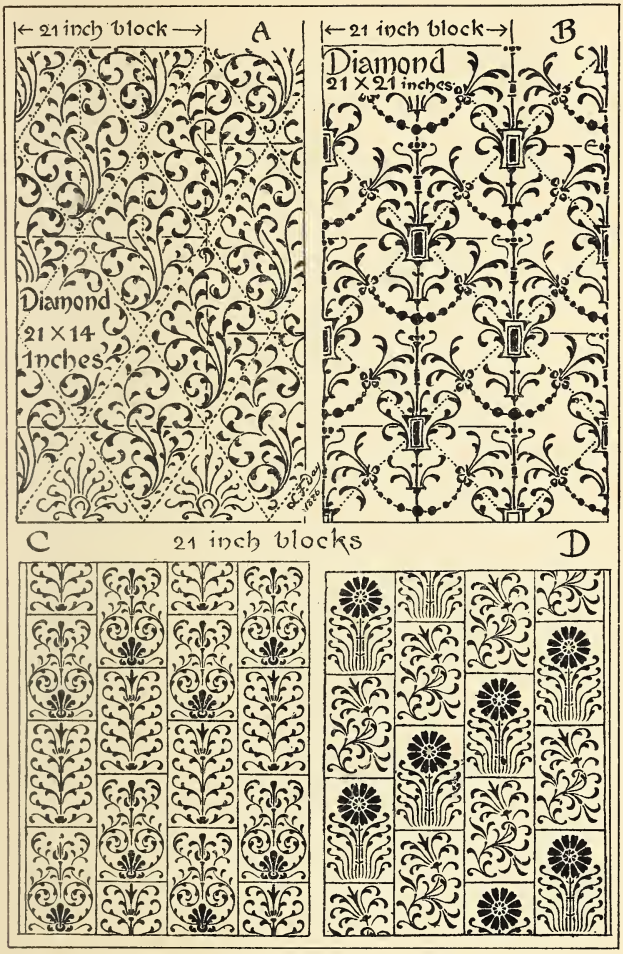
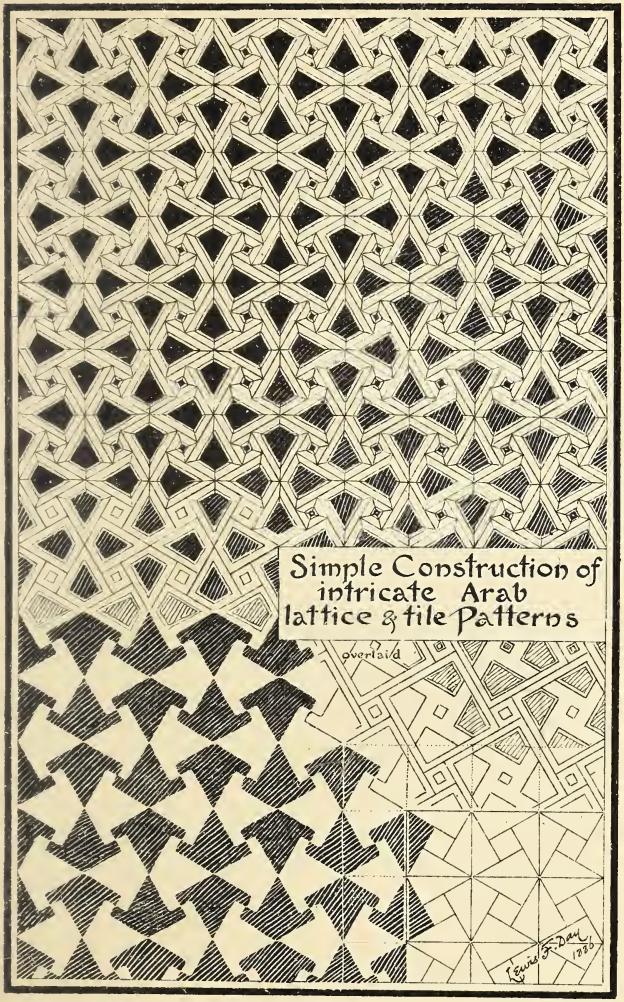

← 21 inch block →
A
Diamond
21 × 14
Inches
← 21 inch block →
B
Diamond
21 × 21 inches
C
21 inch blocks
D

Plate 27.

Diagonal
Stripe
formed upon the
basis of the
Diamond
15th
century



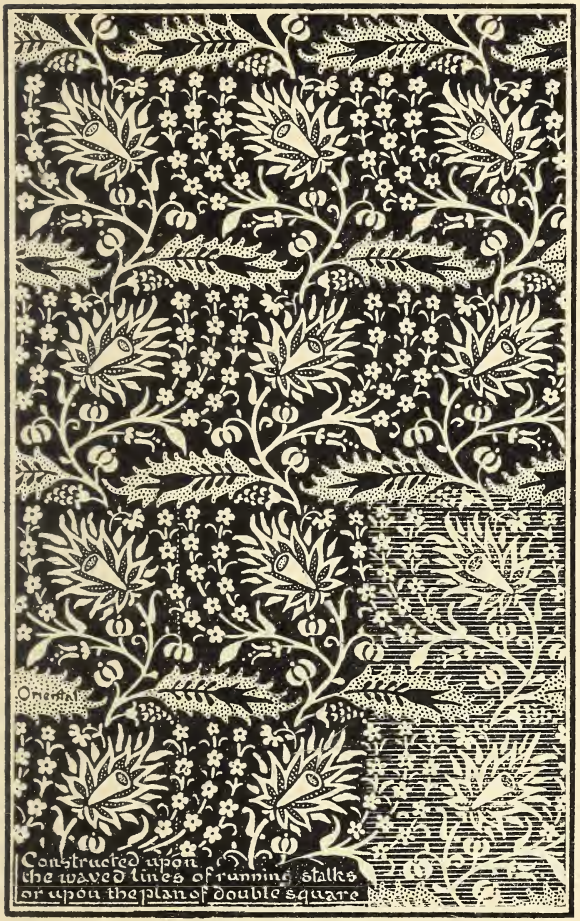
J. W. Ebl, Photo-Lith., 9 Bernard St., Holborn, W.C.

Plate 29.

INK-PHOTO SPRAGUE & Cº LONDON.

Plate 30

Plate 31.



C.F.H.C. Photo-Litho. 9 Fernival St. Holborn. E.C.

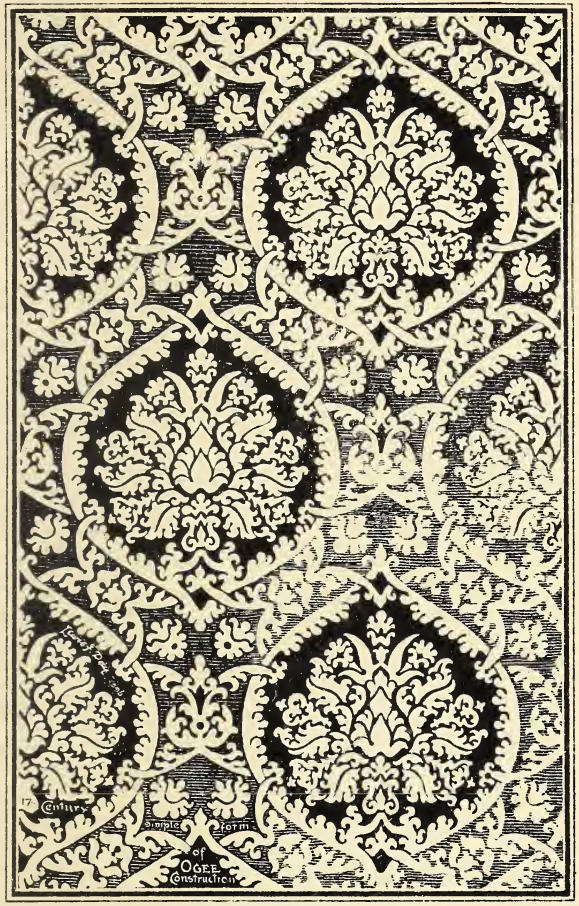
Plate 32

Scroll pattern, designed on the lines of the square, and falling into ogee shapes not at first thought of.

Lewis F. Day

C.F.H. Photo-Litho. 6 Emanuel St. Holborn. E.C.

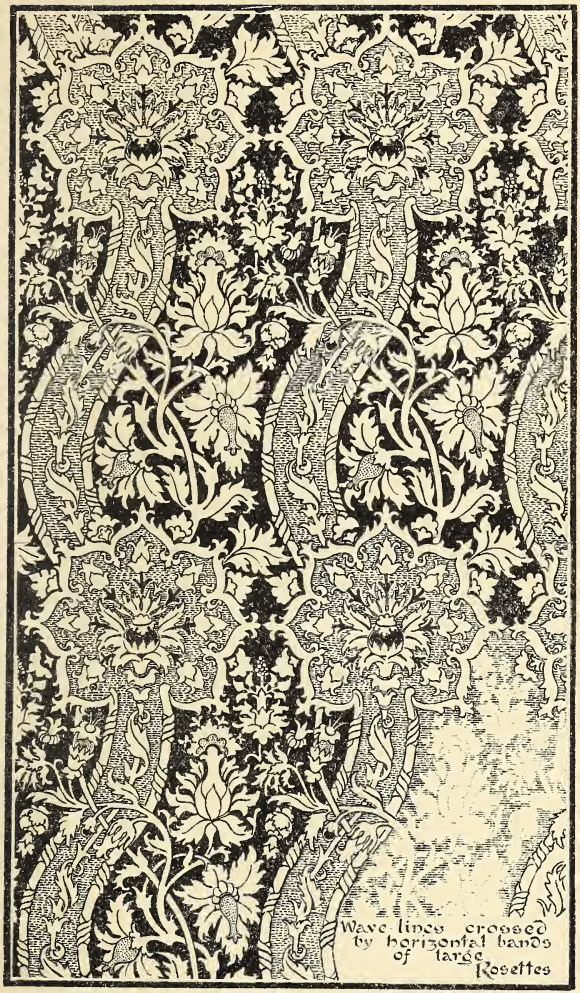
Plate 33.



C.F. Kell. Photo-Lith

Plate 34.

Plate 35



TEXT BOOKS OF ORNAMENTAL DESIGN.

THE PLANNING OF ORNAMENT.

BY

LEWIS F. DAY,

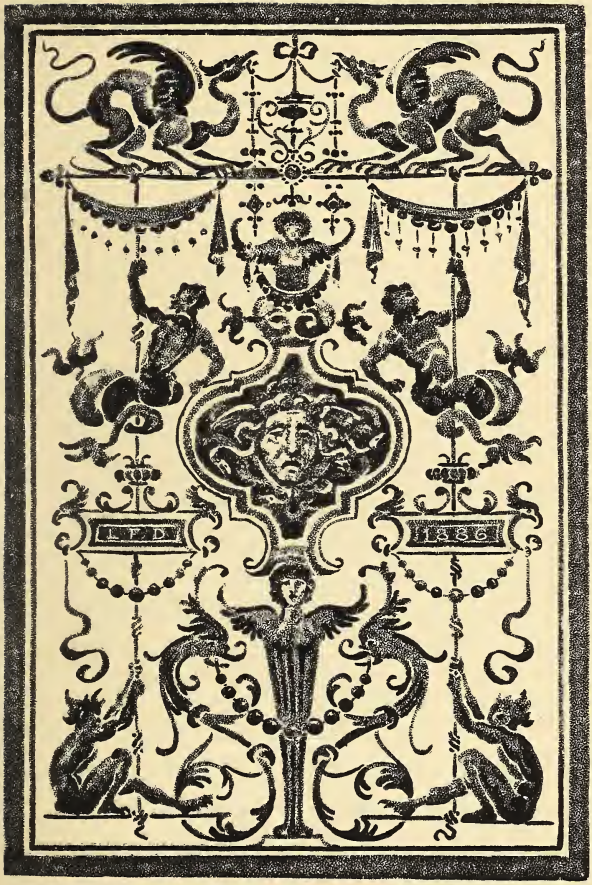
AUTHOR OF 'EVERY-DAY ART,' 'THE ANATOMY OF PATTERN,' ETC.

ILLUSTRATED.

LONDON:
B. T. BATSFORD, 52, HIGH HOLBORN.
1887.

III

Plate 1.



"PHOTO-TINT," by James Akerman.

PREFACE.

The second of a series of Text Books stands scarcely in need of preface. The aim and scope, as well as the origin, of this series was duly set forth in 'The Anatomy of Pattern.' What was there said applies for the most part to the present volume.

It was not possible in this case to make the plates speak quite so plainly for themselves as in the former handbook; but I have made a point of referring to them specifically at every turn, at the risk even of tiresome iteration. They are arranged strictly in the order in which mention is made of them, and placed as near as possible to the allusion to them in the text.

The fact that on the publication of 'The Anatomy of Pattern,' I was invited by the Department of Science and Art to deliver a short course of lectures on the subject at

South Kensington, leads me to hope that these Text Books are likely to fulfil the educational purpose I had in view in undertaking them.

LEWIS F. DAY.

13, *Mecklenburg Square, London, W.C.*
November 10*th*, 1887.

TABLE OF CONTENTS.

PAGE

I.—Introductory 1

II.—The Use of the Border 3

III.—Within the Border 16

IV.—Some Alternatives in Design 27

V.—On the Filling of the Circle and other Shapes 37

VI.—Order and Accident 45

DESCRIPTIVE LIST OF PLATES.

1. PANEL AFTER THE MANNER OF DU CERCEAU—Order in apparent disorder.

2. BORDER IN THE MANNER OF FLÖTNER—Example of comparatively important frame.

3. ROMAN PAVEMENT—In which is shown the development of a geometric diaper into a more important scheme of ornament.

4. GREEK BORDER—Instance of simple and very formal treatment.

5. DIAPER—Schemed to fit a panel.

6. STAIRCASE PANELLING — Illustrating the difficulty of adapting ornament to panels of such different dimensions.

7. PAINTED DOOR—Showing the influence of the proportions of the panels upon the design of the decoration.

8. BOOKCOVER OF XVITH CENTURY—Illustrating the use of border within border.

9. PANEL—Invaded by ornament springing from the border.

10. INTERLACED HENRI II. BOOKCOVER — In which a border line is suggested.

11. PANEL—In which the border is inseparable from the filling.

12. PANEL—In which the filling breaks over the border, in the Japanese manner.

13. PANEL—In which the border is invaded by the field.

14. INLAY, AFTER BOULE—In which the border, so to speak, loses itself.

15. FREE DESIGN—Which by the orderly arrangement of the parts constitutes itself a border.

16. BROKEN BORDERS—Showing various ways of breaking them.

17. INLAID PANEL—Showing a break in the border, and the suspension of the principal ornamental feature.

18. CARTOUCHE, AFTER JOST AMMAN—A very free treatment of the frame.

19. PANEL—With medallion, &c.

20. PATTERN—In which the detail is grouped so as to give medallion shapes not otherwise marked.

21. DIAPER—Not schemed with reference to the panel it fills.

22. PANEL IN NIELLO—With geometric diapers disposed in eccentric Japanese fashion.

23. JAPANESE VASE DECORATION—An instance of stripes.

24. DOORS—One-sided scheme accounted for by the position of lock plates.

25. PART OF CABINET—In which the construction has suggested the scheme of ornament.

26. LACQUER BOX—In which the artist takes the whole object for his field.

27. DOOR DECORATION—In which the larger panel is broken up, to bring it more into scale with the smaller panels.

28. CARVED DADO—With square panel shapes within the panels.

29. DESIGN—In which the borders are interrupted.

30. DOOR—In which the disproportion of the panels is rectified by borders supplementary to the mouldings.

31. PANEL—Where the borders round a central medallion interrupt the borders of the panel itself.

32. SUBDIVISIONS—Each with its own ornamental filling.

33. PANEL—Eccentrically cut in two.

34. BROKEN SURFACE—Japanese diaper without repeat.

35. STENCILLED ROOF DECORATION—Designed in cross bands to correct the parallel lines of the joists.

36. DIAGRAMS—Explanatory of the subdivision of the circle.

37. OLD GLASS—Showing interlacing or overlaying of shapes.

38. PANELS—Jointly symmetrical.

THE

PLANNING OF ORNAMENT.

I.

INTRODUCTORY.

'The Anatomy of Pattern' concerned itself with the lines on which repeated pattern is built. It is proposed in this second text-book of the series to discuss the order in which ornament not necessarily recurring may be distributed. And it will not be difficult to show that, illimitable as those lines may at first sight appear to be, they too allow themselves to be classed pretty definitely; and, moreover, that the classes are not by any means so numerous as might be supposed.

The first step in design, or rather the preliminary to all design, is to determine the lines on which it shall be distributed—to plan it, that is to say.

The more clearly the designer realises to himself the lines on which it is open to him to

proceed, the better; and if it can be shown (as it can) that these are, comparatively speaking, few and simple, so much the easier will it be for him to make up his mind promptly and determinedly which of them he will in any given case adopt.

The shape of the actual space to be filled will oftentimes determine for him, more or less, the distribution of his design. That is to say, it may very likely render certain schemes altogether unavailable, and perhaps even limit his choice to a single plan; but at his very freest he is limited, in the nature of things, to certain methods of procedure presently to be defined.

Plainly it would be out of the question to discuss at length the relation of every possible plan to every possible shape. I purpose, therefore, to take the simple parallelogram (which may stand for panel, page, floor, ceiling, carpet, curtain, wall, window, door, façade, no matter what), and to show the possibilities with regard to the distribution of ornament over its surface. It will then remain only to explain how the same principles apply, no matter what the shape to be filled.

II.

The Use of the Border.

Given a panel to be filled, how is this to be done?

There are two very obvious ways of going to work, either of which, to the sophisticated modern at all events, seems equally natural. You may start as well from the centre as from the edge of it. That is to say, you may boldly attack the centre and let your design spread outwards to the margin; or you may begin with a border and creep cautiously inwards.

When once the border is defined, the space within remains to be treated. Theoretically, indeed, you have only reduced the area over which your composition is to be distributed. But practically that is not quite so; more especially if the border be of any importance. For a border may be of such interest that nothing further is needed, and the centre of the panel is best undisturbed by ornament. Especially may this be so if the material in

use be in itself of some intrinsic interest. It is distinctly not desirable to mar the surface of beautiful wood or richly varied marble with added ornament. And, for example, with the cabinet maker it resolves itself pretty generally (unless he should once in a while mean to indulge in ultra lavish enrichment), into a question of whether he shall enrich his panels or the mouldings bordering them.

The proportion of a border is of more importance to a scheme of design than might be supposed. It makes all the difference whether it is simple or elaborate in character. A very deep rich border has such an entirely different effect from a moderately simple one, that it looks something like a different treatment altogether. Compare Plates 2, 3, and 4, and see what a different part the border plays in each. The ornament on Plate 2 might appropriately enrich a page of text: that on Plate 4 requires obviously some more substantial filling. The strength of the border goes for something as well as its depth.

Borders may easily be so schemed (and should be so schemed) as to give panels of proportions calculated to allow of the decoration proposed for them. If, for instance, a

panel is to be filled with a diaper, arrangement should be made, as in Plate 5, for the "repeat" of the pattern within it. If it is to contain a figure or a figure subject, it should be of a proportion and size not too difficult to occupy with a figure or figure subject.

In the case of an isolated panel, this is perhaps of less importance—the artist ought to be equal to the occasion—but in the case of a series of panels to be treated in accord, the problem is made infinitely more difficult when they are of all manner of shapes and sizes.

It is no easy matter to scheme even the simplest ornament into panels of such widely different shapes and sizes as occur in the section of a staircase on Plate 6. Awkward framing enough, it may be said; but it is with such framing that the decorator has only too frequently to deal. Again in Plate 7 the necessity of accommodating one's ornament to shapes so unequal as the panels of the door, has obviously to a considerable extent controlled the design. But for those small upper panels, it would never have occurred to one to break up the longer panels in that way.

There is a salon in the palace at Fontainebleau in which the proportions of the panelling prove to be due almost entirely to the *painter*, who has brought the larger panels into scale with the smaller by means of a series of borders within the actual mouldings. It is much less trouble of course for the joiner, when he has an awkward space to panel, to determine the width of the stiles, and let the panels come as they may. But a very little consideration on his part would save the decorator, who comes after him, an infinity of pains. And though it may be the business of the decorator to get over difficulties of the sort, his work is not so easy that there is any occasion to put difficulties in his way.

The stiles which frame a panel may be considered as its border; the mouldings again, are so many borders within borders.

A border which is made up of many lines really constitutes a series of borders one within the other. The use of border within border as a deliberate scheme of ornament is common enough, as was the case in certain tooled bookbindings of the seventeenth century, one of which is represented on Plate 8.

You may even add border to border until the whole field is occupied. It is not altogether uncommon in Renaissance cabinet-work to find the panel encroached upon by border after border of mouldings until it dwindles practically to nothing.

The obvious and simple thing to do with a border is to keep it of one uniform and equal width. But such equality of width is by no means essential. You may see in mediæval illuminations the effect, more or less satisfactory, of emphasising two sides of the page. Nor need the border necessarily be continued all round the space at all. Curtains have often a border on two sides only, and sometimes only on one, marking what one may call the lips of the hangings. You may look upon the architrave of a door as a border on three sides of it only. And in the same way a mantelpiece partly frames the fire-grate, the fender completing the scheme. A certain reasonableness is the most complete justification of such partial bordering.

Every frame is a border. No matter how irregular the shape of it may be, a frame's a frame "for a' that." It may take the architectural form of cornice, pilasters, and dado,

or it may be arched; and in either case the architectural members are but unequal borders. All this applies, it need scarcely be said, not only to an architectural picture frame, but to architecture itself, and to whatever may be framed.

Something like a new departure occurs when the border, so to speak, *invades* the field or centre of the panel, as it very often does in French Renaissance work, sometimes to such an extent that little or no further decoration of the field is necessary. There is an indication of such trespass in Plate 9, where the "swag" and corner ornaments, which belong to the border, cut boldly across the face of the panel. In some of the interlacing strap work of the Henri II. period (the French equivalent to our Elizabethan ornament), you cannot always clearly tell where the border begins and ends, or even whether a border was intended at all. It looks sometimes as if the designer had started with the notion of a border, but had allowed it so to encroach upon the field, or the field upon it, that in the end it is not at all clearly recognisable as such. An example of the kind occurs in Plate 10. You may

see the idea of a border here; but you cannot be quite so certain that the designer intended it.

Nearly allied to this is another variety of border, also devised so as to be quite inseparable from the filling; in which, in fact, frame and filling are so ingeniously mixed up, that but for the emphasis of colour, the effect would be confused. There is an instance of this in Plate 11, where the scroll, whilst to some extent acknowledging the boundary line, invades, and indeed entirely occupies, the border. In such a case there is at all events no fear of the exceeding preciseness which is one of the dangers to beware of in border design.

It is interesting to notice the difference between the last-mentioned method and the practice of the Japanese, who will, in the most unhesitating manner, allow the panel pattern, whatever it may be, to break over the margin or border, just as the impulse prompts. It is a proceeding which may or may not result in confusion, according to the relative strength of the border and the pattern that cuts across it. In Plate 12 the border pattern is so subdued that the more important floral growth is very

well able to take care of itself. In the case of a panel in which the enrichment only partially occupies the ground, it is often advisable to introduce a subsidiary border, losing itself behind such more prominent enrichment.

