

SURFACE DESIGN AND STENCIL.

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A Course For Public Schools.

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In teaching the principles of color and design to grade students or beginners, we can accomplish very little by giving mere abstract studies, as the average student neither appreciates nor understands them.

He should, on the contrary, be encouraged to study some form of applied art, where the underlying principles are plainly evident, yet do not require more skill than he possesses.

There are various forms of applied art which might come under this head, but it is our purpose to deal merely with stenciling, as embodying the principle of color and design.

Stencil designing might be taught to great advantage even in the lower grades of the public schools. Students who appear to possess very little artistic talent, often make stencil designs of great beauty, and, encouraged by their success, take up the study of the higher arts.

In order to study the subject intelligently, brief courses in color and elementary design should first be given, as these are both involved in even the simplest stencil.

Color.

The first lessons of the course should be in color, simple work that the student can do well.

Plate I. Figures 1 and 2 are examples of this sort of work.

Figure 1 is made by moistening a space on a sheet of water color paper, and dabbling different colors on indiscriminately. The

paper is then turned about until the colors become merged together, giving the effect of a stained glass window. Interesting and beautiful effects can often be obtained by experimenting with colors in this manner.

In figure 2, we have an example of elementary landscape painting. Have the student take a sheet of clean water color paper, and outline a rectangular space, leaving a good margin. Let him now establish a horizon line, near the center of the rectangle, and having moistened the space with a brush full of clean water, so that there will be no harsh outlines, paint the landscape in the following manner: When the paper is just moist enough so that the paint will spread but not run, take a brush dripping full of light blue paint, and, beginning at the upper left hand corner of the rectangle, sweep the brush across with a smooth, clean stroke, just touching the upper line but not overlapping it, if possible. When the brush has reached the right hand line of the rectangle, it should be placed at the lower edge of the first stroke, and carried quickly back toward the left before this edge has time to dry. These strokes across the paper should be continued until the whole space is filled, giving an unbroken space of color. Color should always be applied in this way, and the student should not be allowed to go back over the work while it is still wet, as this gives a smeared and muddy look to his work. After the sky has been painted, a brush full of green is applied to the lower space in the same manner, and after some practise the student will be able to put in trees, clouds, birds, etc, as his ingenuity or that of the teacher suggests.

A lesson or two of this play work suffices to give the student some knowledge of how to handle the brush and apply the color, and he is ready for more practical color work, namely: the study of different

colors and their relation to each other. The easiest way to take this up is to make scales of the colors in such a way as to show their relation. There are numerous scales of this sort which are easily obtained, so that we have shown only a few of the more important ones.

Plate II shows the six spectral colors: red, orange, yellow, green, blue and violet. They do not appear exactly like the colors of the spectrum and the rainbow which they attempt to represent, because it is impossible to obtain pure spectral colors made of pigment.

Of these six spectral hues there are only three, red, yellow and blue, which cannot be made by a mixture of two others. These three are called the primary colors, and, combined as in Plate III, Fig. 1, they produce the three other spectral colors, orange, green and violet, which are called binary colors. The three binary colors may in time be combined, forming the three tertiaries, citrine, olive and russet; each of which, it will be understood, is now composed of three primary colors in a ratio of 2:1:1.

Take for instance, citrine. This is composed of orange, which is a combination of red and yellow; also green, made by combining yellow and blue.

After considerable practise with these scales of pure color, or hues as they are called, the student will be much interested in the changes that can be made in color by the addition of white, which forms tints, or of black, which forms shades. A good way to show this relation is to scale from white through different colors to black.

For convenience' sake, we have combined, in Plate IV, the scales showing tints and shades with those showing the pairs of complementary colors. We have shown only one tint and one shade of each color, though more can easily be shown. It is a good plan to have the student make several of these scales in squares, as shown in Plates II and III.

The complimentary color scale requires some study to be fully understood. Between the adjacent colors of the spectral lines there is a color containing half of the hue on either side, and designated blue-green, orange-yellow, etc. Now in speaking of complementary colors, we ordinarily mean those colors which mixed together (when absolutely pure) form white, or in the pigment, gray.

For convenience' sake, we say of the six spectral hues that green and red, orange and blue, violet and yellow, are to be