One appreciates the freak of the Japanese as a relief from the monotony of absolutely formal disposition; but it is not a thing to indulge in very freely. It is refreshing to see that a man is not afraid of infringing occasionally upon the margin—on sufficient grounds; but the licence needs always to be justified by some excuse other than the artist's impatience of order. We have to be on our guard against a certain spirit of anarchy which appears to have taken possession of so many a modern artist. There is a class (one cannot call it properly a school) which will repudiate, not only all the laws of art, but the need of all law whatsoever. Urgent need there may be of reform in our ideas of art, perhaps even of revolution; but sobriety recognises in the artistic anarchist only the enemy of art.

There is no peculiar sanctity implied in a margin, that it should be held inviolate; but

the very idea of ornament implies order. And the artist cannot afford to be forgetful of order, even when he allows his border to overgrow the field, or his filling pattern to extend beyond the frame.

There was a fashion in vogue in the seventeenth and eighteenth centuries — borrowed probably from the East — according to which the border is invaded rather by the field or ground than by the pattern on it ; where the field, in fact, seems to eat into the border. It is usually, as you may observe in Plate 13, rather a symmetrical mouthful that it takes.

A border may be lost in a sort of confusion with the panel it began by pretending to enclose. No one ever managed that more cleverly than Boulle, a panel of whose design is given in Plate 14. There is considerable ingenuity in the way in which the pattern is made to appear alternately light on dark and dark on light, without actually confining such alternation within strict border lines. But a border remains a border, however undefined. Boundaries may be understood rather than expressed. Yet that makes no difference as to the lines upon which a design is constructed. You may discard the very idea of formality ;

you may determine that you will have none of it; that you will merely sketch upon your page such and such marginal forms, natural or ornamental. But if you dispose them in anything like an orderly manner, you arrive at something which comes as clearly under the category of border treatment as though it had been enclosed by hard and fast boundary lines. The boys and ribands on Plate 15 form after all a border.

Every margin or marginal line is in its degree a border. The white margin of this printed page borders the type. In Indian and other Oriental work you often see the ornamental details so closely packed as to define the border-shape even without actual boundary lines. And the Germans of the sixteenth century (Jost Amman, for example) sometimes did with very different details just the same thing. The looser borders of the looser time of Louis XIV., XV., XVI., do everything they can to hide the lines of their construction; but you may take it as a sign of artistic demoralisation to be afraid of a straight line. Hogarth, who preached "the line of beauty," was not exactly an apostle of the beautiful.

So great is the use of the border, that even

they who least like formal lines are bound to adopt it; although they are perpetually rebelling against its formality, and doing their best to break it up, as in the case of the encroaching and interrupted borders already mentioned.

The very *naïvest* way of getting over the difficulty—it is a difficulty, there is no denying—is by, so to speak, snipping a piece or two out of the panel, and carrying the border round the incisions, so as to get a more or less irregular central space instead of the four-square parallelogram.

In the Certosa near Florence, there are some windows by Giovanni da Udine (the border of one of them is illustrated on Plate 16), in which he has deliberately snipped pieces (*a*) out of the space to be filled, and left them as so many gaps in the design. We can forgive this kind of thing once in a way; but it stands very much in need of justification.

Where a gap has some meaning it is different. In the case where there is a square block or patera occupying the corner, as you sometimes see in seventeenth century wood-panelling (and on Plates 16 and 17),

that seems to account for the break in the border. It is as though the border went out of its way in order to escape the patera.

Nor is there any objection to the doubling of the border round an imaginary line (*b* on Plate 16); by which means the same end of irregularity is arrived at without the brutality of da Udine's method. The Italians of the Cinque Cento resorted freely to the foregoing plans—in their schemes of ceiling decoration to wit; and with marvellously beautiful results. Perhaps, however, they were rather too ready,—certainly the artists of the later Renaissance were too ready—to adopt any device which would enable them to depart from the simple panel form. In not a few instances, the further they went from it the worse it fared with them.

A separate treatise might be written upon the construction of the border itself. It may be continuous or broken, and broken at all manner of intervals, and in all manner of ways. It may flow, or grow. It may be symmetrical or absolutely free. The outer or the inner edge may be accentuated, or both, or neither. It may spread outwards from a well-defined central feature or inwards from

the margin, diffusing itself, and giving a less definite central shape.

But it is not so much the design of the border that we are considering at present as the place of the border in design—on which point enough for the present has been said.

III.

Within the Border.

Though you abandon all idea of bordering, and elect to place, as you well may, some arbitrary shape within the parallelogram, the space round about that shape may indeed be considered as an irregular border to the same. If, for example, you plant in the centre of the space a medallion, and round that medallion sketch a cartouche, after the manner of Jost Amman in Plate 18, the cartouche and the rest of it may be called the frame or border of the medallion; and, again, the ground beyond the edge of the ornament may be taken to be the margin or border to that. But it is going rather out of the way to look at Amman's design in that light.

In the example chosen for illustration we have arbitrary shapes, one within the other; but one might just as well have two or more such *independent* shapes. Nothing is easier than to take a simple field, and to spot about

upon it any shapes you please. That is one way, not a very ornamental way, but one way, of occupying the space.

When you proceed to connect such shapes in any way, you bring in another principle of design—which, however, will be more conveniently approached from the other side, when we come (as we presently shall) to the discussion of the lines enclosing various shapes and subdivisions.

Abandoning all thought of border, or supposing a border already in existence, you may, as I said, plant any independent shape, medallion, shield, cartouche, tablet, what you will, within it. This form may be left, as it were, floating in space, or it may be supported by ornament; which ornament may literally seem to hold it up; or, if you will, the ornament may appear to be suspended from it, as was most frequently the case with the festoons and garlands of the later Renaissance. Instances of such support and suspension are given in Plates 17, 18, 19. Finally, the ornament may be unconnected with the central shape, and comparatively independent of it, as a powdering or sprig-diaper would be.

The central feature need not, of course, be a frame of any kind ; it may be a figure, a spray of flowers or ornament, a vignette, a spot, a spray—as free as painter's heart could wish. Or, just as in the case of the closely-packed border, whose shape was marked without the aid of boundary lines, so any central sprig of ornament or foliage may be so densely massed within a square, circle, quatrefoil, or other imaginary form, as to assume a quite regular outline. Such grouping of the ornament is shown very plainly in Plate 20, where the circular shape is emphatically pronounced without the aid of any enclosing line. You see the same thing very commonly in Indian art.

A number of sprays, or other features, free or formal, group themselves into a sort of diaper. Such diaper should naturally have some reference to the space it fills, or it will appear less than trivial. The design on Plate 5 forms a panel, Plates 21 and 34 are only bits of diaper work. Whether the component units of such a decoration be all alike, or of various design, is a question independent of the lines of their distribution. The variety in Plate 22 is at all events amusing. One

does not readily grasp all that is in it. There is always something to find out; which is just what there would not be in a simple and orderly geometric pattern of the European type.

A mere series of bands or stripes across the field (vertical, horizontal, diagonal, waved, or in whatever direction), is an obviously simple way of getting over the ground, about which not much further need be said. As the filling of a panel, such a treatment as that shown on Plate 23 is not very adequate. Rightly employed it forms, however, a very fit and proper method of decoration: for the slight enrichment of a vase, from which it is taken, nothing could well be more apropos than this banded scheme of ornament.

Such filling as a scroll or anything of the kind may be quite freely drawn, as on Plates 12 and 24, or disposed symmetrically in relation to an imaginary central line or spinal cord, as in Plates 11, 14, 17, &c.; or it may radiate from the centre, as it naturally would in a ceiling, pavement, carpet, or other object demanding an all-round treatment. Radiation of the design occurs in Plates 3 and 10.

The scroll work, or what not, might equally

proceed from two ends of the panel, as in Plate 8, or from the sides, or from both sides and ends, either symmetrically or at irregular intervals; or it might spring from the corner or corners, as in the lower half of Plate 9.

The treatment from the corners is, again, adapted to, and often adopted in, ceiling decoration. In principle it is very right indeed; but in practice it is not invariably all that decorator could desire. The "line and corner" tune, as it may be called, has been harped upon until one is chronically sick of it, even when it is played in time—which is not always the case.

A corner-wise treatment is seen to advantage when it has been suggested by use, as in the metal garniture of old book bindings, and in the clamps of coffers such as German smiths of the fifteenth and sixteenth centuries elaborated with such workmanlike pride. In the tooled binding of the Henri II. period, given on Plate 10, the corner is very carefully taken into consideration, such consideration being very possibly a survival from the times when the corners were habitually protected by metal-work. You see also in book covers

of all times instances of a treatment where the design is manifestly "to be continued in our next," the side unseen being necessary to its symmetrical completeness.

Further examples of the same thing occur in the mediæval cabinet doors given in Plate 24.

The need of clasps, hinges, and so forth, no doubt gave the hint of such a manner, which, in spite of the one-sided forms it gives, is wholly satisfactory in effect. We do not sufficiently realise how readily the mind makes good what the eye does not see in design; assuming, that is to say, a certain workmanlike reasonableness in it. In Plate 25 (which is only one half of a cabinet) the design is in a very remarkable degree the outcome of the constructional idea. It was the locks and hinges that gave the artist his cue.

It is worth while to compare the above-mentioned scheme, in which the symmetry is suggested rather than expressed, with the free and easy way in which the Japanese lacquer-worker will overrun the limits of a box top or cabinet front, and trail his ornament over all or any of its sides indiscriminately. The

front of the box is not enough for the dragon on Plate 26. Yet you will observe that there is a certain consideration for ornamental propriety in the disposition, for example, of the creature's claws.

There also, the artist, in his very different fashion, chooses to consider the whole object his field, and not just the portion of it he sees before him. There is a certain logic in his licence, too; but the more restrained manner of the mediæval workman is, in proportion to its restraint, the more to be preferred.

Where the design—scroll, foliage, or whatever it may be—bears no relation at all to the shape or space it occupies, like the diapers on Plates 21 and 34, it ceases to be surface design, and is merely a means of breaking the surface. It is only as a background that such hap-hazard distribution of forms has any meaning. But then a good deal of decorative design pretends to be no more than background.

A very satisfactory and effective result is sometimes reached where the artist starts, as it seems, with the idea of a diaper, more or less geometrical, and, as he approaches the centre of the panel, gathers together the

pattern, so to speak, into points of emphasis. You see this in the Roman pavement represented on Plate 3.

That is a case in which the design was unmistakably set out first of all in geometric divisions, certain of which divisions were afterwards grouped together to give point to the pattern. If you analyse any of the old Jacobean ceiling designs, or the Italian originals on which they are but variations, you will find that many of them may be resolved into very simple diapers, on a rather large scale, adapted to the space they fill, and emphasised here and there by figure subjects or other special filling of some of the more prominent geometric compartments.

The difference between the method of design employed in Plate 3, and the plan adopted in the kind of design shown on Plate 10 is, that in these last the central shapes appear rather to have suggested the corresponding interlacements than the interlacements to have led up to them. But even in such a case it seems desirable that the artist should have in his mind from the beginning some kind of idea of geometric construction. The longer he can manage to keep that geometric notion in his

mind, without putting it on paper, the more freely he can go to work. That same faculty of holding a design, so to speak, in solution in the mind, is most invaluable to the designer. A notion is so much more manageable in its fluid state. Once an idea is allowed to crystallise into definite form, it is no easy matter to modify it.

Should the space to be decorated be very considerable in extent, it is often necessary to cut it up into sections, otherwise than by merely marking off a border. A wall, for example, is divided into cornice, frieze, wall space, dado, and so on. Some such subdivisional process may be adopted in the case of a smaller panel, with a view to modifying its proportions, for any reason, as in the centre panel of the door on Plate 27. Or the space may be divided vertically into panels, of equal or unequal width. A building in several stories is an instance of the one kind of division, a colonnade of the other.

If the subdividing lines take both directions, the result is a scheme of panelling, such as was commonly adopted in the domestic wainscoting of some centuries ago.

Further, by the introduction of cross-lines at various angles, or of curved lines, we arrive, by a different road, at panelling of more complicate character, and at something like the interlaced patterns to which reference has already been made, or like the setting out of Plate 32.

It is clear that these various ways and means may be associated ; and under the complex conditions of the times, they usually are more or less "highly mixed."

Thus one may, as I have said, begin with a border, and then treat the space within it in any of the ways already described ; one may divide a wall horizontally into two, with a diaper or frieze at the top, and panelling below ; or into three, with frieze, wall, and dado, either one of which may again be broken up, like the dado on Plate 28 ; where the upright panels into which it is divided are broken by small contrasting inner panels of flat carving. One may plant upon the field any independent feature, frame, shield, tablet, or such like, and then fill in the background without regard to it, as though a portion of the design were lost behind it. As many as three, or more, plans may be associated. For

example, one might, as on Plate 29, stretch across a title-page a tablet, then introduce a border disappearing behind it, and the spaces enclosed between the border and the top and bottom of the tablet one might treat again either as one interrupted panel or as two independent parts. The fact, however, that they are both, as it were, on one plane in the design, seems to require that they should both be treated in much the same way.

The possibilities opened out by this association of various plans, are obvious.

IV.

Some Alternatives in Design.

The use of the border is not, of course, confined to the outer edge of the main space to be filled. Every sub-section of the design may be provided with its own border, as you see in the case of panelling, where each separate panel has its own border of mouldings. Plate 3 shows two panels only of the design emphasised by independent borders within the outer frame. On Plates 7 and 30, the mouldings round the door panels are supplemented by additional painted borders.

A central feature, such as the medallion on Plate 31, may have its border or borders, interlacing with, intercepting, or intercepted by, the borders which mark the space or panel itself.

A surface, once subdivided, as already described, two separate courses are open to the artist. The one is to accept each compartment as a separate panel, designing his

ornament into it; in the manner shown on Plate 32. The other, which is no less reasonable, is to make his ornament continuous throughout; allowing it, that is to say, to cross the dividing lines or to interlace with them; more in the manner of Plate 10.

Again, the two plans may be combined, certain prominent parts being reserved for individual treatment, and the subsidiary spaces only being linked together by the forms of the ornament, as though in Plate 32 the pattern had been allowed to meander through the lesser panels, the central diamond only being reserved for the grotesque head.

Which of these plans may be the better to adopt is a question of some nicety, not always easily to be decided. What rational question is? In proportion to the importance of the framing lines, it becomes dangerous to overstep them. Who ventures nothing runs no risk of failure; but neither will he achieve any great success in art. And then there is the charm of danger. Soldiers, sportsmen, and mountaineers, are not the only class of persons privileged to run a risk. It is a luxury we may all indulge in on occasion —were it not so, art would be no congenial

pursuit for any one who is really alive. Only a man should look before he leaps into danger. "Erst wägen, dann wagen," is the pithy way Count Moltke's motto puts it; which might be paraphrased "Weigh before you wager."

When the artist starts from the beginning, and the scheme of design rests entirely in his own hands, it is not so difficult to determine just what is fit. The scheme develops itself. But in the more frequent case, in which the art of the ornamentist is only supplementary, and he has to work, as he usually has, upon lines already laid down for him, it is only where those lines are worth preserving that he is necessarily bound to preserve them—assuming, that is, that he can obliterate them. This is heterodox, but none the less true. If the lines existing are bad, and he can by his design withdraw attention from them to lines more reposeful to the eye, he is doing good work. Only he should do nothing but what he can make seem right. There must be no appearance of awkwardness, no suspicion of effort about it. It is a case in which success alone justifies the attack upon the situation. To fail is to lay yourself open to the charge

of the unpardonable sin, the sin of disobedience to the conditions of design.

An actually hap-hazard or eccentric scheme of composition, such as a Japanese will sometimes affect, is hardly in contradiction to what I have laid down. When a Japanese artist cuts a panel quaintly into two, after the manner of Plate 33, and treats each part of it as seems good to his queer mind, he is only doing what the Greek did when he cut off a portion of his wall space, and treated it as a frieze; though he does it more energetically, not to say spasmodically, and with less appreciation of grace.

So, again, when the said Japanese strews buds and blossoms about a box top, and breaks up the ground between with conventional, though very accidental, lines of crackle, as on Plate 34, or when he crams all manner of geometric diapers into a panel, as on Plate 22, he is only doing in a more eccentric manner what the European artist does, with greater regard for symmetry, when he disposes his sprigs or what not on a geometric basis. If only he arrive at balance, which he almost invariably does (so little is his instinct in this respect likely to err), there is no occasion to

cry out against him. We, on our part, are perhaps too much disposed to design as though there were no possible distinction between symmetry and balance, between bulk and value—as though the little leaden weight did not balance the heaped-up pound of fruit, or feathers in the scale.

Design apparently quite unrestrained, such as the men of the Renaissance habitually indulged in, proves very often, upon examination, to be constructed upon one or other of the systems I have described. Sometimes, indeed, the system of construction is very frankly indicated, though not precisely defined—the confession, that is to say, is full enough to ensure absolution for any offence there may be against strict order.

On Plate I there is blotted in a panel of ornament somewhat on the lines of Androuet du Cerceau, in which the central feature is an echo of the medallion treatment, whilst certain vertical and horizontal lines recall, however vaguely, the notion of a border. Such reminiscences of severely constructional lines give additional charm, as it seems to me, to design otherwise fanciful, and even fantastic in character. It is as though a man said in

his design, almost in so many words: I claim my freedom, but I have some lingering respect for law and order.

Except on the very minutest scale, the scope of subdivision possible with regard to a space, is not affected by the amount of ornament introduced, nor by its character. No matter whether it be human or animal figure that you employ, conventional or natural foliage, scroll or growth, interlacement, arabesque, or geometric pattern, the possibilities in the way of distribution are the same.

Naturally, however, certain lines of subdivision will be found to accord with certain kinds of treatment; and so we find that, as a matter of history, the Mohammedans adopted certain lines of composition, the Greeks other lines, and the Japanese quite others again, and so on.

Furthermore, the lines one would instinctively choose for different purposes would themselves be different. One would scarcely proceed to decorate a panel by merely crossing it with bands, of ornament, as on Plate 23, except perhaps in the case of some long strip of a panel which it was absolutely necessary

to shorten. There is a case in point given on Plate 35, where the disproportionate, though constructionally very proper, length of the panels of a roof is mitigated by the band-wise arrangement of the stencilled ornament.

A similar system was found by the Greeks to be the most satisfactory way of dealing with draperies. Their pet idea of decorating a full skirt seems to have been by means of so many parallel patterns. You have only to refer to the terra-cottas at the British Museum to see both of these uses illustrated, often in a single vase.

What one would do, then, is not the same thing as what might be done. The possibility, as distinguished from the expediency, of distribution, is in all cases much the same. But there must necessarily be some correspondence between detail and its distribution.

For all that, there is no cut and dried rule as to the association of this kind of detail with that kind of distribution, or *vice versâ*. It does not even follow that the description of detail usually found in connection with a certain order of composition is the only detail appropriate to it. The connection of the one with the other is evidence only of

their conformity, not at all of the incongruity of other combinations. It is just possible to fry without bread-crumbs. Is it not chiefly laziness (where it is not a suspicion of our own incompetence) which tempts us to adopt bodily what has already been found to succeed? There are so many people in the world to whom it comes easier to take what there is than to give what is theirs.

A design is in harmony, not when it is strictly according to Greek or Gothic precedent, but when the parts all fit.

Suppose, for instance, the lines in a composition lead up to some prominent feature, that feature must be of sufficient interest to justify the attention it attracts. There are positions so prominent they almost demand figure design properly to occupy them.

Such central features as those in Plates 1, 18, and 31 are bound in consistency to be of more importance than their surroundings. I don't mean to say that an heraldic shield like that on Plate 18 is essentially of profoundest interest; but in the eyes of its owner at least it is worthy of all prominence.

In like manner also, if it is proposed to introduce the figure, or anything of that

importance, it is only natural to provide for it in your scheme, whether in the shape of medallion, frame, niche, or what not. The gem of your design should have a setting worthy of it.

Any feature, such as a tablet, medallion, label, cartouche, shield, and so on, introduced into a composition, should bear relation not only to its surroundings, but to what it is to enclose. This is a serious consideration very often neglected. It is no uncommon thing to see a shield introduced to bear an inscription, a circular medallion to frame a picture which demands a rectangular outline, and all manner of queerly proportioned shapes, which by their very position call for decoration, whilst, at the same time, it is almost impossible to fill them satisfactorily.

Upon the same principle of fitness, a predetermination to adopt natural forms of foliage would, artistically speaking, necessitate the choice of a not too formal framework for it. Detail designed on a large scale would call for equal breadth and simplicity in the setting out.

So with regard to the allotment of ornament—once the lines determined, the artist

must scheme his ornament accordingly. Whether he elect to ornament every portion of the surface, as the Orientals and the artists of the Early Renaissance often do, or certain selected parts only, like the Greeks, whether he chose to decorate many parts or few, and which parts, and how—that is his affair. His taste must be his guide in that; and unless he have some taste he had better not attempt to design. This may sound like discouragement; but the beginner who is easily discouraged may as well be made aware at once of the difficulties in his way. The lukewarm may as well be warned off. Ornament is not one of those easy things a man may take up for a livelihood, pending fame as a painter. Success in ornament implies devotion to it.

V.

On the Filling of the Circle and other Shapes.

Having discussed so far the various lines on which ornament may be distributed over a simple panel or parallelogram, I propose now to show how the same principles apply to the covering of all manner of shapes.

Evidently it makes little difference at all, and in principle none whatever, whether it is four sides of a figure we have to deal with, or three, or five, or how many. In either case you proceed in the same way; you work from the centre or from the sides, as best may suit; you divide your space into regular or irregular compartments, on the systems already explained; you overlay one feature with another, or interweave this with that; you interrupt a border, or encroach upon a field, according to the circumstances of the case; and so on, just as though it were a square shape you were dealing with.

In the case of anything like an awkward shape, you have even an opportunity of correcting it, by introducing into it some prominent regular figure, which, if you insist upon it, will occupy attention, whilst the irregular surrounding space will go only for margin or border; just as in the case of the regular panel you had the option of discounting its severity through the agency of any irregular feature it seemed good to you to insert.

The management of the circular shape, and of the irregular forms of vases, seems to present a more serious difficulty; but it is more apparent than real.

The simple treatment of a vase is (1) according to its elevation, as may be seen in any striped Venetian glass, or (2) according to its plan, as exemplified in the rude earthenware of every period. The glass-blower falls, in fact, as naturally into the one scheme of lines as the thrower or turner into the other.

A third way is to cross the shape diagonally, which gives the appearance of twisting, to be seen very often in silversmith's work.

Two or more of these systems may be associated; and they often are; as in so many a

German tankard of the fifteenth or sixteenth century, where the bulbous bowl is beaten out into the semblance of a melon, and the neck and foot take the lines of the lathe.

Now the decoration of a vase lengthwise, according to its elevation, corresponds to the striping of a panel with vertical lines; the decoration bandwise, according to plan, corresponds to the striping of a panel with horizontal lines; and the twisted treatment corresponds to a series of diagonal lines crossing a panel.

The way in which medallions, panels, and other shapes may be incorporated with the design of a vase is not different from that already set forth. There is, however, this difficulty, that any marked independent shape is likely to interfere with the form of the vase, or the form of the vase to distort it, which is the way with the landscape and picture medallions so persistently misapplied to Sèvres and Dresden china. Not that it is at all impossible to introduce such features with good effect; only it needs to be done with judgment, which of all things is most rare. And, as it happens, the difficulty has been more often attacked with valour than with that

discretion which is reputed to be its better part.

What is said with reference to the vase shape applies equally to balusters, columns, and cylindrical shapes generally.

When we come to the circular shape, as of coins, plates, medallions and so on, its decoration involves new forms rather than new principles.

The circle is most naturally divided either into rays or into rings. In the one case the radiating lines may be said to answer to the division of a rectangular space by vertical lines; in the other the rings would answer to the horizontal lines dividing a panel. A reference to Plate 36 will make this more clear.

Imagine a series of upright lines (A) to represent the folding of a sheet of paper. You have only to gather the folds together at one end, after the manner of a fan (B), and you have the system of radiation. Repeat the fan shapes side by side, and you soon arrive at a circle divided into rays (C).

Again, in the case of a series of horizontal bands (D), you have only to suppose them elastic enough to be bent, and you have a series of concentric arcs (E), so many slices,

so to speak, out of a circle decorated ring-wise (F). The identical target-like result may be arrived at by the continuation of a series of borders round the circle, one within the other. That is only another way of reaching the same point in design. As in the case of pattern planning ('Anatomy of Pattern,' pages 19 and 22), one comes by various lines of thought to the same conclusion.

The crossing of the two schemes (G) is much the same thing as a square lattice of cross lines in a rectangular panel. The sub-division of the circular space by lines of more flowing character (H) would correspond to the division of the panel by diagonal lines. And if those lines were crossed (J), it would be analogous to the division of the square by cross lines into diamonds.

The spiral line, as applied to the decoration of the circle (K), is equivalent to the fret or key pattern as applied to the square (L). These analogies, I think, are plain enough. They were suggested to me by Mr. Henri Mayeux's 'La Composition décorative' (A. Quantin, Paris), to which the student may refer for more ample illustration of the subject.

All manner of independent shapes may be

introduced into the decoration of the circle, as into that of the panel. One may plant a shield in the centre, and surround it with a border: one may associate any arbitrary form with ringed or radiating lines. But should any such shape form an important feature in the design, the situation is not so free from danger. There is a limit, that is to say, to the arbitrariness with which prominent lines or forms may judiciously be introduced into a circular design. Anything which counteracts the space you have to fill needs to be accounted for.

The difficulty in dealing with forms contradictory one to another is, that you are apt to leave interspaces of irregular shape, which are not easily manageable; as for instance, in the inevitable spandril which occurs so frequently in architecture. If a spandril happen to be very large you can insert into it a more symmetrical shape, which will hold its own; and if it be insignificantly small, you may ignore it. You may (where it is of importance enough to be accepted as an individual panel) treat it as such, with figures, scroll, and so on. You may simply cover it with an unimportant pattern in the nature of a diaper, or leave it blank. These are the

extremes: the happy mean in spandril decoration is not easy to find.

The spandril may be taken as typical of all the many awkward shapes which come of the intersection of curved lines by straight. Ornamental design would be a very much easier thing if we had only to consider the lines of the ornament, without any regard to the interspaces.

From the circle to the rosette, or cusped circle, is so short a step, that the treatment of such shapes goes almost without further saying. The cusps seem almost to call for acknowledgment by lines radiating towards them. Indeed, if you simply carry a series of borders, one within the other, round the cusps, the points where they meet will give of themselves radiating lines; just as in the case of the vandyke or zigzag ('Anatomy of Pattern,' p. 9) it was shown that the recurring points gave vertical cross lines.

The pentagon, hexagon, and other equal-sided polygonal figures may be considered as broken circles.

The triangle offers no new difficulty. It is merely a case of three sides to deal with instead of four.

A branched form may be resolved into its elements. The Greek cross, for example, may be regarded as an assemblage of five squares ; the Latin cross as a group of as many as you please, according to the length of its arms, or as four parallelograms arranged round a square.

An altogether exceptional space will be pretty sure to indicate of itself the exceptional lines on which it can best be decorated ; and a capricious one may well be left to the caprice of the artist.

VI.

Order and Accident.

Entirely apart from the question of the skeleton of a design, is the consideration as to whether it shall be looked at primarily from the point of view of line or of mass.

In any satisfactorily completed scheme, lines and masses must alike have been taken into account; but the artist must begin with one or the other; and the result will probably be influenced by the one or other consideration which was uppermost in his mind. Which of the two it may happen to be, is more often a matter of temperament than of choice with him.

The primary consideration, whether of line or mass, will always lead the designer, though perhaps unconsciously, to adopt a plan accordingly. That is to say, the preference for mass will lead him to attack his panel resolutely, planting shapes upon it, which it will be his business afterwards to connect by means of

the subsidiary lines needful to the completion of the scheme. On the other hand, a greater partiality for line will induce him to have recourse to a more orderly procedure; will, perhaps, even suggest a geometric groundwork, which, however far he may depart from the first lines, will materially help him in securing the object he has most at heart.

If you start with certain arbitrary and irregular forms, arbitrarily and irregularly disposed, so many patches, as one may say, on the panel, it is clearly not such a very easy matter to connect them by any systematic lines of ornament. If, on the contrary, you begin with a system of orderly lines, these must necessarily determine in some measure the shape and distribution of any more prominent features you may thereafter introduce into the scheme.

For my own part (whilst I disbelieve entirely in arriving at anything more than flat mediocrity by the adoption of set rules of proportion), I feel rather strongly that there should be by rights a strict relation between the parts of a design, however little it may be obvious. If, for example, there is a space to fill between border and central medallion, a diaper may be enough; but the diaper

should be designed into its space. And even if part of a design be permitted to disappear, as it were, behind this feature or that, it should be so schemed that no very material form is mutilated in the process. Where an interruption occurs in a border the pattern should be planned with a view to such interruption. Even though you deliberately adopt a diaper, say as background to a scroll, the character of that diaper should be determined by the scroll, notwithstanding that the lines of the one are meant to contradict the lines of the other. The cultivated artistic sense is by no means satisfied with the casual employment of *any* diaper.

Again, where one feature of the design is overlaid by another, as frequently happens in Early Gothic glass, the overlapping patterns should be designed (as they always were) to overlap. The spaces between one series of medallions should suggest the outlines of the subordinate medallions between, which should be shaped with a view to the proposed interruption—just as the interlacing shapes in the (not very Early) window figured on Plate 37 are schemed with a view to their entanglement. The careless overlaying of one pattern, or of

one scheme, by another, is the merest make-shift for design.

The apparently "accidental" treatment, when it is at all successful, is not quite so much a matter of accident after all. You will find invariably, if you inquire into it, that there has been no disregard of the laws of composition, but only the omission of some accustomed ceremonial. To take what might seem a flagrant instance of the disregard of an obvious rule of art:—an artist like Boulle would sometimes boldly treat the doors of a cabinet as one panel, notwithstanding their actual separation by a pilaster between them. However wicked this may be in theory, his practice proved it to be not so unsatisfactory. And for this reason—that the upright intervening space was, as a matter of fact, very carefully taken into account in the design.

He only goes a step further than the obviously permissible treatment shown in the double panel on Plate 38, where the two one-sided panels are jointly symmetrical. Boulle chose to make a constructive feature less emphatic than its position would have suggested to most of us it should be. But he did not really ignore it. Very far from it. Had he

disregarded the construction, the error would have been very perceptible. If he succeeded at all in satisfying the eye, it is because he did with great deliberation and judgment what might easily be mistaken by the inexperienced for an inconsiderate thing. Giants can afford to be daring.

It is when dangerous liberties are taken by the novice, without forethought and without discrimination, that they become offensive. When there is no offence in the lapse from what we had thought a wise rule, be sure it was designed, and designed with more than ordinary skill. It is only a master that can reconcile us to something which, until he did it, we did not think could properly be done. There is nothing careless or casual in the art of design—not even in the little art of ornament.

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Plate 2.

C. F. KELL, PHOTO-LITHO, 8, FURNIVAL ST. HOLBORN, E.C.

Plate 3.

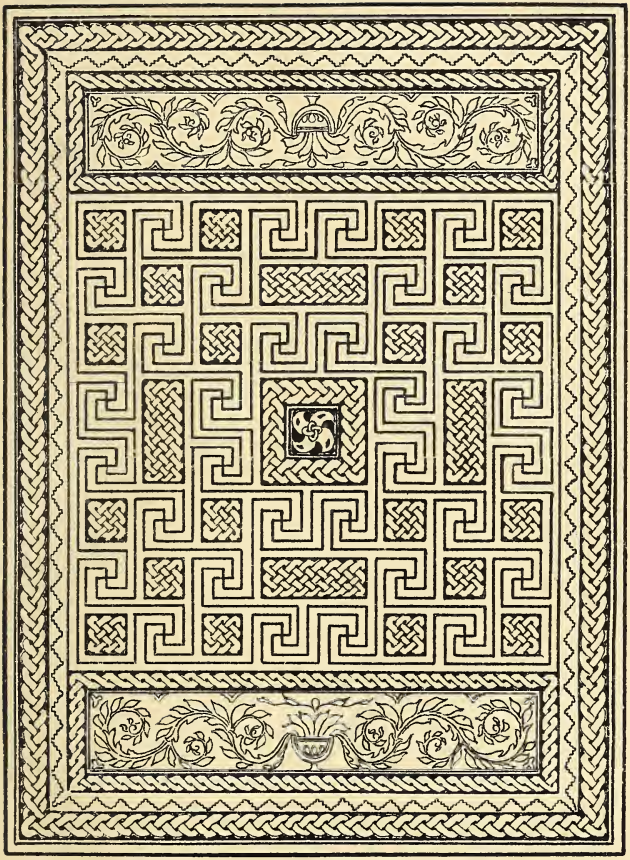
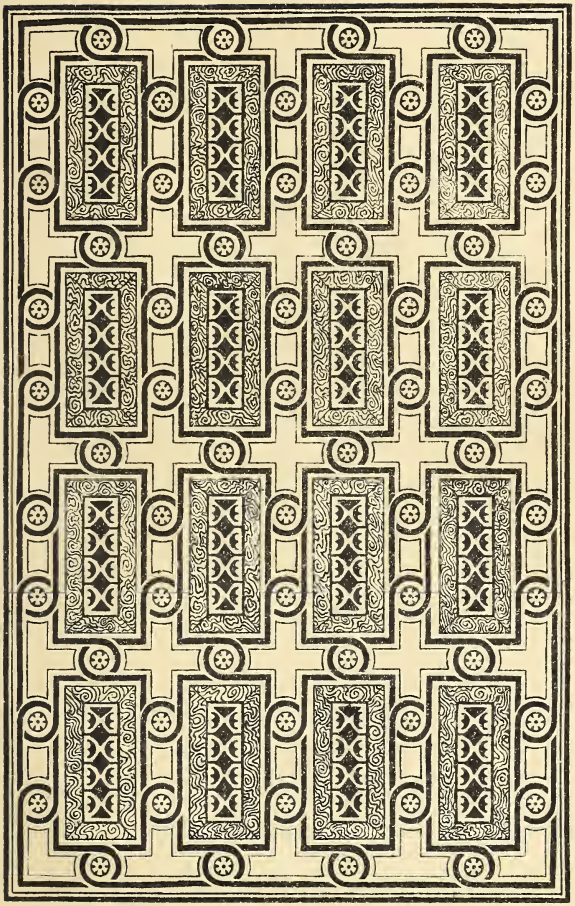


Plate 4.

J. Akerman, Photo-lith London

Plate 5.



C. F KELL, PHOTO-LITHO, 8, FURNIVAL ST HOLBORN, E. C

Plate 6

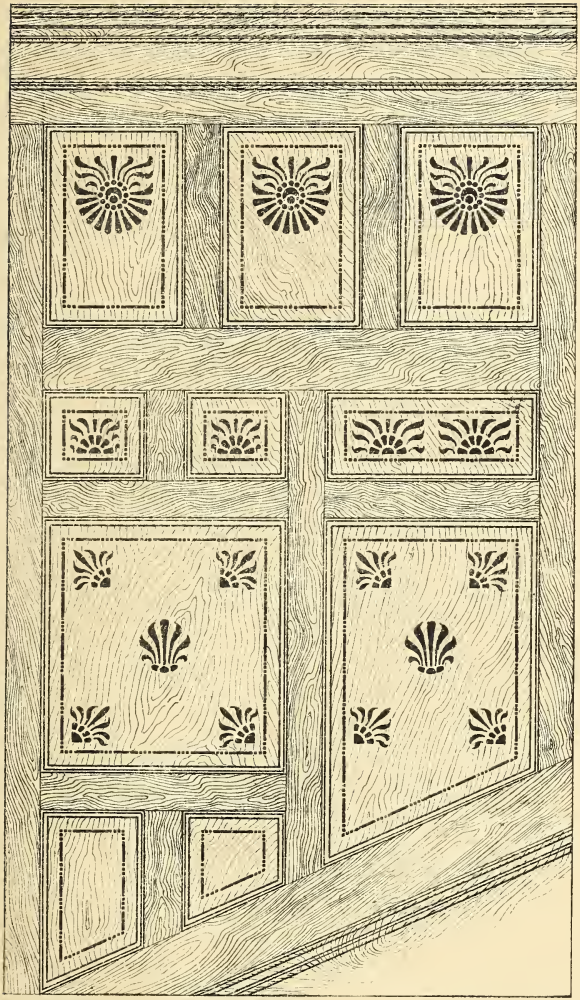
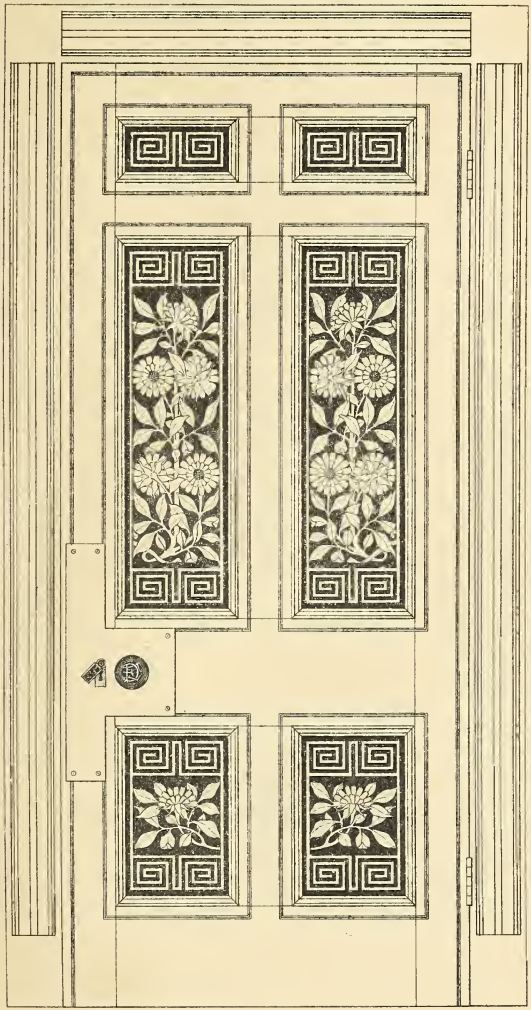
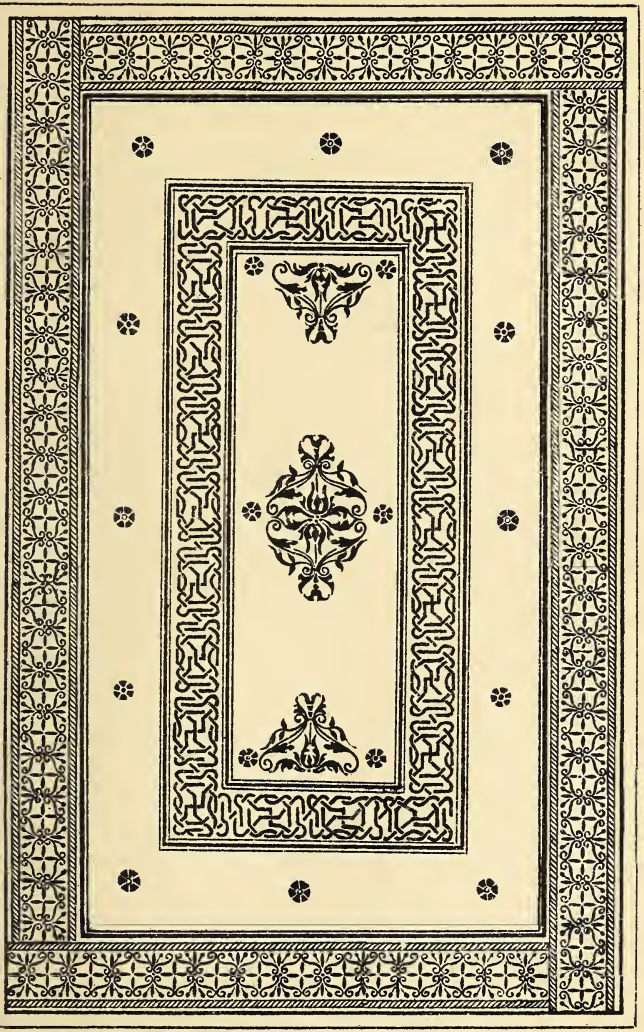


Plate 7.



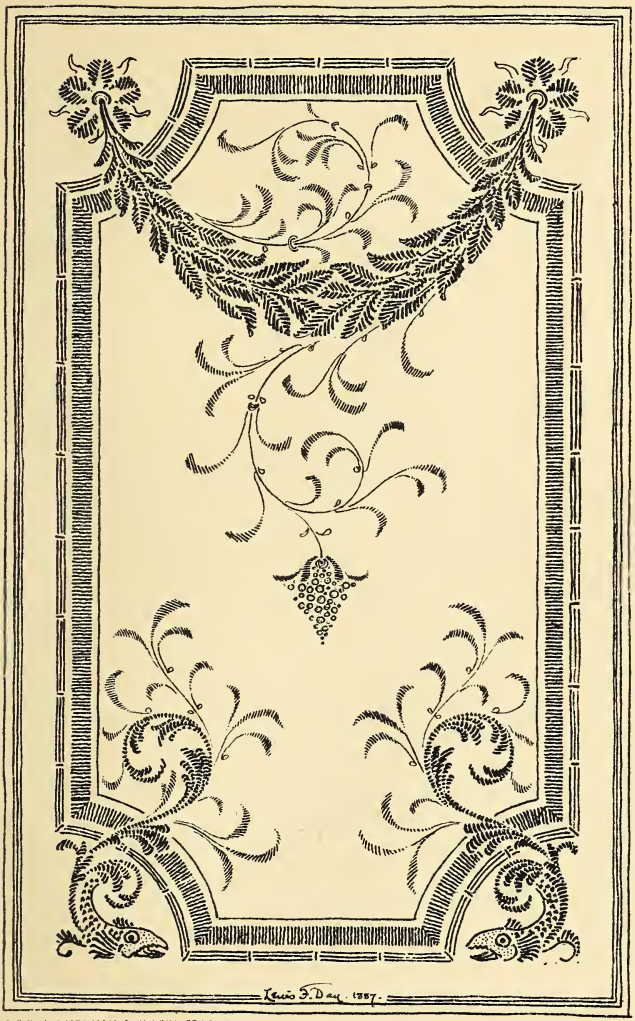
C. F. KELL, LITHO, 8, FURNIVAL ST HOLBORN, E.C.

Plate 8



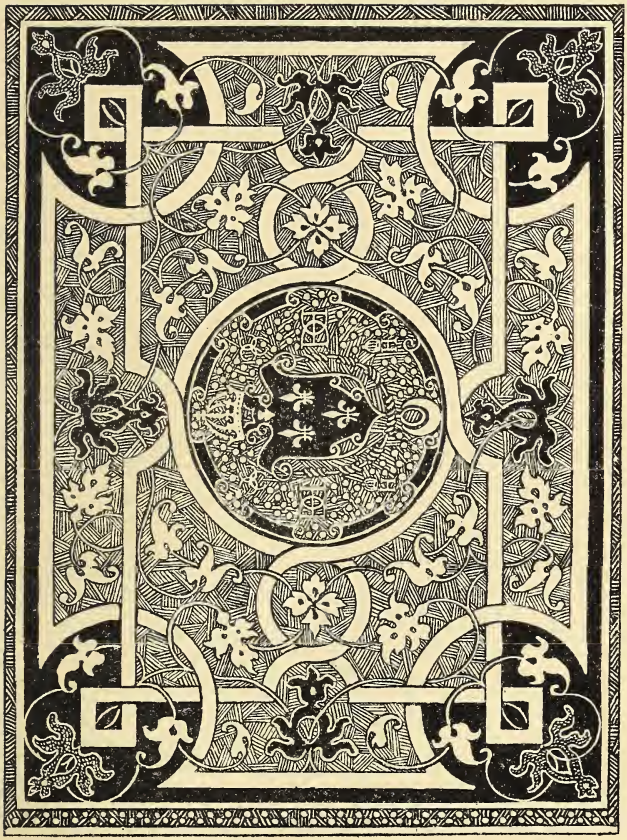
C. F. KELL, PHOTO-LITHO. 8, FURNIVAL ST HOLBORN, E.C.

Plate 9.



C. F. KELL, PHOTO-LITHO. 8, FURNIVAL ST HOLBORN, E.C.

Plate 10.



O. F KELL, PHOTO-LITHO. 8, FURNIVAL ST HOLBORN, E. C.

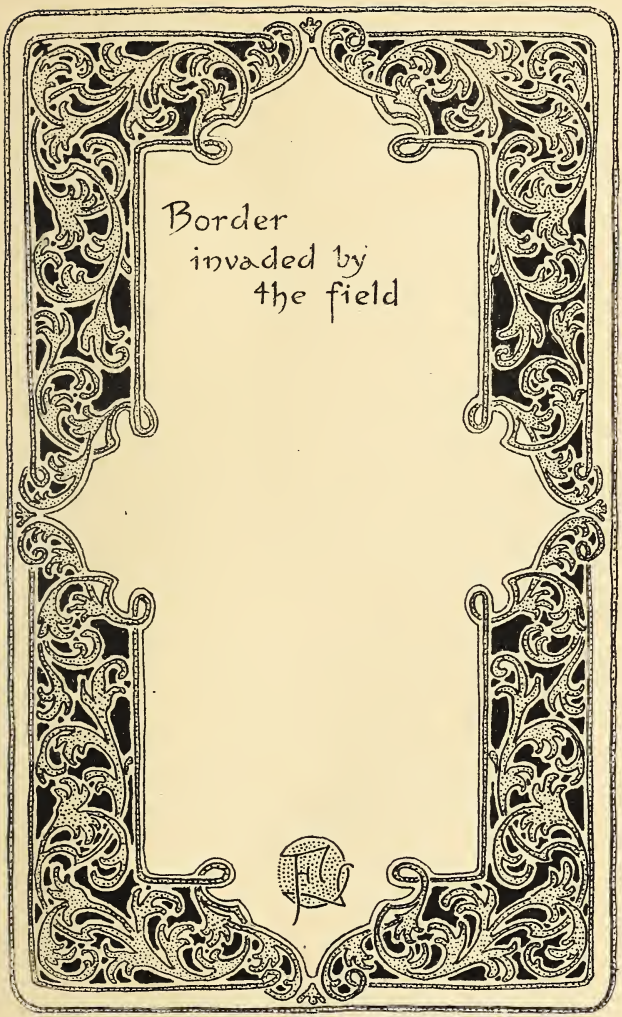
Plate 11.

"PHOTO-TINT," by James Akerman.

Plate 12.

"Photo-Tint", by James Akerman

Plate 13.



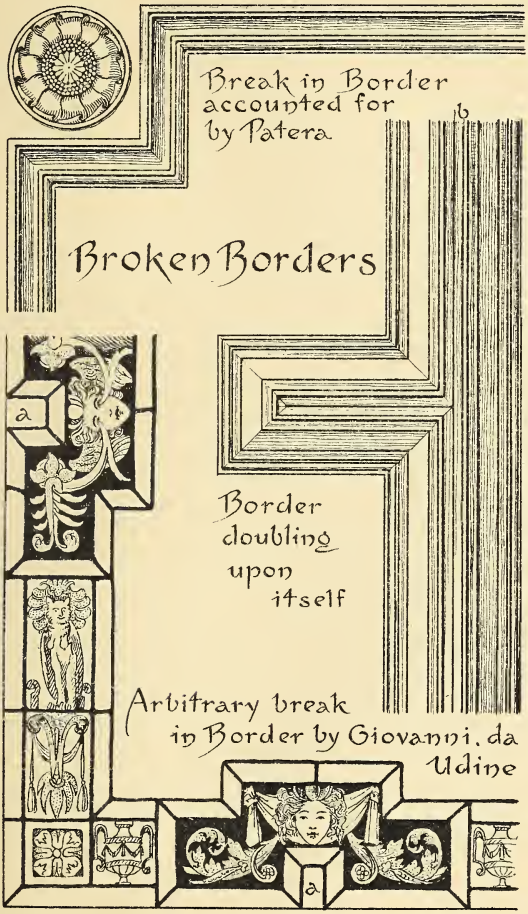
C. F. KELL, PHOTO-LITHO. 6, FURNIVAL ST. HOLBORN, E. C.

Plate 14.

"PHOTO-TINT", by James Akerman.

"PHOTO-TINT," by James Akerman.

Broken Borders

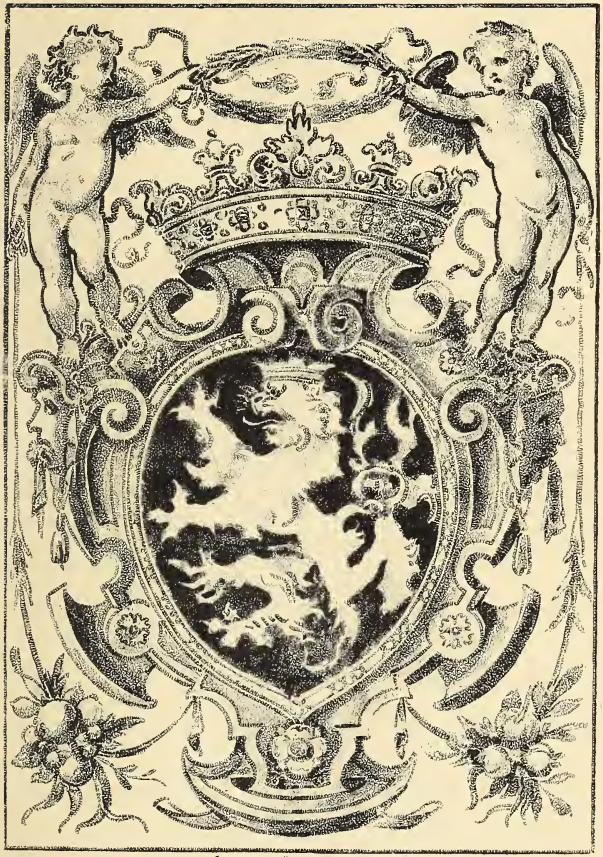


C. F. KELL, PHOTO-LITHO, 9, FURNIVAL ST HOLBORN, E.C.

Plate 17.

C. F. KELL, PHOTO-LITHO. 8, FURNIVAL ST HOLBORN, E.C.

Plate 18.



'PHOTO-TINT,' by James Akerman.

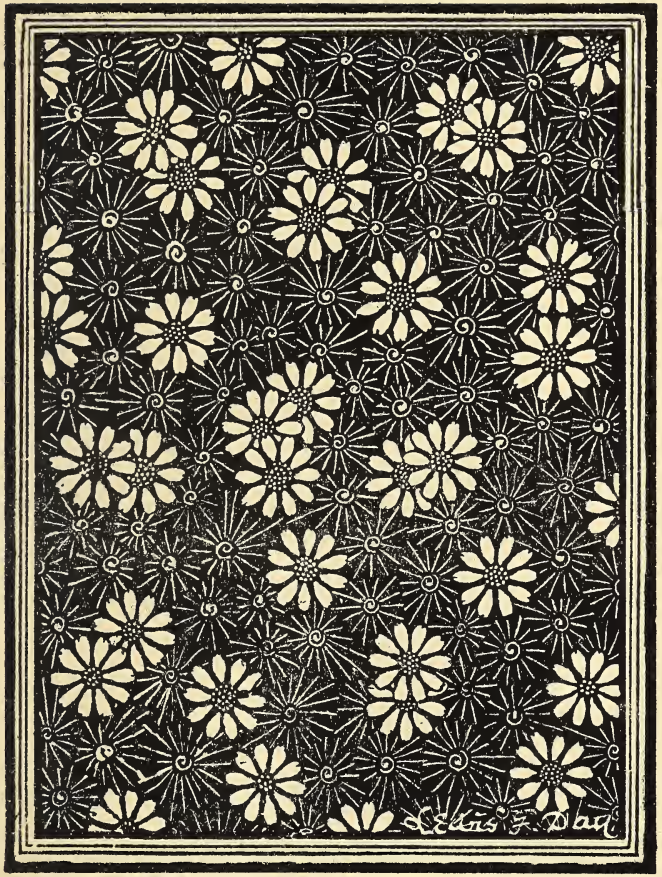
Plate 19.

C. F. KELL, PHOTO-LITHO. 8, FURNIVAL ST HOLBORN, E. C.

Plate 20.

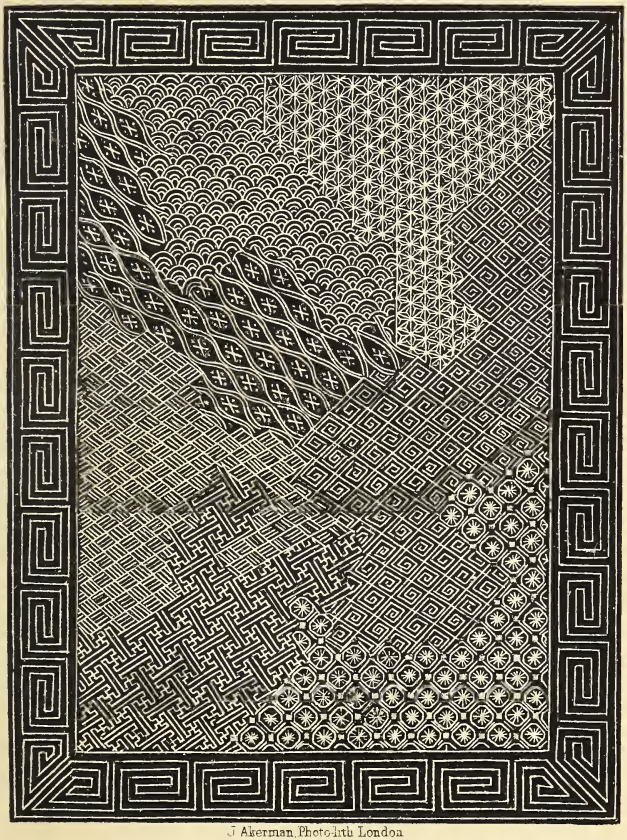
C.F KELL, PHOTO-LITHO. 8, FURNIVAL ST HOLBORN, E.C.

Plate 21.



C. F. KELL, PHOTO-LITHO. 6, FURNIVAL ST HOLBORN, E.C.

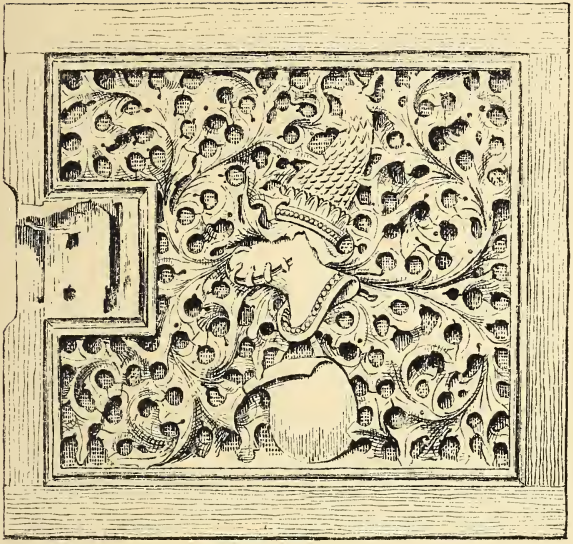
Plate 22.

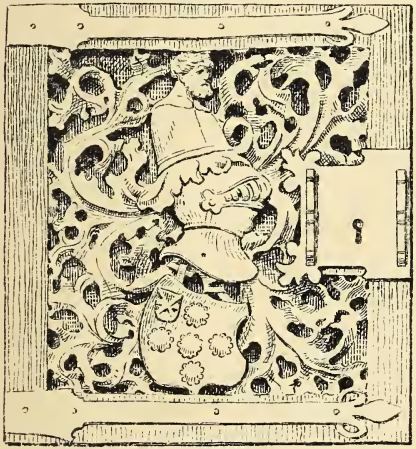


J. Akerman, Photo-lith. London

Plate 23

C. F. KELL, PHOTO-LITHO 8, FURNIVAL ST HOLBORN, E.C.

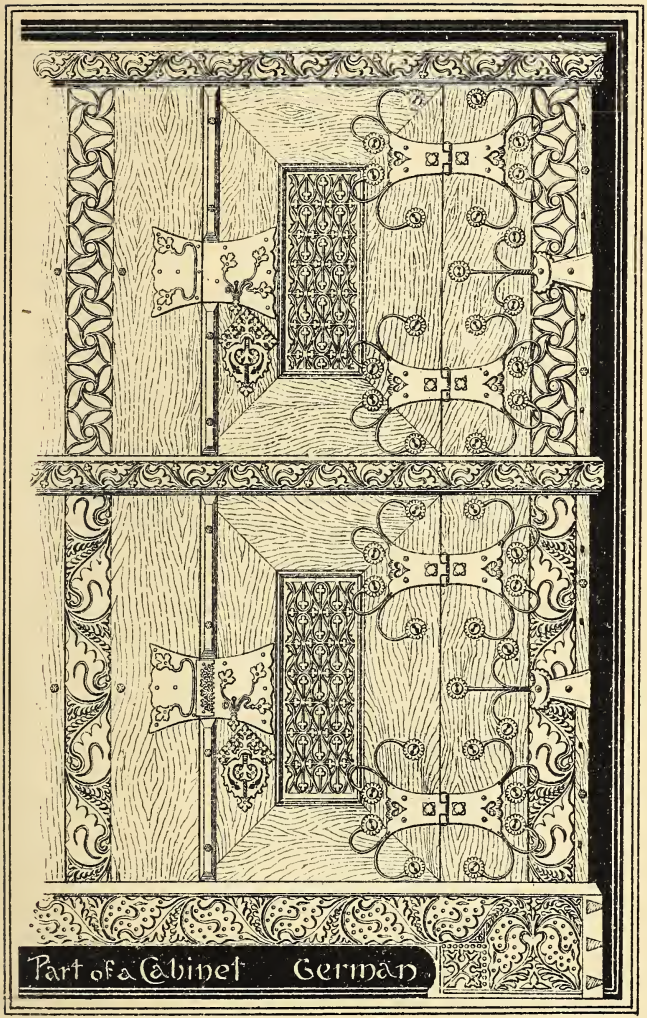




DOORS of old German Cabinets with heraldic carving

Panels incomplete or one-sided

C. F. KELL, PHOTO-LITHO. 8, FURNIVAL ST HOLBORN, E.C.



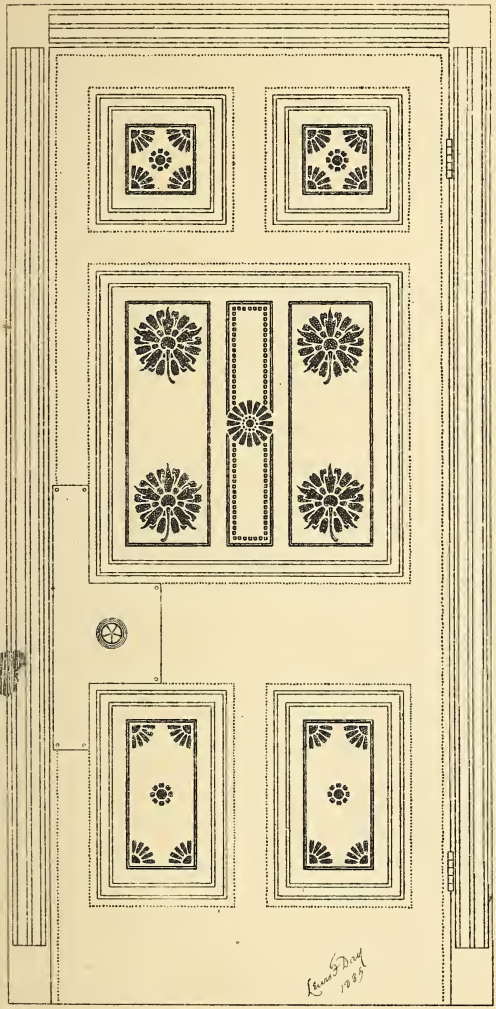
Part of a Cabinet German

C. F. KELL, PHOTO-LITHO, 6, FURNIVAL ST HOLBORN, E.C.

Plate 26.

"PHOTO-TINT," by James Akerman.

Plate 27.



S. F. KELL, PHOTO-LITHO. 8, FURNIVAL St HOLBORN, E.C

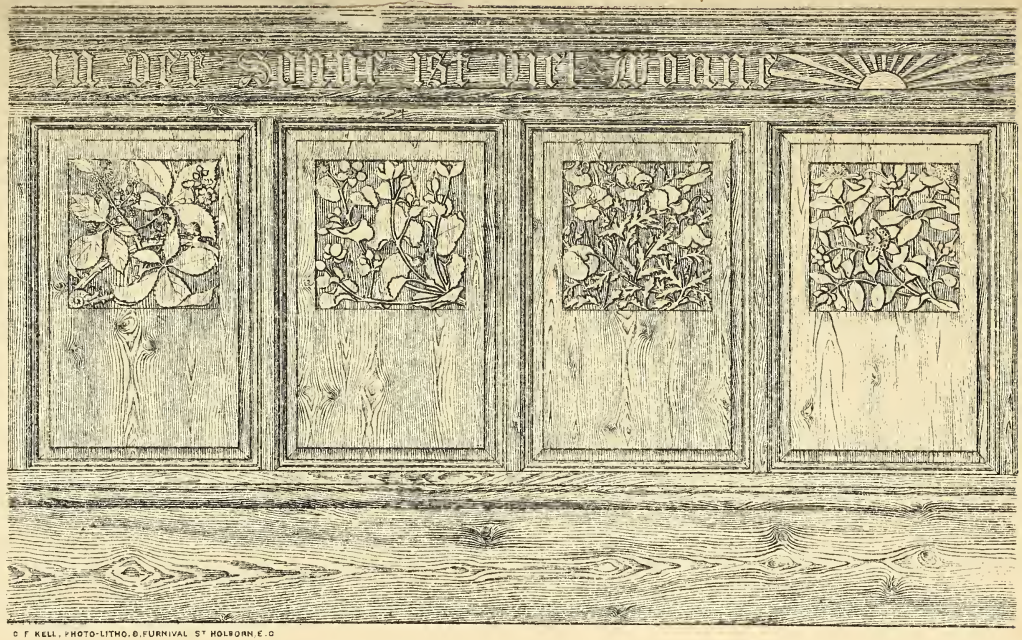
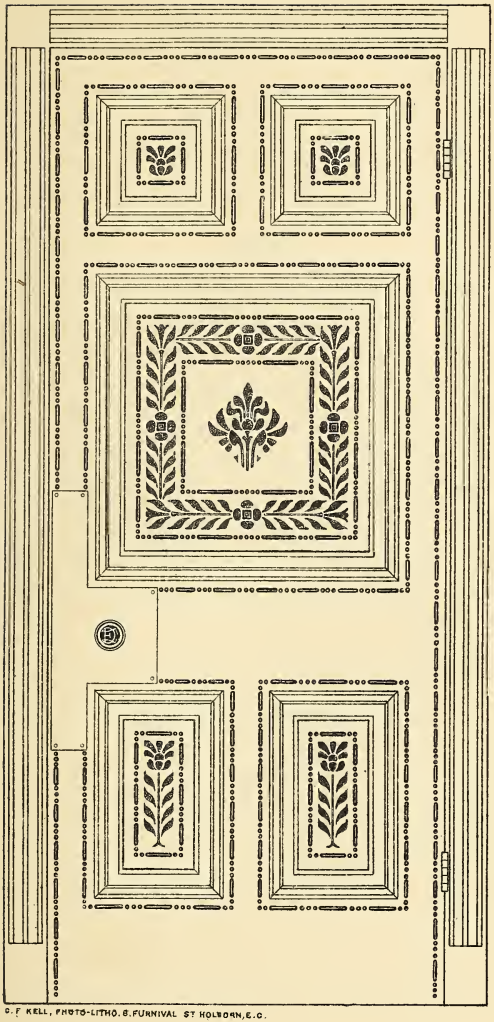


Plate 28.

C. F. KELL, PHOTO-LITHO. 8, FURNIVAL ST HOLBORN, E.C.

"PHOTO-TINT," by James Akerman.

Plate 30.



C. F. KELL, PHOTO-LITHO. 8, FURNIVAL ST. HOLBORN, E.C.

"PHOTO-TINT", by James Akerman

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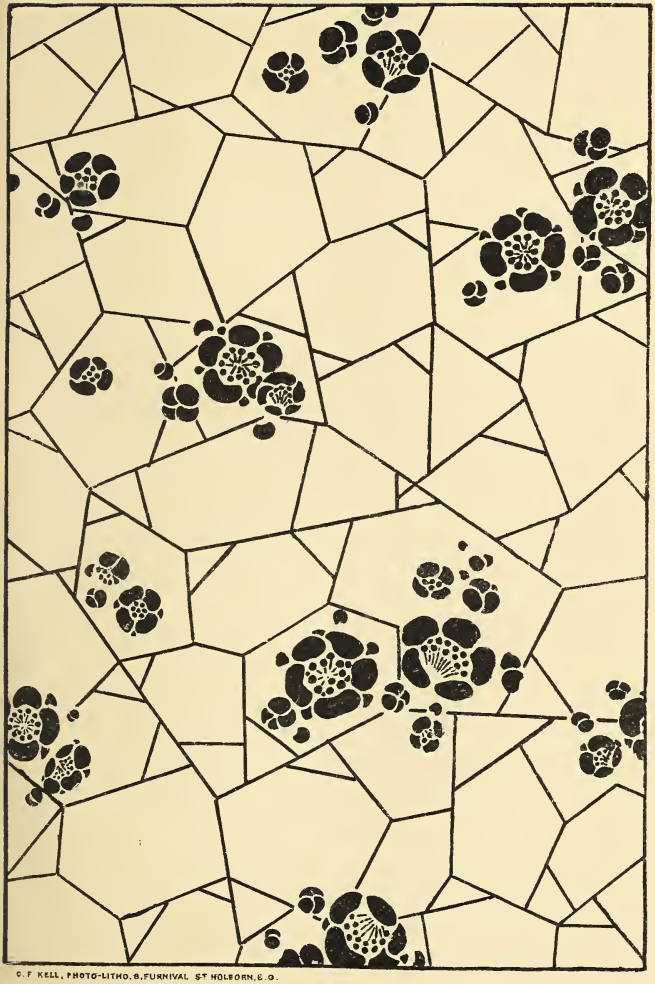


C. F. KELL, PHOTO-LITHO. 8, FURNIVAL ST HOLBORN, E.C.

Plate 35.

A

B

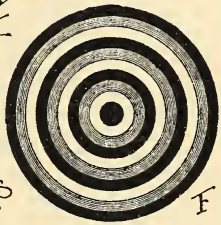
C

Upright & Radiating Divisions

D

E

Horizontal Lines

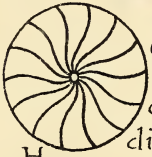


F

3 Rings

G

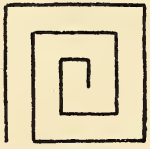
Crossing Lines equivalent to Lattice-work



H

equivalent to diagonal divisions.

J

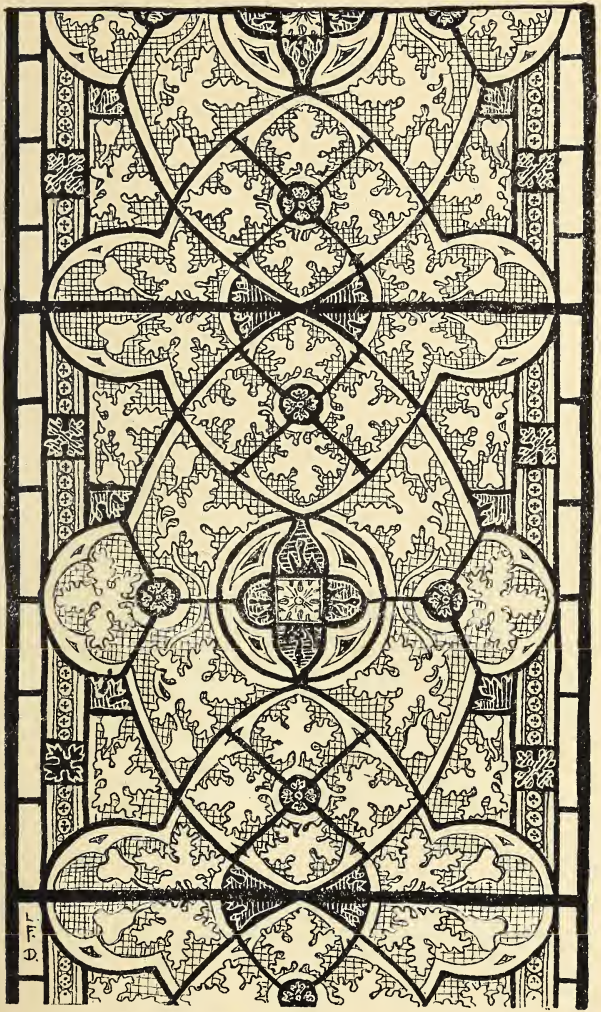


K

L

C F KELL, PHOTO-LITHO. 8, FURNIVAL St HOLBORN, E.C

Plate 37.



C. F. KELL, PHOTO-LITHO. 8, FURNIVAL ST HOLBORN, E.C.

Symmetrical Panel Treatment.

Unsymmetrical Panels jointly symmetrical

G. F. KELL, PHOTO-LITHO. 8, FURNIVAL ST HOLBORN, E. C.

TEXT BOOKS OF ORNAMENTAL DESIGN.

THE APPLICATION OF ORNAMENT.

BY

LEWIS F. DAY,

AUTHOR OF 'EVERY-DAY ART,' 'THE ANATOMY OF PATTERN,' ETC.

ILLUSTRATED.

LONDON:
B. T. BATSFORD, 52, HIGH HOLBORN.
1888.

Plate 1

PREFACE.

The former text-books of this series concerned themselves with the rudimentary lines on which ornament may be designed and distributed.

It is only in theory, however, that ornament can be independently discussed. Practically it exists only relatively to its application. Apart from its place and purpose and the process of its doing, there is no such thing as ornament.

The necessity of adapting design to its position and use is as obvious as it is absolute. The need of conforming to the more technical conditions imposed by material, and the means of working it, is not so generally understood. It takes, perhaps, a craftsman thoroughly to appreciate its urgency.

These few chapters go to demonstrate how essential to ornament is its strict subordina-

tion to practical conditions; how in all times and in all crafts good workmen have cheerfully accepted them; and how the very forms of historic detail handed down to us grew out of obedience to them. In the genesis of ornament will be found the strongest argument for the study of technique.

The consideration of natural form and its adaptation to ornamental design is reserved for a separate volume.

LEWIS F. DAY.

13, *Mecklenburg Square, London, W.C.*
October 7th, 1888.

TABLE OF CONTENTS.

PAGE

I.—The Rationale of the Conventional .. 1

II.—What is Implied by Repetition 7

III.—Where to Stop in Ornament 17

IV.—Style and Handicraft 37

V.—The Teaching of the Tool 51

VI.—Some Superstitions 65

DESCRIPTIVE LIST OF PLATES.

1. STENCIL—The ties breaking up the broad masses of colour.

2. ORNAMENTAL FIGURE COMPOSITION—Identical figures reversed.

3. ANIMALS AND ARABESQUE — Varied creatures symmetrically disposed.

4. A TREE OF JESSE — Figures ornamentally valuable among the foliage.

5. NURSERY WALL PAPER—Fun in design.

6. ANIMALS AND ARABESQUE—Various creatures enlivening the ornament.

7. PATTERN WITH GROTESQUES—The creatures themselves reduced to ornament.

8. VARIOUS VESSELS—Characteristic of the way of their making.

9. WOOD CARVING—Showing the marks of the chisel.

10. AFRICAN BASKET WORK—A typical example of plaiting.

11. CARVED LEATHER — Preserving the quality of the material.

12. PERSIAN FAIENCE—Direct potter's work.

13. LETTERING—Showing its relation to the pen, &c.

14. EGYPTIAN SCULPTURE—Basalt.

15. GREEK SCULPTURE—Marble.

16. RENAISSANCE SCULPTURE—Marble.

17. RENAISSANCE SCULPTURE—Sandstone.

18. WOOL DAMASK—Broad surfaces calculated to exhibit the quality of the material.

19. LYONS SILK—Trivial design, disguised by the sheen and colour of the material.

20. BYZANTINE SILK—Coloured according to the weft.

21. ARABIAN PATTERNS—Incised in soft plaster.

22. IRONWORK—Characteristic similarity of motif in work of quite different periods.

23. IRONWORK—Characteristically different types of wrought iron.

24. NEEDLEWORK—Characteristic quality of line.

25. EMBOSSED PANEL—Design suggested by the process.

26. FILAGREE—Characteristic design common to work of different periods.

27. GREEK LACE—Analogous to filagree on straight lines.

28. JAVANESE ORNAMENT—Inspired by the way of working.

29. FRETWORK—In wood and metal.

30. SAWN WORK—Ingenious patterns produced by very simple means.

31. STENCIL PATTERN—And the way of producing it.

32. BOOKBINDER'S TOOLING—And the tools used.

33. MOSAIC PAVEMENT—Workmanlike thrift.

34. RIGID DESIGN—In need of the softening influence of accidental colour.

35. NIELLO—Severity of pattern calculated to be mitigated by the brilliancy of the metal.

36. MARBLE INLAY—Practically a fret pattern.

37. ARAB LATTICES—Characteristic wood-turning.

38. ENAMEL—Showing the difference of outline in *cloisonné* and *champlevé*.

39. STAINED GLASS—The glazing lines for the most part the outlines.

40. *APPLIQUÉ* EMBROIDERY—The joints masked by a corded outline.

41. OUTLINE—Defining the forms.

42. OUTLINE—Softening the forms.

artist's interpretation of the word. If by conventional ornament we mean perpetual variations on the old, old tunes, long since played out; if we mean adherence to well-worn types; if we mean affectation, imitation, mimicry, a bigoted belief in the letter of the law as it was in the days that are happily past; no one of any originality or invention of his own—no artist, that is to say—can consistently belong to the party of convention.

If, however, what we understand by the term is the spirit in which the past masters of ornament accepted nature, finding in her a never-failing source of inspiration, reverencing her most deeply—aye, and following her most truly—in that they were not content to copy, without further thought, the forms nearest at hand, because they did not imagine for a moment that what she had made fit for her ends must, without modification, perforce be fittest for their very different purposes;—then it seems hard to understand how ornament can properly be anything but conventional.

A fitter term might be found for it, no doubt; I prefer myself the more expressive word "apt"; but in discussing the thing we

cannot conveniently ignore the word by which it is currently known, and we find the word "conventional" in possession.

One can scarcely conceive of ornament which is not, in a manner, more or less modified by considerations altogether apart from the natural forms on which it may have been founded. Even the human form, which is our highest type, and with which liberty may less safely be taken than with any other of nature's works—even the human form is not ready-made to the hand of the sculptor. The works of the great masters, to which we accord the title of "monumental," are so in virtue of a something which was not in the model of the sculptor, but in his art.

Call this subtle quality what you will—conventional, traditional, monumental, ideal, individual—something there is in all applied art (in all art for that matter, but our concern is just now more especially with decorative and ornamental art), something which is, let us not say contrary to nature, for it belongs inherently to human nature, but non-natural, in the sense that it is not directly borrowed from natural forms.

Conventionality in ornament is another

term for reticence or self-restraint. The artist who exercises no restraint upon himself will hardly command the full sympathy or admiration of Englishmen. Apart from the natural, or national, desire for some reserve in art, as in everything else, restraint is forced upon the ornamentist by all the conditions of his work, by its purpose, place, and means of execution, no less than by that necessity for repetition which, in these days more than ever, is a condition of its very existence.

II.

What is Implied by Repetition.

The very purpose and position of ornament, the method of its execution, and even its construction, insist upon some treatment of natural forms which, for want of a better word, we call "conventional."

First, in reference to the construction of ornament. Its mere repetition, which in a former text-book ('The Anatomy of Pattern') was shown to be inevitable, would of itself render such treatment necessary; and even without the inducement of economy, which calls for the use of a machine, we should still resort to repetition, if only because the human brain cannot go on inventing without intermission, but needs the comparative rest of repeating itself, even in hand work.

In the artist's repetition of himself (unless the fatal pressure of the times have made him also a machine), there will always be a certain degree of variety, which there could

not be in mere mechanical reproduction. But he cannot afford to dispense with repetition; nor need he wish to dispense with it. It is in itself an element in decorative design; it is a preventive against loose and rambling ornament; it exhibits order, and gives scale.

The only question is, where and to what extent we should avail ourselves of it.

In proportion to the naturalism of a design, and the point of realism to which it is carried, it becomes unsuited to multiplication. To put it the other way about, the oftener it is proposed to repeat a form, the more imperative it is that it should be removed from the imitation of nature, and the further it should be removed. It needs, in short, adaptation to the purpose of repetition.

Such adaptation is strictly in proportion to what one may call its reticence. A highly elaborate and attractive feature—anything, certainly, that is in the least self-assertive—will not bear so much as reduplication; whereas an insignificant device may be multiplied *ad infinitum*. In anything of the nature of a background (and so many manufactures are intended to serve only as backgrounds) repe-

tition is of the utmost service, and repetition implies modification.

It follows from what has already been said as to the danger of tampering with the human figure, and the prominence it naturally assumes, that there is great difficulty in repeating it without offence. The interest of a pattern is enhanced, no doubt, by the recurrence at stated intervals of appropriate figures. But it is desirable that there shall be always some difference in them; for with every repetition of the same figure its charm is discounted. There is something exasperating in the reversing of identical figures in a pattern (Plate 2), when it is so simple a thing by the careful disposition of various creatures to retain the symmetry of effect desired (Plate 3).

Presumably the reason for introducing figures into ornamental design, is for the sake of some added interest there may be in them. But you cannot get up any absorbing interest in a series of figures all identically of one pattern. They suggest only the mechanism employed in producing them. The multiplication of the figure, far from multiplying its interest, diminishes it in proportion to the

number of times it is repeated. And though it be a very good thing that is repeated, the case is not greatly mended—it is so easy to have too much of a good thing.

The only safety is in toning down the repeated form until its recurrence ceases to be very obvious. This may be effected in various ways. In certain embossed leather, and such like designs, it is brought about partly by the low relief of the stamping, partly by the softness of the colouring, and partly by a more or less cunning complication of the figures with the rest of the design, so that they do not thrust themselves into notice. That variety in the creatures, were it possible, would be desirable no one can doubt.

The consideration which occurs in the case of figure design which it is so necessary to reduce to comparative insignificance is, whether it was then worth doing. Perhaps not. Except that ornament has a way of being a trifle too ornamental, or, more strictly speaking, too monotonously ornamental ; and the introduction of any bold mass, such as the figure very readily gives, is one obvious way out of the besetting danger.

Apart from the symbolic intention of the

figures on Plate 4 (it is part of a genealogical tree of Jesse), the ornamental use of them in the design is conspicuous. We may take it that symbolism does not flourish where the symbols are ugly or unamenable to ornamental effect.

It is not suggested that we should be straightlaced to the extent of denying ourselves the amusement that may be got out of designs such as Mr. Crane has made popular in his nursery wall-papers, in which he has contrived to give us grace of line and charm of colour, as well as the humour of the nursery rhyme (Plate 5). Once in a while the human figure may be degraded to do the merest pattern work. The artist must be allowed, now and again, to put off his dignity and indulge in an artistic gambol. Even a bad joke may, on occasion, be more to the purpose than an everlasting seriousness.

Still it is as well to bear in mind the *primâ facie* objection to the repetition, not only of the human form, but of the forms even of birds, beasts, and all living, and especially moving, creatures.

The occurrence of the stag, boar, hare, fox, hounds, and birds in the border of which

portions are given on Plate 6, clearly gives point to the ornament; and they are rendered with a certain conventionality which makes them one with it. To reconcile us to the repetition of these creatures would be a feat indeed. The grotesques introduced into the cretonne design on Plate 7 may perhaps be excused on the plea of their remoteness from nature in the first place, and further on account of the minuteness of the scale on which they are drawn: they are scarcely apparent at first sight. But their real justification is that they are a joke. Alas, it is not often that the conditions of manufacture allow us that relief.

The advisability of introducing animal forms into mechanically repeated manufacture depends entirely upon the possibility of keeping them in appropriate subjection—in their place, in fact—which, in turn, depends upon the art of the artist. There is a lesson for us in the artful way in which the designers of the Renaissance contrived to keep down the creatures, graceful or fantastic, with which they peopled their scrolls, subduing them to the decorative key. Where the forms which first take the eye are the bold lines of the leafage, among which the live things are more or less

hidden, so that it is only by degrees that one becomes fully conscious of them all, scarcely the purist can find cause of complaint. Some sort of mystery in design is always delightful. The perfection of art is reached when, however attractive at first sight, it continues to grow upon you, and the more you contemplate it, the more you see in it.

Natural forms, to be admissible in ornament, must be decoratively treated. Natural though they be, they must be at the same time ornamental. A lion, as Landseer modelled it, is not fit for any decorative purpose. An Egyptian or Assyrian lion, on the other hand, Donatello's lion at Florence, or Stevens's outside the British Museum, are admirably decorative.

The objection to naturalism, or perhaps it would be more exact to say literalism, in forms repeated, applies not only to animal but even to floral forms. It exists in a less degree, inasmuch as they are of less prominent interest; but for all that it exists. The charm of the simplest flower is lost when we see, side by side, so many copies of it —not varieties, as they would be in nature, but stereotyped repetitions of the same thing.

The designer is exposed, by his very artistic

ability, to the temptation of aiming at natural effects, a temptation all the stronger because, few persons having knowledge enough to appreciate design, whilst all are more or less familiar with natural forms, there is nothing in the shape of public opinion to keep him in check.

Every artist likes, of course, to make a good drawing, and to carry it as far as he can. But that is not at all the vital point in decorative design: the all-important thing is the effect of the work in execution and in its place. Any one who thinks twice about it must realise that in very self-defence he is bound to consider the repetition of his design, and all else that concerns its use. If he is really a designer, he will know how to make capital out of the very poverty of the conditions to which he submits. Submit he must —better do it, then, with a good grace.

Some adaptation of natural forms, some simplification in fact, is demanded, not only to fit them for repetition, but, further, by the position and purpose of the work; sometimes in order that the detail may not assert itself too much, sometimes in order to give it the emphasis that is needed.

For example, it is quite a common thing to see an infinity of elaborate and laborious work misspent upon details of domestic furniture, which not only pass unnoticed, but which ought never to attract notice. It often seems as if the workman had set himself to show how far it was possible to go in the direction of minuteness of detail. It is quite possible to show that, and at the same time illustrate the futility of going anything like so far.

In proposing to carry execution to a point beyond what has hitherto been attempted, it is as well to ask oneself, whether there may not be good reason why the attempt has never been made. Our forerunners were not all of them fools, we may be sure. As a *tour de force*, once and again, most things may be admissible; but a wise workman rarely indulges of his own accord in that kind of "brag" (there is no better word for it) which exhibitions, international and other, have done so much to encourage.

A master is loth to waste labour, and he knows how to make his work hold its own without shouting at you. He deliberately does less than an inexperienced person would have thought necessary, with a view to making

his design tell in its place. In wall decoration, for example, to be seen from some distance, a merely natural representation of natural forms would often go for very little. By the omission of multitudinous detail, he manages to emphasise what he is anxious to preserve. Or (since decorative treatment by no means consists in omission only) he exaggerates, perhaps, features in his design which, in the position assigned to it, would otherwise be lost. According to his purpose, he makes no scruple about modifying natural forms and colours: he enforces his effect, indeed, by every conventional—that is to say, every workmanlike—expedient at his command.

III.

Where to Stop in Ornament.

Assuming, on the one hand, the urgency for some modification of natural forms according to the work in hand, and on the other, of some continual reference to nature in design, the question arises as to the limits of the one and of the other. How far may one safely go in the direction of nature? And to what extent is it well to admit the dictation of the tool? In order to settle that point quite definitely, each separate craft would have to be discussed. An excellent prescription would be, just so much of natural food as the artistic stomach can digest; but then we have to take into account each man's powers of artistic assimilation—always an unknown quantity. The degree of ornament which is barely enough for one man will be far too much for another.

Any attempt to define the limits within which decoration should reasonably be con-

fined may seem at first sight rash enough. But with regard at all events to things of common everyday use, there clearly is a point at which the line of decoration must be drawn. And, more than this, just as the object itself, its use, its material, and the manner of its making, indicate plainly enough the fit method of its decoration, so also they give the hint as to the measure thereof. It would seem, in short, as though the point at which a material or a process failed were the point at which we might most conveniently stop, rather than bring in some supplementary process, which, under pretence of helping it out, ends more likely in supplanting it.

This will be made clearer by an example,—let us say pottery, in aid of which so many of the applied arts are called in, that we shall necessarily have to branch out by the way into discussion of the wider subject of applied ornament, with which this text-book is concerned.

The primitive way of making a pot is by what is known as "throwing," that is to say, shaping the lump of wet clay with the hands as it revolves on the wheel before the potter. This, it should be observed, is at the same

time the way most directly conducive to artistic results (Plate 8).

Bigotry alone would seek to narrow the scope of a workman to any single process of making. One is fain to own that in the hands of an artist the lathe too may have its use (Plate 8). The so-called Etruscan vases (Plate 8) were turned on the lathe, the artist probably caring more about the painting of his vessel than its shape.

But whilst you watch the potter at his wheel, it appears to you that no supplementary process can be necessary. Almost from the moment he begins to hollow with his hands the revolving lump of plastic clay before him, it begins to take suave and beautiful shapes, gliding the one into the other, as the wheel goes round, with an ease which it is delightful to see. It all seems to go so easily that your fingers itch to try a turn at it. Seeing the potter at his work, you see how the typical pottery forms grew out of his fingers; you realise how it is that ugly forms are so rare in primitive pottery; and you are inclined to think that the ugliest pot ever made on the wheel must have passed in the making through several stages of

beautiful form, which the potter, sitting *over* his work, did not perceive perhaps, or did not see to be beautiful.

It is taken for granted by our makers-by-deputy, that the soft shapes of the wheel need to be effaced by the more mechanical action of the lathe—in other words, that a second and supplementary process should be called in to do the work over again. It is true that only certain shapes can conveniently be thrown on the wheel. But these are obviously the most beautiful. There may be monotony in them, but so there is in the shapes of turnery.

Moreover, if the potter were in the habit of depending more upon the wheel, he would surely find in it still further facilities. If the blunt forms produced by his finger-tips are wanting somewhat in precision, he might even use the modelling-tool (reticently, as an artist would) to make indentations smaller than with his fingers only he could. But that is a very different thing from submitting his work to an after-process; and, in fact, effacing with a mere revolving plane, in the half-dry state of the clay, all that was done to it whilst it was amenably moist to

the hand. If any such final shaving is to take place there is, artistically, small reason for the preparatory process of throwing. The thing might just as well be cast, or otherwise mechanically made from the commencement, since there is to be nothing but what is mechanical in the result. There is this against after-processes generally. They are apt to undo a great deal of what has been done. How fatally the final process of glass-papering wipes all character out of our modern wood-carving; whereas one great charm about old work (Plate 9) is in that crispness of touch which tells of the carver's chisel.

The excuse in the particular instance of earthenware (there is always an excuse ready for unworkmanlikeness) is in some supposed advantages of lightness and so-called elegance. The answer to this is that lightness is not the quality most characteristic of, or especially desirable in, pottery. If it is elegance we want we had better employ glass (Plate 8), the convenient and conventional treatment of which is all in the direction of grace and airiness. A bubble, whether blown in molten glass or soap and water, is a bubble. In earthenware we had best be content with

the subtle and beautiful, if heavier, forms the wet clay gives us.

The various vessels on Plate 8 are all characteristic of the process of their making. The Chinese vase and the ruder earthen pot have that softness of contour which comes of throwing on the wheel. The Greek vase shows, by its harder and more precise outline, that it was finished on the lathe. The coarse but rich ornament of the German tankard is appropriate to stamped stoneware. The savagery of the cut crystal cup, and the fantastic grace of the Venetian wine-glass, are no less characteristic and workmanlike.

Apart from the commercial incentive to make *his* craft fulfil all manner of impossible purposes, the workman unfortunately (and this is true of us all, whatever our walk in art) always wants to do more than his means will let him. It is the rarest thing in the world to know where to stay your hand, or to have the self-restraint to stay it. It is the more necessary therefore to insist—one cannot insist too strongly—that in ornament, at all events in ornament applied to any useful purpose, it is best to stop when the material itself gives you the hint. In the "convention"

of work in which that hint has been taken, there is always a fitness or rightness which is inestimable in art applied. Would any more pretentious form of art be so entirely satisfactory for the purpose of basketwork as the ingeniously plaited pattern on Plate 10?

If you once go beyond the resources of your material there is no knowing where to pull up; and few indeed are they who manage to halt in time. You may go on until you reach a sort of lower stage of "high art"; but in doing that you inevitably lose those qualities of usefulness and fitness which are the only justification of art, excepting only such as may be of the supreme beauty to justify its claims to independence. A great work of art is a kind of king among created things, deserving of all homage. But we don't want this work-a-day world peopled with kings, least of all with petty princes and pretenders.

To return to the instance in point, when it comes to the after-decoration of earthenware, the rule of convention holds equally good: "If it were done, when 'tis done, then 'twere well it were done quickly." Elaborate and difficult processes, involving something in the nature of a *tour de force*, are a snare to the

artist and a delusion to the buyer. The salesman has a way of excusing the high price of a thing on the score of the difficulty there was in making it. But was it worth while? That is the question. Apart from its superiority in design, there is not much to choose between the Portland vase and the marvellously cut glass or crystal of modern Bohemia. They are the very extravagance of workmanship, and as such merit the praise due to all patient labour, and no more. The simplicity and appropriate breadth of treatment of the crystal cup on Plate 8 is vastly more workmanlike than either. Patience does not rank, outside the copybook, as the virtue of virtues. Without some share of it genius falls short; nevertheless the power of taking pains does *not* constitute genius, nor will it even enable one to design so much as a good pattern.

But this is straying rather from the point, which is, that material and process may be trusted to suggest the character of decoration and the point at which it should be restrained. The lavish and unintelligent use of ornament about us is enough to reduce one to despair. In our longing for palatable ornament we seem sometimes to see

pattern, pattern everywhere, and not a line in place.

Suppose an earthen vessel is somehow to be enriched with colour, the simplest and about the most obvious means to employ is to dip it into a coloured glaze, just as the simplest way to dye a textile is to dip it into the vat. The glaze will naturally follow the law of gravitation, so that it is rather difficult to get an even colour by that means. But there is no artistic reason whatever why colour should be even. On the contrary, beautiful effects of quasi-accidental colour result from the running of the glaze. I say quasi-accidental, because the accidents in art are, or ought to be, foreseen and reckoned upon. Though the potter cannot be sure of any precise shade of colour, experience tells him within a little the kind of "fluke" he may anticipate. He fires, so to speak, with his eyes shut, but not quite so wildly as might seem. He takes a good look first at the object of his aim,—or he would not be so habitually near the mark.

In actual flaws and failures there is nearly always a lesson which artists have promptly turned to account—not by intentionally

producing faulty work, but by noting how a new and beautiful, and at the same time workmanlike, effect may be obtained by working *with* the material. A coloured glaze, no doubt, may be too unequal; a careless or lazy workman may stop too soon. In the glazes of the Chinese and Japanese the change of colour is sometimes far too sudden. But even so, it is a hundred times to be preferred to the insipid evenness of tint which is the aim of so many a modern manufacturer. It was the aim too of the celebrated French potters, who laboriously produced some of the most excruciating tints —whether due to their own want of taste or to the vulgarity of the Du Barry and other such patrons, one hardly knows. In how many of the arts is insipid evenness reached, with infinite pains, and at the sacrifice of beauties peculiar to the material!

Greater variety of colour than is to be obtained by simple glaze may naturally be arrived at by in any way roughening the surface of the ware before it is dipped. And the judicious contrast of smoother and rougher parts is only what would naturally occur to the artist. This roughness may consist in the

merest scratching, or in raised modelling, which last is capable of being carried to the point even of competing with sculpture. In that case it enters a class of work not now under consideration. If the perfection of figure modelling is what is wanted (and this, again, applies to a great deal of misplaced figure work in decorative art generally), it would be so much more properly put to so many other purposes, that it is a mistake to apply it to the useful but homely pot.

The genius of Flaxman was, relatively speaking, wasted on those finikin and crudely-coloured medallions with which the most familiar form of Wedgwood ware is encrusted. A much more workmanlike process is that of painting in clay on clay, usually in white upon a coloured ground. M. Solon, with whose name it is associated in England, is not a Flaxman ; but his paintings in pâte sur pâte, as it is termed, are infinitely superior as pot-decoration to Wedgwood's moulded medallions. You get here the utmost delicacy of which the material is capable. Not that this utmost delicacy is a thing universally to be sought. It is a kind of luxury in which one may be occasionally allowed to indulge, or

in which here and there one competent may be permitted to indulge, growing as it does naturally out of a natural process of work. It is a sort of fine-gentleman cousin of the process that is easy and obvious enough for the decoration of ware for common use—that more rough and ready painting, namely, in clay or "slip," as it is called, where the touches of the brush are left to tell their own tale. It is strange that the public should have to learn that the tale of the tool—brush, chisel, hammer, or whatever it may be--is never discreditable, and always interesting.

There is a something very direct and workmanlike in the way "slip" is used in modern Indian pottery. The dark-coloured clay is first patterned over in whitish slip, and then the whole is dipped in transparent glaze. It results from the very method of execution that the relief is *so* slight as not in any way to interfere with the form of the thing it enriches, nor yet in any way to hinder its usefulness. The necessarily restricted relief of repoussé metal is accounted for in a similar manner; whereas ornament in relief *applied* to a vase usually presents the appearance of so much excrescence upon it. The

modelling you get with a brush is not likely ever to be in too bold relief, nor that which you get by punching too sharp.

A very suggestive illustration of appropriate flatness of relief resulting from a workmanlike proceeding, is given in Plate 11, representing an old German book-cover in carved leather. The flatness is such that it is not unsuited for its purpose, and the quality of the material is retained. It looks like leather.

Sgraffitto, or the art of scratching, is another of those direct methods plainly appropriate to the decoration of earthenware. Just as the Italian decorator covered his tinted plaster with a layer of white plaster, and while it was yet soft scratched out his design (which thus appeared in the dark colour of the underground), so the potter dips his vessel of dark-toned clay into a paste of white, and on this outer coating proceeds to scratch his design. Or, of course, he may scratch on the moist body of the vessel itself, and rub colour into the incised lines.

These simple processes in a manner suggest themselves by their very easiness; and the blunt line produced by the point on the damp clay, has an ornamental character of its own

well worth keeping. The delicate diaper lines, simply picked out of the painted ground (Plate 12), have a different character of their own.

The objection there is to obtaining relief by the application of cast ornament applies only in a less degree to rude and rough and less assuming work, such as German stoneware or *grès de Flandres* (Plate 8). Stamps or punches for impressing coarse patternwork, need to be used with judgment. Within certain limits one may employ in ornament, especially of the ruder kind, devices which would not be endurable in work of more lofty pretensions; still there is always a danger of hardness resulting from mechanical and perfunctory ways of working, even though, as in stoneware, the glaze may help to soften the forms. The important thing is that the end of beauty be gained without sacrifice of use, and without greater expenditure of time and labour than is justified by the purpose in view. The truly conventional way is the workmanlike way.

One would not by any means exclude human or animal figures from the sphere of ornamental design; but it should be of the

simplest and most spontaneous kind, such as can be done without effort and under no special disadvantage, such as in no way pretends to the accuracy, finish, or dignity of art unapplied. The figures on the Etruscan vases (Plate 8) were, ordinarily, painted right off without any great care for accuracy. Sometimes they are wild enough in drawing. If it comes easier to a man, or is more amusing to him, to devise human or animal forms rather than any other, by all means let him do that; but, in so doing, let him aim at what he can *best* do *under the circumstances*, and not ignore them, nor yet attempt to oppose them.

How desirable it is to let the mode of workmanship suggest the design, is shown by the futility of searching for qualities difficult of attainment in the material used. This is nowhere more apparent than in the painting of pottery. Think of all the miniatures in china turned out from the factories of Sèvres, Dresden, and Stoke—marvels of misapplied skill—and compare their absolute ineffectiveness as decorations with a bit of Italian or Persian faience (Plate 12), and see how the glory is all with the direct and untrammelled "conventional" art of the potter who made

the most of the beautiful capacities for colour and iridescent beauty which lay in his crucible, and how vain were the efforts of the would-be miniature or landscape painter. If he ever succeeded in getting what he sought (which is very doubtful), he certainly failed to produce decoration ; that was sacrificed, as it so often is, to a misplaced pictorial ambition.

This applies, *mutatis mutandis*, with equal force to decorative treatment in general. Whatever medium a painter may adopt, he is bound in reason to consider that medium, as he is bound to consider the work before him in adopting it—distemper, fresco, oil, encaustic, or whatever it may be.

In ceramic painting the choice lies between painting on the glaze and on the "biscuit," as it is called before it is glazed. For ordinary earthenware the more limited resources of the "underglaze" method offer all that the ornamentist need desire. One reason for our modern failures lies in the multitude of our facilities ; the secret of the ancient triumphs is often in the simplicity of the workman's resources.

The artist's choice of manner will be regulated to some extent by what he wants

to do. In any case, if he is discreet, he will limit his ambition to the range of his appliances. The china painter, that is to say, will think out a scheme of colour which, if not suggested by the oxides employed in ceramic painting, is not in any way opposed to them. This will, indeed, deprive him of some possible indulgence in naturalistic effect, but in the main it will lead him to more perfect achievement than would the pursuit of mere difficulties, without regard to the nature of vitreous colours and the action of the kiln upon them. One appreciates more fully the colour of the Persian or Damascus pottery when one realises that the painter's palette was set by the circumstances. It is only when we respect our materials that we get so much out of them.

The uncertainty of all colour which has to pass through the fire renders it most unwise to entertain a scheme which (whether founded upon nature or not) depends upon absolute accuracy of tint. The certain thing about vitreous colours is their uncertainty in the kiln.

The potter is working always more or less in the dark, since the value of his work is not

perceived until it comes out of the furnace. It may be within the bounds of possibility to get actual flesh tones in china colours; but at what a cost of risk, and at what a sacrifice of qualities (rich colour qualities, for example) so easily obtainable, and decoratively so much more valuable!

It is only reasonable that, if an artist elect flesh-painting as his *métier*, he should forswear whatever has to pass through the fire, and adopt a medium in which he can express himself with ease, or at all events without for ever breaking his heart over it. Better be an underwriter during perpetual high gales, or a large holder of doubtful stock in a time of general panic, than live the life of a pot-painter whose ambitions are all in opposition to his craft.

So in other crafts. The glass-painters of the best periods were content with white glass for their flesh tone. And it was for no lack of ability to get something more like flesh-colour that the great decorators of the 16th century adopted flesh tints, which certainly must be called conventional. However limited the resources of an art, a man knows them, or should know them, when he takes it up. Besides, every

medium has its inherent advantages as well as its limits—and it is these which should be turned to account. There is a liquid and transparent quality in water colour, which every water-colour painter wishes he could only retain beyond the wet stage of his picture. This is just what the china painter can get, without the least trouble, by simply floating on his colour with a full brush. Surely, then, that is the kind of thing to aim at, when it is within easy reach; instead of fidgetting it, or stippling it, or dabbing it with cotton wool, to the dull evenness so dear to the commercial mind, or otherwise laboriously seeking effects more easily and much better produced by other means. That loose, juicy, pot-like look is more valuable in ceramic painting than any degree of mere finish, and should be valued accordingly. So also the scheme of colour should have reference to what can best be done with the palette available.

In pottery painting, or whatever it may be, in all kinds of carving, in mosaic, in embroidery, in jewellery, everywhere it holds good, that the selection both of the forms and the colour should have direct reference to the technique employed. What is simplest under

the circumstances is not only safest but most directly conducive to success; and there is a further charm in the evidence of directness itself.

In all applied art, and in every stage of it, the work in hand points out the appropriate treatment; it suggests the degree as well as the kind of conventionality to adopt; you have but to heed its prompting and it will tell you what to do, and where to stop.

IV.

Style and Handicraft.

The purpose and position of ornament belong to the wider subject of decoration, at which we have not yet arrived, and come only incidentally under our consideration. On the method of its execution depends, as already said, the very conception of ornamental design. One cannot properly discuss style without reference to material and tools.

The style peculiar to each particular kind of work is, indeed, so strongly marked, that it would be quite feasible to classify ornament according to its evolution. Mr. Wornum's analogy between "style" in ornament and "hand" in writing, holds absolutely good. There never was a tool or process but it wrote its character on the work done. It was so in a simple practical matter like lettering. The cuneiform character of the Assyrian inscriptions was developed chisel in hand. It was the chisel shaped the hieroglyphs of Egypt.

In a certain bluntness of the early Greek character the influence of the stylus is apparent. Chinese and Japanese writing must first have been done with the brush.

The various shapes of letters on Plate 13 are instructive. The simple form of the Roman capitals A B C might, like the Greek, first have been indented on a soft substance with a point. The later form of lettering, D E F, with its varying thickness of line and its spurred extremities, was better calculated for engraving on hard stone. The use of the thick and thin lines (the down-stroke and the up-stroke) comes of the use of the pen, and so, plainly, does the characteristic thickening of the backs of certain Gothic capitals such as the G. The smaller Roman letters, h i j, and still more plainly the italics *k l m*, are unmistakably related to the "round-hand" n o p. But it is in the medieval "black letter" that penmanship is most plainly pronounced, as in the letters q r s, in the capitals T U Y, and in the more fantastically flourishing W on the same plate.

That our own printed type does not more distinctly reveal the intervention of the metal worker, is accounted for by our following the

historic, pen-born, fashion of lettering—I would say, too closely, but that history and sentiment must be allowed to count for something; and it would be hard to set a limit on their just influence.

In our day we are given to the cultivation of "a good business hand," which is just a little characterless and monotonous, as are indeed the lives of some of us who accomplish that modest end. Time was when the pen of the ready writer indulged in occasional flourishes. There is no time for such frivolity nowadays; and what little character there is left in our handwriting seems likely to be sacrificed to the convenience of the stylographic pen—even if we do not give up penmanship altogether in favour of the "type-writer."

Style, then, is not so much a thing of dates and countries as of materials and tools.

Whenever the development of ornament is discussed, it is the custom to begin with the savage. How the aboriginal developed into the Assyrian is not very clearly shown. But from Assyrian art is traced Egyptian, and from that again Greek art, and its Roman imitation—all very plausibly. The foundation of Byzantine art upon the ruins of

Classic, the growth of Gothic, the reaction of the Renaissance, its transplanting, and its degradation, follow in accustomed order.

It is easier to jog along this well-beaten road, though it be a trifle tedious, than to explain how, all the while, parallel with this, Oriental art was pursuing a course of its own, infringing, nevertheless, at times upon Western art, and whenever that was the case, leaving the imprint of its touch upon it.

This would be well worth doing; but it would take volumes to do it in, and would demand, besides, historical knowledge far greater than I can pretend to—a knowledge perhaps scarcely compatible with the necessary knowledge of art. One feels always how hard it is for the artist to equip himself with the necessary scientific and historic knowledge; as for the man of learning and research to cultivate that susceptibility to art necessary to any profitable discussion of the subject.

Still more to the purpose would it be to classify ornament according as it was plaited, notched, scratched, turned, modelled, carved, inlaid, printed, woven, embroidered, or what not (see Plates 10, 30, 12, 37, 21, 9, 36, 7, 19, 40, respectively).

In such a classification architecture would divide itself into masonry, brick, concrete, timber, plaster, and iron styles. The subsidiary arts would class themselves in conformity with the use of clay, stone, wood, metal, yarn, and so on.

There would be further subdivisions into granite, marble, sandstone; into hard and soft wood, close grained and variegated; into wrought, cast, chased or beaten metal; into tapestry, cloth, damask, velvet, lace, brocade, embroidery, and the like.

What are known as the historic styles might be examined by the way; they would go to illustrate the development of style more technically considered. In all probability it would be shown that, wherever the historic style is marked, its character is to be traced to some mode of workmanship which, if it did not actually inspire it, made it advisable. The characteristic ornamental forms of a period or people can usually be traced to the technique and needs of that same people. In this far, ornament rises to the dignity of history.

A tolerably clear idea of style is conveyed to us at once by the mention of Egyptian,

Greek, Gothic, or Renaissance sculpture. But if we compare for a moment the carving of Egypt, of Greece, and of Medieval and Renaissance Europe, we shall see at once that the styles are not more distinctly of a place and of a period than they are markedly granite, marble, and soft stone styles.

The monumental simplicity of the graven obelisk, the refinement of the Panathenaic frieze, the rude grandeur of the Gothic portal, the delicate elaboration of the Italian arabesque, were but the natural development of resources at hand. Working in porphyry, basalt, or granite, severe simplicity was inevitable, and the Egyptian (Plate 14) was severe with a vengeance. There was no temptation to him to fritter away all breadth in the accumulation of petty detail. On the other hand, the even textured but less obstinate marble encouraged the Greek sculptor and his fifteenth century successor (Plates 15 and 16) to greater and ever greater subtlety of execution; which again would have been quite out of the question in working the more friable sandstone native to Northern Europe (Plate 17).

We associate the coarser treatment with

Gothic carving in particular. It is all the more noticeable, therefore, how the sculptor of the Renaissance, working in a coarse stone, arrived at results in some respects so like Gothic work. Compare Plate 16 with Plate 17, and see the difference between early Renaissance marble and later Renaissance sandstone. The later work is much the rougher, as sandstone is rougher than marble.

Apart from all that has been said, there are conditions of sunlight and grey skies, dry atmosphere and moist, which also have their say in the character of carving everywhere.

To explain at length the invariable conventionality of historic ornament, would be to write the history of the various crafts, each of which might claim a treatise to itself. All that one can do within the limits of a manual like this is to give instances, typical as may be, of the influence of material, tool, or process of execution upon design, and to show how the forms of ornament were inevitably modified by such influence, if not actually due to it.

In discussing in a former text-book the anatomy of pattern, I pointed out how its construction was affected by, and very often

directly due to, some particular manufacture or method of work. So it is with the details of ornamental design.

The exquisite simplicity of certain characteristic patterns familiar in the figured velvets of the 15th century, is cleverly calculated to disturb the least possible amount of the sumptuous pile, so that the full value of the rich texture is preserved.

In the old-fashioned damask patterns the big broad leaves and scrolls are planned (like a Turkey carpet or an Indian rug) with a view, before all things, of getting a broken effect of colour. The designer relied upon the quality of the silk with its varying sheen to alleviate the exceeding flatness of the pattern. No treatment less broad would have done justice to the quality of the stuff, which in those days was worth consideration. Compare even the comparatively debased specimen of woollen damask on Plate 18, with the current designs in linen damask, and it will be seen how well advised were our grandfathers. Nineteenth century manufacturers who desire equally to exhibit the quality of their woof, can think of no other way of doing it than by leaving the ground for the most part empty. They

dearly love a spot pattern. Is it possibly out of consideration for the lady purchaser that modern table-linen is for the most part so *petite* in style? The consideration of the customer and not the thing to be done, is responsible for much of our modern misdoing.

In certain woven fabrics of our time the hope of disguising the shabbiness of the substance has prompted the adoption of the fussiest kind of pattern. One had need beware of textiles worried all over with pattern; they are often expressly designed to hide shoddy. The manufacturer of *bonâ fide* silk, or wool, or other worthy material, would do well, for his part, to identify his goods with a kind of design which the baser fabrics cannot imitate without convicting themselves.

The character of the Lyons silk designs of the 17th and 18th centuries owes very much to the circumstance, that the lustrous material was so fascinating that artists were led astray from beautiful form, and simply revelled in the delights of colour. Charming as these silks often are, translate any one of the patterns into uncompromising black and white, and you are disillusioned at once. The most characteristic of them lose all their

charm in monochrome. It is hard to realise that forms like those on Plate 19 can ever pass for beautiful; but it is wonderful what colour and texture will reconcile us to in the way of design. That is no reason why the artist should leave us to reconcile ourselves with ugly forms, still less why we should accept such models without attempting to improve upon them.

The Byzantine colouring, in bands, according to the weft (Plate 20) is almost brutal in its outspoken acceptance of the limitations of weaving.* It speaks volumes for the safety with which such limitations may be accepted, that the contradiction between the forms of the design and the scheme of colour does not in the least offend one in the silk. The same kind of thing occurs sometimes in Japanese stuffs.

Until recently, the conventional treatment of foliated forms always and everywhere confessed quite frankly the way it was done. The so-called honeysuckle of the Greeks I have shown elsewhere† to be directly traceable to the use of the brush, as was the case

* See 'Anatomy of Pattern,' pp. 49, 50.

† See 'Everyday Art,' pp. 106–8.

with other familiar forms of painted Greek ornament.

The Corinthian capital and the acanthus scroll, even when they most nearly approach nature (which is never very closely), are always modified according to the conditions of sculpture.

In the Byzantine version of the Classic leafage, in which the sculptors made abundant use of the drill, the drill-holes form an element in the design. The same thing occurs in much of the later Gothic foliage, more especially in German work.*

The Arabian borders on Plate 21 leave no possible doubt as to their having been traced on the plastic stucco with the modelling tool. The workman did what was simplest for him to do. We may be sure, too, that it was the ease with which the plaster could be manipulated, which led to the extraordinary elaboration characterising the impressed diapers on the walls of the Alhambra.

The somewhat savage enrichment of our own Norman buildings forcibly recalls the rude way it was done. It is more properly speaking chopped than carved.

* See 'The Planning of Ornament,' Plate 24.

To refer to a specific material, you cannot look at the ironwork of any early period without seeing how directly the forge affected its design. It was the obvious thing to do to beat out the metal into a bar, and equally obvious to beat out the bar into the familiar spirals. And the very difficulty of forging a perfectly even bar was the surest preventive against mechanical results, such as we see in the handiwork of the modern smith, whose bars are made for him by machine.

The forms on Plate 22 belong more distinctly to the forge than to France of the 13th century or Italy of the 17th. The metal-workers in different parts of medieval Germany give different expression to their work (Plate 23). If a man had anything to say he expressed himself. A strong man would found a school. But it is smith's work everywhere. Even in the decadence of the art, when it bursts out into an uncomfortably bristling form of foliage, it breathes always the atmosphere of the forge. If nature inspired it, it was the hammer and the pincers that shaped it.

It is precisely for this reason that similar forms in cast iron are so singularly ill-judged.

There is nothing contemptible in cast iron, if we would but abstain from the reproduction in it of forms inappropriate to casting. We should have no cause to regret the institution of the foundry, if founders would but put art into their moulds ; and the first step towards that end would be, to dismiss from their memories the familiar forms of the forge. It is customary to talk about cast iron as if it were an abomination. It is its misapplication only that is objectionable. There is no reason why we should not do in iron something like what the Italians of the 15th century did in bronze—unless it be 19th century incompetence.

It is one of the wicked ways of our civilisation to smoothe out all character from workmanship. For idiomatic expression in ornament we have generally to travel back to a remote period. The angularity of the piece of darning on Plate 24 is what might be called old-fashioned. But how it explains itself! No one who cares for needlework would wish to have it otherwise.

So in embroidery (Plate 40) we look for colour and not perfect lines ; and so again in mosaic or stained glass (Plate 39),—just as

in glass-blowing (Plate 8) we properly expect to find lightness rather than precision of form.

In the pursuit of mechanical finish and the blind worship of nature, considerations of this kind are commonly lost sight of. The love of smoothness comes of our abuse of machinery. The love of nature is not, as the realists (so-called) would have us believe, an invention of to-day. Artists have always loved and studied nature. Only, in the historic treatment of natural forms, modelled in clay or plaster, carved in wood or stone, painted on wall or window, wrought in metal, or on a loom, or with the needle—there is always a touch of the tool which removes the rendering by so much,—let us not say from nature, for the instinct which directs such modifications is natural enough,—but from the imitation of nature.

V.

The Teaching of the Tool.

Difficult as it may be for any but a workman quite to appreciate the influence of tools and treatment upon ornamental design, and so to trace the origin of time-honoured forms to their first cause—it is certain that nearly all forms of ornament may be followed back to a beginning in technique.

Take any tool in hand and proceed to design with it, and see what comes of the experiment. It will be something quite different from what you would have drawn with a pencil on paper, and something much less literally like any natural object: and according to the tool employed will be the character of your design.

The process of *repoussé* work or embossing will serve for an example. You lay a sheet of brass or copper, with its face downwards, on a bed or cushion of pitch, and proceed with tools of various shapes and sizes to

punch the pattern from the back. Now, if you have any feeling for the material at all (and if you have not, you have mistaken your vocation), you begin very naturally to do what can be done in it. Accordingly you set to work to beat out certain round bosses, Plate 25, A, which you surround with smaller bosses, B, arriving so at something like flowers. These you go on to connect with rounded stems, C, from which grows a kind of foliage, D, large or small in detail, as need may be, but always more or less bulbous in shape. We have thus a pattern, which is characteristically *repoussé*, beaten work, and which has grown to a great extent out of the conditions under which you were working.

Plate 25 pretends to do no more than illustrate this method of proceeding. Your bosses may take the form of figures, animals, or what not; yet, in the hands of a sympathetic workman, they will not cease, whatever their individual shape or interest, to be always bosses. It is your unsympathetic workman who designs without foreseeing how every detail is to be carried out, and misses the characteristic qualities of his material.

It cannot be insisted upon too strongly that, in designing for ornament, it is absolutely essential always to have those conditions in mind, as clearly as though you were yourself working under them.

In beaten work you descend from the mass to the minutiæ; in filagree, on the contrary, you would work from the minutiæ to the mass. Commencing with wiry lines, you would perhaps clothe them with more compact spirals, clustering these together where you wished to concentrate the effect. The design of the Byzantine artist of a thousand years ago is not, you will see (Plate 26), very different from that of the medieval silversmith, nor yet from that of the Genoese and Maltese artificer of to-day.

This is the type of all ornament in delicately elaborate line, as, for instance, damascening, embroidery in gold or silken outline, and, on a larger scale, hammered ironwork. Substituting straight lines for curved, it has its parallel in certain kinds of lacework, such as the so-called "Greek lace." (Plate 27.)

A very curious instance of design directly inspired by the way of working occurs in the Javanese work on Plate 28. Some plastic

substance, paper or gutta-percha, is rolled out into the thickness of stout wire, curled round into spirals, and laid on papier-mâché. The ground is then partly fretted away and the whole gilded. There is something delightfully naïve in the result.

Fret cutting affords another homely illustration. The very necessities of the saw suggest the nature of the design. You are led to devise some form of pierced ornament not unlike stencilling; or, if you prefer to cut away the ground instead of the pattern, you are compelled to hold the design together by ties.

Unless these ties were from the first taken into account, they would be sure to mar the effect. The artist, accordingly, finds himself, as if by instinct, evolving a kind of strap-work, which reminds one of the typical Elizabethan ornament—which very possibly originated in some such device as fret carving, although the forms show also the influence of types more proper to metal. The likeness of the strip of low-relief pattern-work, on Plate 29, to fret cutting, is too striking to be merely accidental. The relationship challenges recognition.

In the comparative massiveness or delicacy of a fret pattern, one sees at once whether it was designed for stone, or wood, or metal. The artful fret-worker leaves no frail projecting ends, in stone or wood to be promptly broken off, and in metal to catch hold of any textile thing that may brush against them. The strength of a metal fret naturally affords facility for indulging in more florid forms of ornament. The iron lock-plate represented on Plate 29 shows this, and exemplifies besides how the metal may be in part embossed, and, of course, engraved.

Even simpler and more direct than fretwork is the plan of notching thin planks of wood and crossing them (as in Plate 30). It has all the effect of elaborate fretwork. The acme of simplicity is shown in the no less ingenious device of placing the notched planks side by side, so as to produce a pierced pattern of singular effectiveness. Instances of this, taken from the balconies of Swiss chalets, are given on the same plate with the Arab lattices referred to above.

The likeness between a fret pattern and a stencil pattern is explained when one realises that a stencil plate is a fret of cartridge paper,

through which the design is rubbed in, the plate protecting the ground.

Stencilling is very properly used in decoration as a means of laying in a first painting only, in which case one may do with it what one will, or what one can. One may even, by the use of a succession of plates, produce most elaborate designs. An ordinary Italian house decorator will manage to stencil a wall surface with a gorgeously rich damask pattern, at a cost not exceeding that of equally effective wall-paper.

A stencil pattern proper should, however, be designed to be stencilled right off, without needing to be made good at all by hand. This principle is illustrated in Plate 1, which by its construction owns to being stencilled. It is a bastard kind of design that is ashamed of its origin.

Ties, it will be seen, may well be turned to account to form a pattern on the pattern, to give detail, such as the veining of large leaves, or otherwise to break up the broader masses of the design.

The geometric diaper on Plate 31 is obviously produced by means of two stencils, the outline being formed by the portion of

the ground left clear. In the case of an elaborate series of stencils each one may be schemed to make good the ties of another; but, to the workman at least, there will always be an interest in the evidence of the way an effect has been produced. He looks for character as well as beauty.

It must be confessed that he is the only one who does. This merit of workmanlike-ness is one which the public cannot, as I said, be expected to appreciate. It is reserved for the craftsman to recognise behind his work a craftsman with whom it is his pride to claim fellowship. His interest in it is not alone in seeing how another solved a difficulty which had occurred to himself, or took advantage of an accident which to him had been fruitful only of disappointment. He has a thrill of purest satisfaction in feeling how some one, far away and years ago perhaps, realised, as he does, that this, and not that, was the spirit in which such and such thing should be done, such and such material should be treated, saw the same hint in nature as he sees, or felt the same limitation in his art as he feels. This is the satisfaction, not of the sentimentalist but of the workman. And no workman of any

account will be satisfied without the approbation of the fellow-workman he respects.

The tooled book-binding illustrated on Plate 32 is interesting rather to the craftsman than to the artist. The ingenuity with which a few simple and rather insignificant tools are made to suffice towards a somewhat florid effect, shows the practised hand.

Our wonder at the splendid scheme of architectural colouring which prevailed in Italy, settles down into the conviction that it was encouraged, if not wholly suggested, by the gorgeousness of the multi-coloured marbles within easy reach. This it was which led also to the development of a kind of decoration, very characteristically mosaic, in which the beauty of the material is displayed in large slabs of rich veneer, whilst the waste is used up in the form of geometric pattern work, the design of which is literally cut according to the chips. The contrast between the broad surfaces and the minute mosaic is exceedingly happy.

The large circular slabs of porphyry which form so prominent a feature in the pavements of Byzantine churches in Italy, notably in many of the Roman Basilicas (Plate 33),

afford yet further evidence of the dependence of design upon the conditions of material. These circular plaques are in fact so many slices of old columns, saved from the wreckage of more ancient buildings, and put to this ingenious use.

The common adoption of geometric patterns for inlaid pavements was countenanced by the circumstance that the unequal and accidental colour of the marble cubes, just counteracted the tendency to mechanical hardness, in which lies the danger of purely geometric ornament.

In marquetry, similar geometric forms were found, for similar reasons, to be serviceable, so that one may say that, whether in wood, or mother-o'-pearl, or marble, a style of inlaid pattern-work was begotten of the very facility of shaping and laying geometric forms, by the certainty of the harmonising influence of colour.

It is in the inlay of natural woods and stones and the like that we find the most satisfactory use of absolutely geometric pattern. The accidental variation of the natural colours is exactly the thing needful. Unexpectedness of tint makes amends for cer-

tainty of shape, and gives an air of mystery to what would otherwise be only so much mechanism. The rigid forms of the diaper on Plate 34 are plainly in need of some such softening influence of colour. Again, in geometric ornament like the "niello" on Plate 35, the silvery brilliancy of the metal glorifies, so to speak, the nakedness of the design.

So in the ornamental glass mosaic so often used in Italy about Giotto's time in connection with white marble, the shimmer of the surface, more especially as it was never absolutely even, put all contingency of harshness out of the question. Such a thing was barely possible with all those little facets of glass catching the light at all manner of angles, and glittering each according to its own bright will.

In marble inlay of strongly contrasted colour there is no such excuse for severity of form; some of the old pavement patterns, that for example in the baptistry at Florence (Plate 36), are exceedingly graceful in design. Even there you see the influence of the material. The desirability of maintaining the solidity of the white slabs into which the blackish-green

is inlaid, has led to a kind of network of white enclosing the darker tints, by which means the contrast between light and dark is most judiciously softened. These patterns would stencil perfectly. They are, in fact, fretted in marble.

Here it may be as well to remark that, though a stencil is a kind of fret, a fret is not exactly the same as a stencil. In designing a stencil the ties are the main consideration. In designing a fret, the connection of the openings is an important point. One must as much as possible avoid the hindrance of perpetually removing and refixing the saw, which, in fretting a stencil pattern such as that on Plate 1, would take almost as much time as the actual cutting. Long, smooth, sweeping lines are also suggested by the saw, the backward and forward action involved in following jagged lines, such as the serrated edges of leaves, resulting in some waste of labour.

Very characteristic design occurs in the wooden lattice work which has lately been imported from Cairo, and freely used (not always with discretion) in the decoration and furniture of English houses (Plate 37). Better

lattices it would be difficult to find, or a better means of employing otherwise not very useful scraps of wood, or a better employment of wood turning. This Cairene woodwork indicates equally the scarcity of large timber, the cheapness of labour, and the dependence upon the lathe. Had the conditions been other, we should never have had just such patterns as the Arab builders evolved in infinite variety.

The characterlessness of 19th century ornament is due very largely to the absence of any direct impress of the tool upon design. In the process of modern manufacture, everything is planed down to a marvellous but monotonous smoothness; the mark of the tool, which is the evidence of workmanlikeness, is popularly regarded even as bad work —want of finish, indeed. Even in this age of enlightenment there are some who have yet to learn that work may be smooth and smug, and yet not beautiful, nor so much as finished.

This mistaken ideal of perfection is not, it must be owned, altogether a modern one. In tapestry, for example, designers have been working for centuries past, steadily in the pictorial direction, and against the threads;

until there is now little difference between the picture and its copy in wool, except that the copy costs ever so much more than the original. Already in the comparatively early tapestries of Raffaelle, you can see at Dresden or Beauvais what inferior and characterless hangings his famous cartoons make, as compared with the neighbouring designs of earlier, unknown, and less accomplished draughtsmen, who knew their trade. That Raffaelle either knew little or cared little about tapestry, is clear. And in his failure there is some consolation for the least of us. If we only love our trade, and know it (as only those can who love it) we may succeed where a Raffaelle would fail, though we be anything but Raffaelles. It is easier said than done, for a great painter to step down to mastery in the minor arts. All trades want learning.

The crowning point of ignorance and inconsistency in design is reached where the convention peculiar to and characteristic of some quite different material is affected, as in the bulbous forms of beaten metal reproduced in 15th century Gothic stonework, or the facets of Brobdingnag jewels in Elizabethan woodcarving.

The modern Frenchman seems to have no conscience at all in this respect. He will copy anything in any material, and be proud of himself. He is not to be persuaded that the characteristic lines of darning for example (Plate 24), when reproduced in wall paper are simply broken lines, as meaningless as they are awkward.

Affectation of that kind seems to throw into stronger relief the fitness of fit ornament.

VI.

Some Superstitions.

Out of the practical conditions of work have arisen elements of design so distinctly decorative that they are sometimes taken to be inseparable from ornament and essential to it. Flatness of effect, symmetry of distribution, firmness of outline, and other such useful devices, have been adopted as articles of a rather too credulous faith. That is a proud position to which they are by no means entitled. They are at the best working rules, a sort of *recipe*, not without use, but useful mainly to those who are not much in need of such help.

Let us inquire into one of these superstitions—outline. It is of such use in ornament, and so often useful, that it has come to be accepted by certain theorists as a necessity of the case; with them it is the passport to "the decorative." Useful as an outline is in decoration, it is not, however, inevitable. Nor

is it so easy to say just where an outline should be used.

In very many cases, the material and its workmanlike employment necessitate an outline. They may even determine its colour, as in the case of the metal lines marking the cells in which the paste of enamel is laid. And it is curious to notice how, in *champlevé* enamel, where the cells for the paste are dug out of the metal ground, the outlines are of varying thickness ; whilst in *cloisonné* work the even section of the wire soldered on to form the cells, necessitates an absolutely even strength of line.

You have only to look at the quality of the outline, to tell at once whether enamel is *champlevé* (a sort of niello in colours instead of black) or *cloisonné*. The evangelistic emblem on Plate 38 combines the two processes. You can distinguish the solid metal from the wire-work quite plainly.

You find that when the more laborious process of cutting out the ground is used, the artist adopts a larger treatment, and is altogether more chary of his lines, omitting them even, and blending one colour into another. The method invites the use of broad

spaces of plain metal, which in their turn tempt to engraving—although thereby there is a danger of disturbing too much the breadth and beauty of the polished surface, a danger successfully avoided by the artist of the twelfth century (Plate 38).

In soldering on the flat wire, on the other hand, one is induced to elaborate a network of lines, such as we see in Chinese and Japanese enamel, too familiar to need illustration.

Thickness of outline is not unusually regulated by material. Another case in point is the leadwork by which a stained-glass window is held together. Glazing being, in richly-coloured glass, a necessity, the art of designing it consists partly in throwing the lead lines into the outlines (Plate 39). The leading of a mosaic window corresponds exactly to the *cloisons* of enamel, just as the pierced plaster windows of Cairo may be compared to enlarged transparencies in *champlevé*.

In *appliqué* embroidery, again (Plate 40), it is practically something of a necessity to mask the joints by an outline of gold or silken cord, very much to the enhancement

of the general effect. In short, there is every reason to follow the lead given us by the material. It does not do to play altogether from your own hand; the material is, so to speak, our partner in the game of decoration.

An artist will seldom resort of his own free will to an even and rigid outline all round every form. Excepting at a great distance from the eye (where its equality is not seen), that is almost certain to result in hardness. Mechanical precision is not seldom the manufacturer's ideal of finish. It is one, unfortunately, which he can all too easily realise —at a loss of what beauty of feeling and colour, he can probably never be brought to know.

The instinct of art is rather to lose an outline, more or less, in places, and not to insist upon it unless its value is sufficient to justify the risk its use entails. The only rule which can be laid down as to the use of outline, is so extremely simple as not altogether to satisfy the pedantic mind: if the need of an outline is apparent, then adopt it; but if not, if the effect is satisfactory without it, why on earth should one insist upon its use? For a reason —yes; but not otherwise.

The insistance upon outline for the sake of outline, as though decoration were not decoration without this official stamp of pedantry, this trade mark of the decorating shop, is pure nonsense.

The truth is, outline is frequently just a matter of expediency, and no more. And a very wise and fit expedient it is, if only in view of that process of reproduction which is admitted to be one of the necessities of modern decoration, and particularly of modern ornament.

The vaguer forms which depend so much upon the touch and feeling of the artist do not lend themselves to this necessity of reproduction. An outline does. And if, in outlining his drawing, the designer cannot help in some degree hardening it, the evil is infinitely less than if more undefined and delicate forms had been left to the tender mercies of another.

Moreover there are cases in which some consolation awaits the man who has the courage to make his design such as the available mechanic can render. The hard outlines of stained glass are blurred by the spreading of the light as it shines through;

the hard shapes drawn for the damask weaver are redeemed by the sheen of silk or linen,—and so on. In such cases the artist who has been equal to the emergency will often find again in the executed work something of the delicacy belonging to his original.

Even in autograph work, where the artist executes his own design, he still avails himself of a soft outline. Decorative art is a kind of shorthand. Its very existence seems to depend upon its being done with readiness, quickness, and certainty—so that he who runs may read.

The art which only careful scrutiny reveals to us will, for the most part, fail to win appreciation. Whatever its merits, if it hide them, no wonder that men pass them by. Even poetry of the over-subtle order is not popular; and decorative art (unpopular though it be) is essentially popular art.

The effectiveness so much to be desired in decorative art, has to be obtained without many of the resources of which the painter is free to avail himself. It is not often that the ornamentist can indulge in extremes of light and shade, nor yet in very strong modelling. Under these circumstances, an outline

is invaluable in helping to detach a pattern from its background. It is not generally understood how effectually even a delicate outline will sometimes do this (Plate 41).

In work placed at a great distance from the eye, outline is quite the simplest means of definition. The greater the distance off, and the less the contrast in tone and colour between the design and its background, the more urgent something of the kind becomes.

For all that, there is no law making outline compulsory, unless the artist feels the need of it. He may, if he please, detach his pattern from the ground by deepening the one, or lightening the other, or by doing both. That would, however, ordinarily be a much more laborious business. Besides, it is only fair to assume that there was always some reason for the choice of tones adopted in the first instance; and it may be anything but desirable to modify them. So it happens that in many instances the expedient of an outline is most handy. It enables one deliberately and safely to adopt a scheme of colour which, but for it, would be altogether ineffective.

So far from invariably hardening or empha-

sising form, outline may equally be used for the diametrically opposite purpose of softening the shapes, as may be seen on Plate 42, where a small portion of the pattern is harsh by comparison with the part outlined. The softening effect of outline is exemplified also in the embroidery on Plate 40.

The use of outline must not be taken as a justification of its abuse. To accept the dogma of its saving merit and submit to its tyranny, is sheer foolishness. Art may quite well be decorative in which the outline is not emphasised ; nor does the insistance upon it make design decorative, however effectually it may remove it from the pictorial.

So with regard to flatness, symmetry, and other qualities supposed to pertain to decorative treatment,—one must in every instance use one's wits. Any effect of relief which disturbs the sense of flatness in a surface characteristically flat, is plainly out of place. Just so much of symmetry as may be needful to convey the sense of balance is to be desired —but no more.

The fear of offending against the arbitrary laws of authority, often altogether "irresponsible," is a bogey which may scare some from

trespassing on dangerous ground, but which certainly deters others from adventuring on fields of design in which they might perhaps discover the full use of their artistic faculty.

What is called convention is not a hindrance to the workman, but a help. If he finds it an impediment, he would do well to ask himself if that may not be his fault.

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Plate 2

Identical figures reversed

16th Cent. German

C. F. KELL, PHOTO-LITHO. 8, FURNIVAL ST HOLBORN, E.C.

Plate 3.

Variety in Creatures symmetrically disposed - German

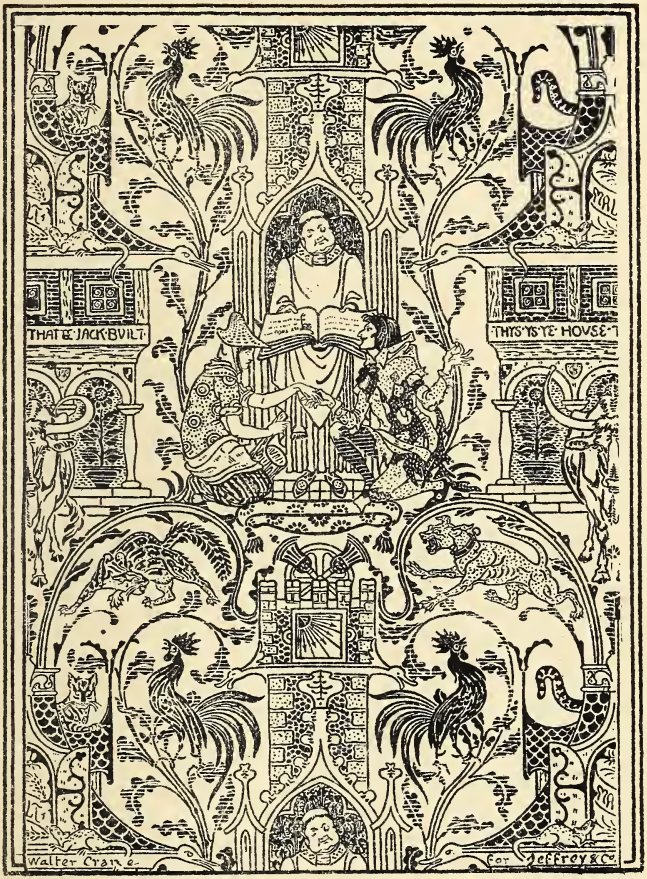
C. F KELL, PHOTO-LITHO. 8, FURNIVAL ST HOLBORN, E. C.

Plate 4.

Portion of a Tree of Jesse I. van Mecken end of 15th Cenly.

"PHOTO-TINT," by J. Akerman, 6, Queen Square, W.C.

Plate 5



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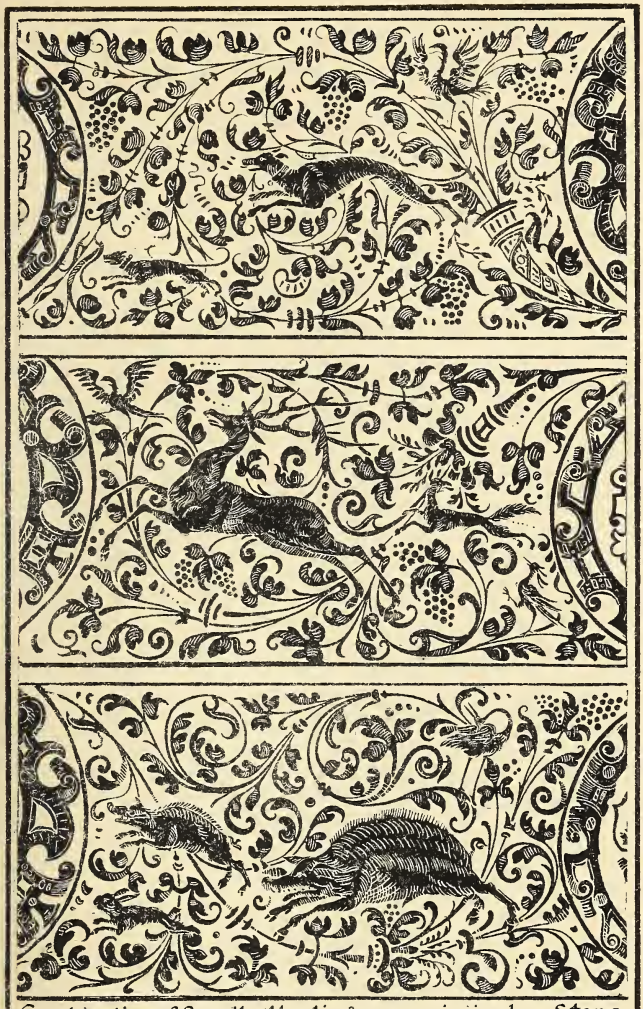
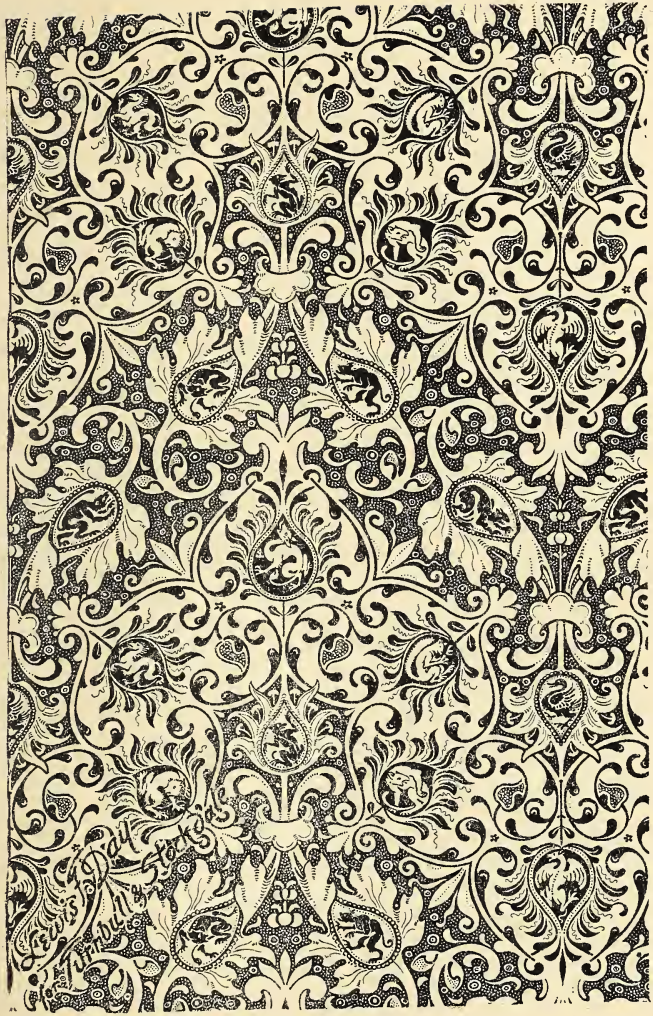


Combination of Scroll & Hunting scene - incised on Stone

Plate. 7



C. F. KELL, PHOTO-LITHO. 6, FURNIVAL ST. HOLBORN, E.C.

Plate 8.

"PHOTO-TINT," by J. Akerman, 6, Queen Square, W.C.

Plate 9.

"PHOTO-TINT", by J. Akerman, 6, Queen Square, W.C.

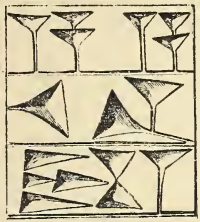
Basket-work African

Plate 11.

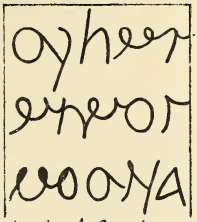
"PHOTO-TINT," by J. Akerman, 6, Queen Square W.C.

Plate 12.

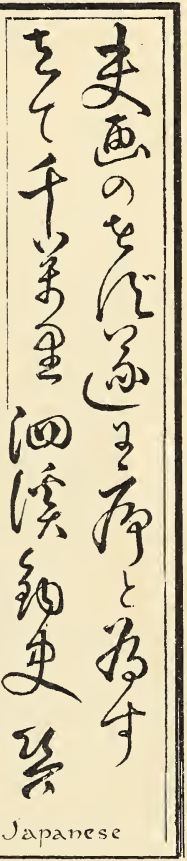
"PHOTO-TINT," by J. Akerman 6, Queen Square, W.C.



Cuneiform



Ancient Greek

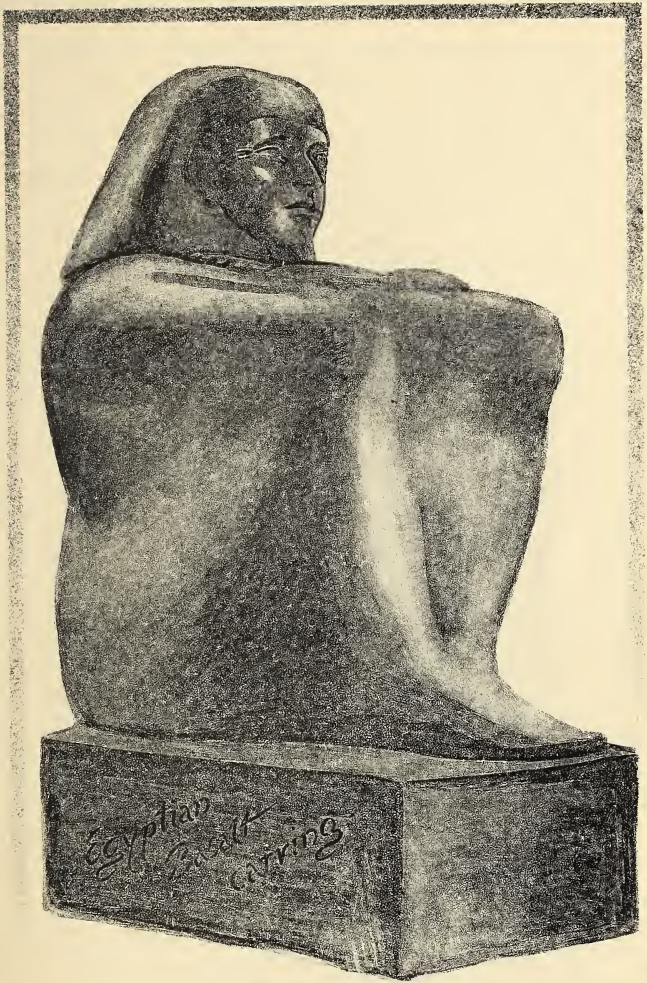


Japanese

A B C D E F G hij k l m n o p q r s T U V

C. F. KELL, PHOTO-LITHO, 8, FURNIVAL ST. HOLBORN, E.C.

Plate 14.



"PHOTO-TINT," by J. Akerman, 6, Queen Square, W.C.

Plate 15.

"PHOTO-TINT," by J. Akerman, 6, Queen Square, W.C.

Plate 16.

"PHOTO-TINT," by J. Ackerman, 6, Queen Square, W.C.

Plate 17.

"PHOTO-TINT," by J. Akerman, 6, Queen Square, W.C.

C. F. KELL. PHOTO-LITHO. 6, FURNIVAL ST HOLBORN, E.C.

Plate 19.

"PHOTO-TINT," by J. Akerman, 6, Queen Square, W.C.

Byzantine colouring according to the weft.

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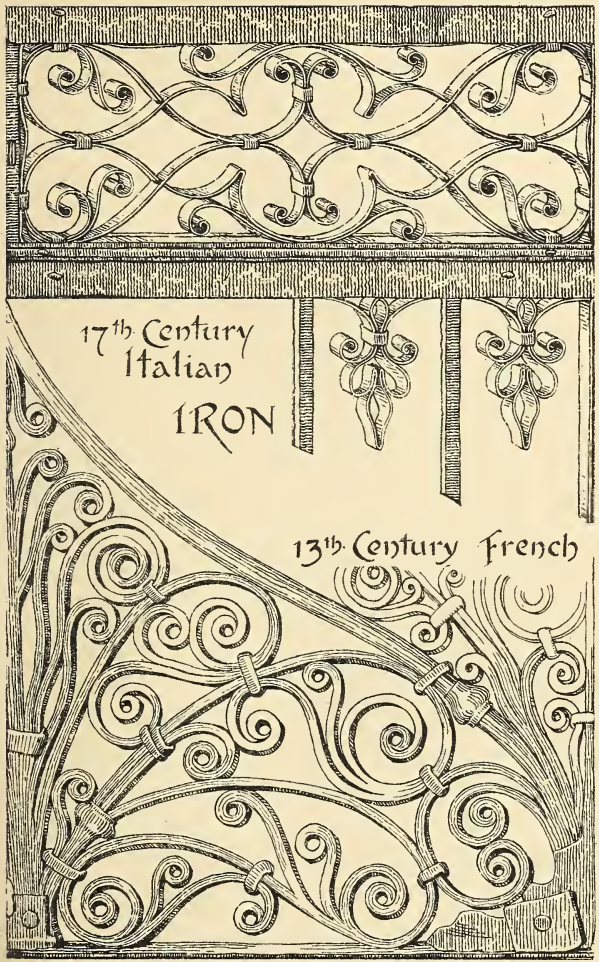
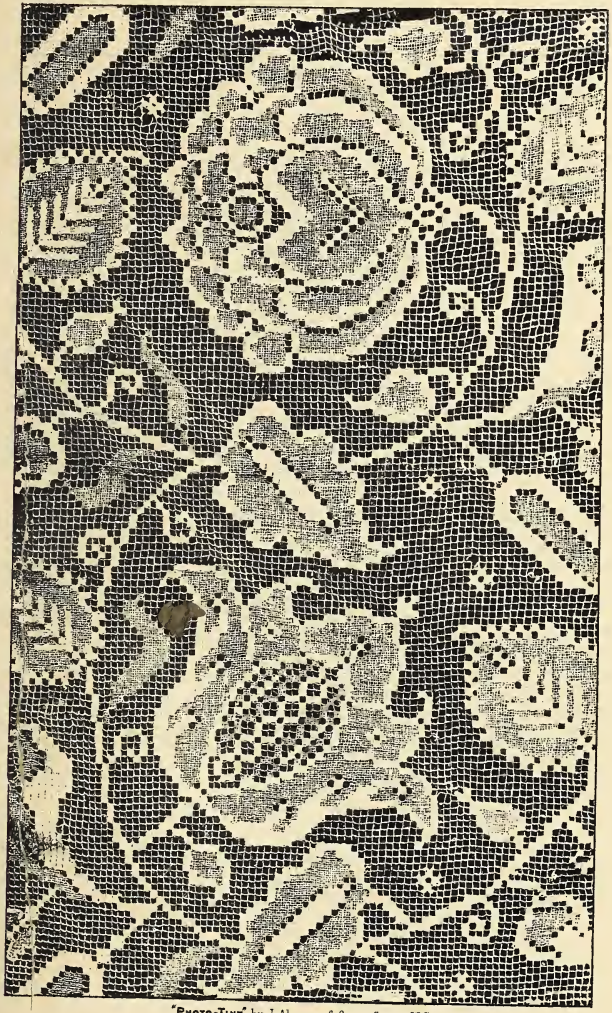
"PHOTO-TINT," by J. Akerman, 6, Queen Square, W.C.


17th Century
Italian
IRON
13th Century French

Types of Wrought Ironwork



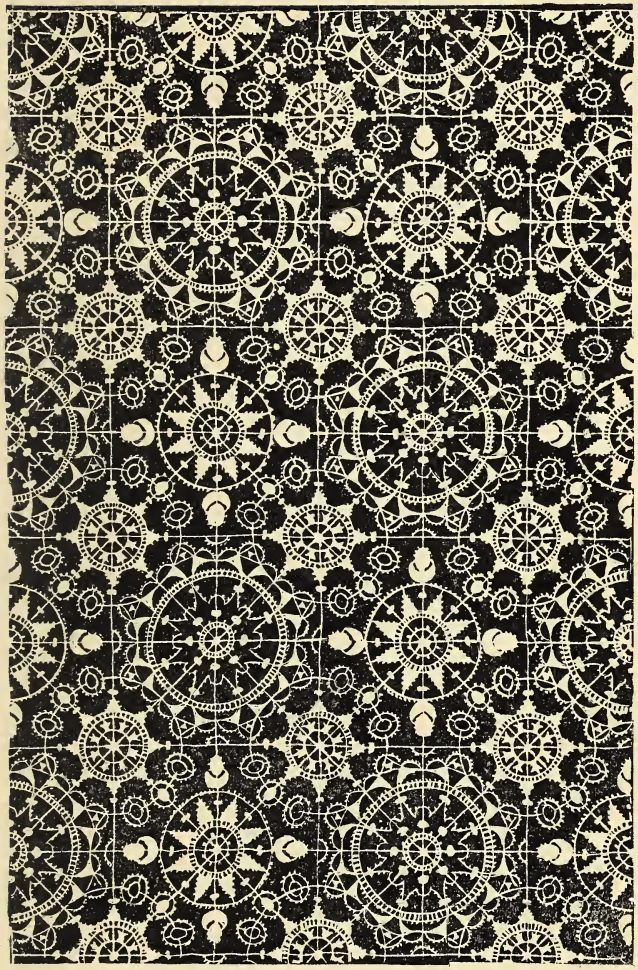
'PHOTO-TINT', by J. Akerman, 6, Queen Square, W.C.

Plate 25.

"PHOTO-TINT," by J. Akerman, 6, Queen Square, W.C.

C. F. KELL, PHOTO-LITHO. 8, FURNIVAL ST HOLBORN, E.C.

Plate 27.



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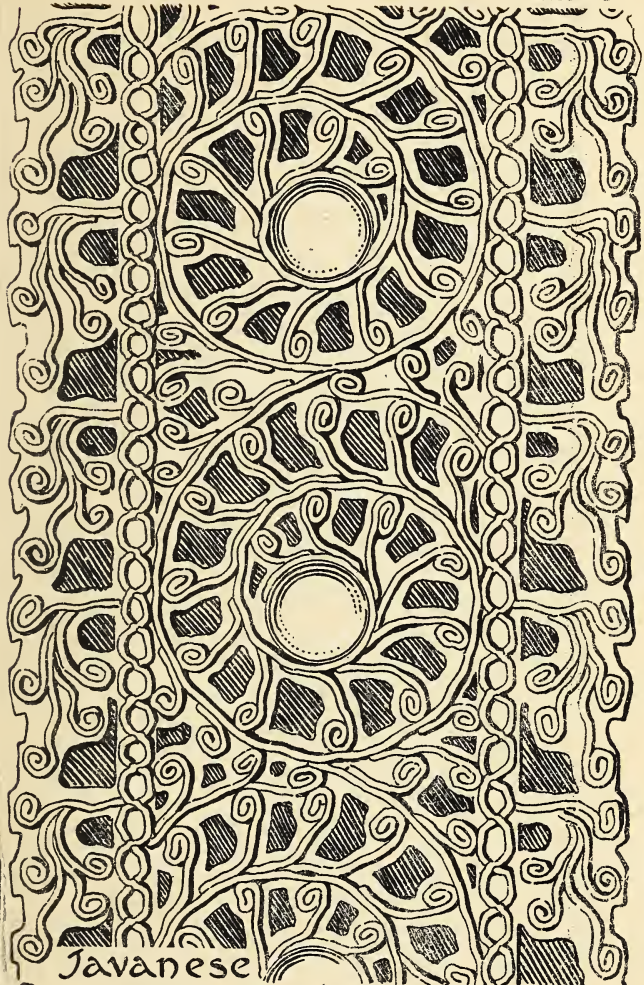
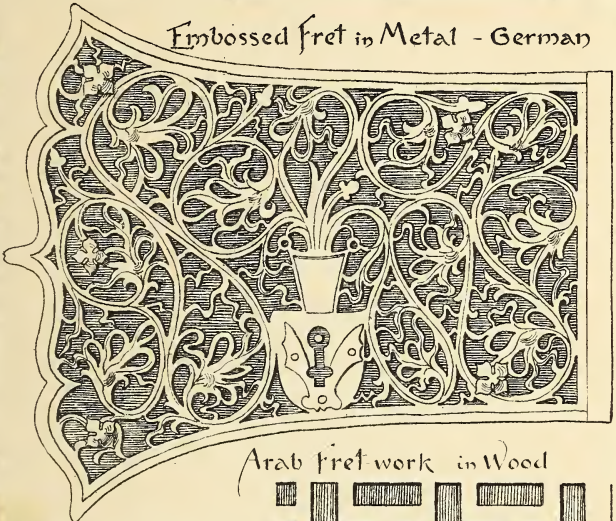


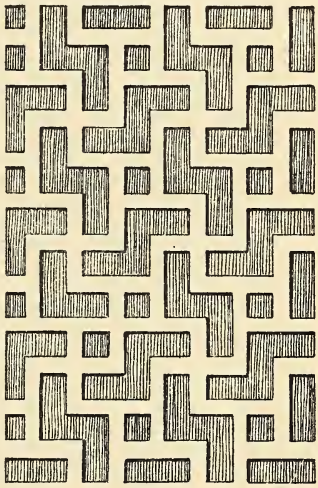
Javanese
Ornament inspired by way of working

LL. PHOTO-LITHO. 6, FURNIVAL ST HOLBORN, E.C.

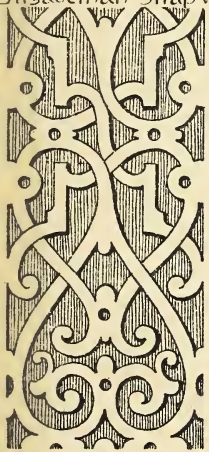
Embossed Fret in Metal - German

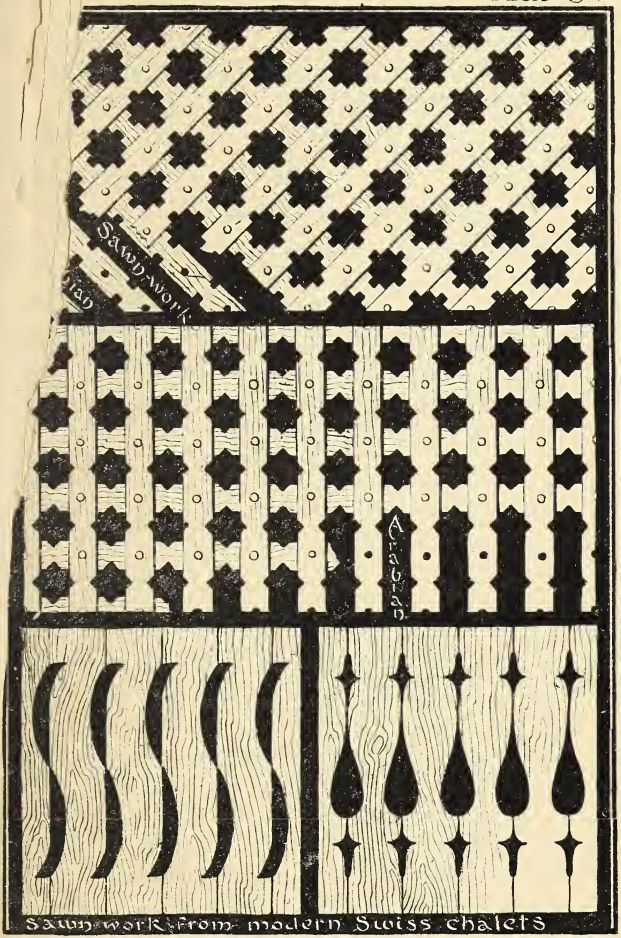


Arab fret work in Wood



Elizabethan Strap-work





Sawn-work from modern Swiss chalets

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Plate 31.

First stencil

Second stencil

Design complete

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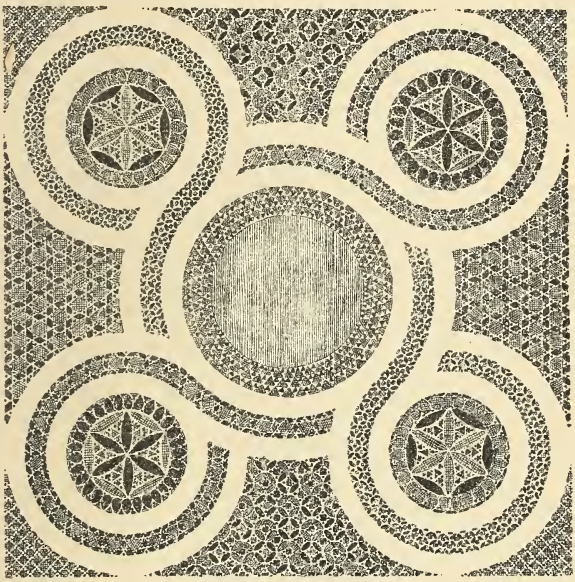
Plate 32.

"PHOTO-TINT," by J. Ackerman, 6, Queen Square, W.C.

Plate 33



Inlaid Mosaic Pavement San Marco, Rome.

C F KELL PHOTO-LITHO 8, FURNIVAL ST HOLBORN E.C.

Inlay Pattern in which severity of line would be softened by colour of woods

C. F. KELL. PHOTO-LITHO. 8, FURNIVAL ST. HOLBORN, E. C.

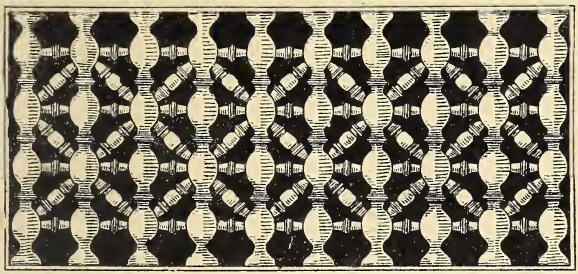
Plate 35

Brass Pot in "niello" of common Indian workmanship

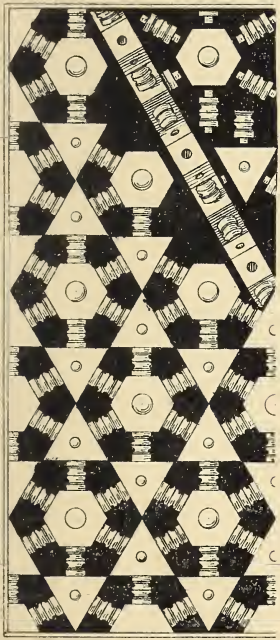
C. F. KELL, PHOTO-LITHO. 6, FURNIVAL ST. HOLBORN, E.C.

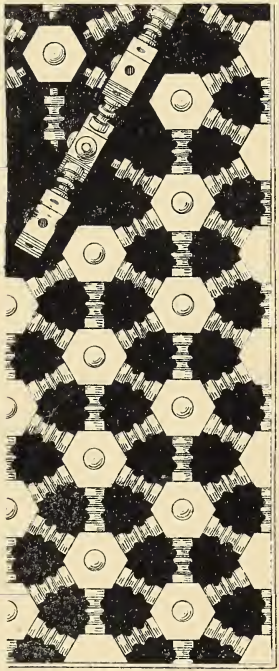
Plate 36.

"PHOTO-TINT", by J. Akerman, 6, Queen Square, W.C.



Arab lattices characteristic wood-turning





C. F. KELL, PHOTO-LITHO. 8, FURNIVAL ST HOLBORN, E.C.

12th Century
German

13th Century
French

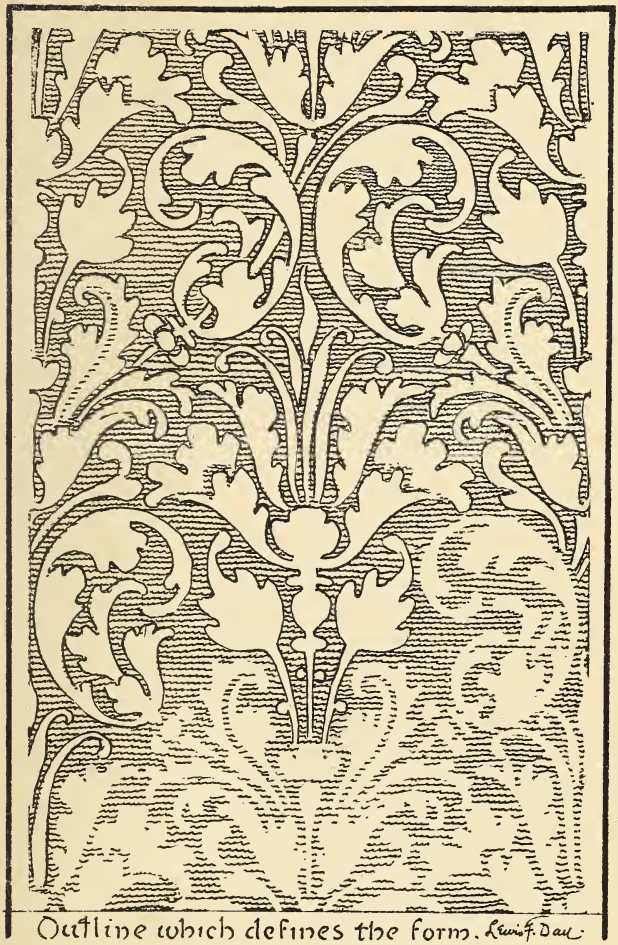
ENAMEL
Champlevé & Cloisonné

11th Century
Italian

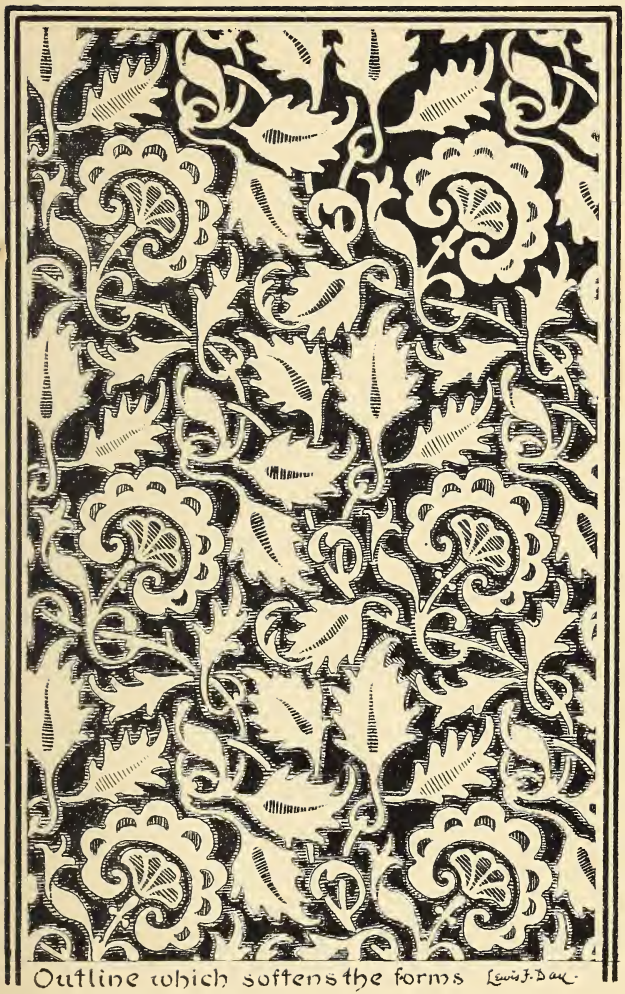
C. F. KELL, PHOTO-LITHO. 6, FURNIVAL ST HOLBORN, E.C.

Plate 39.

PHOTO-TINT, by J. Akerman, 6, Queen Square, W.C.



Outline which defines the form. Lewis F. Day



Outline which softens the forms Lewis F. Day

C. F. KELL, PHOTO-LITHO, 8, FURNIVAL St HOLBORN, E.C.

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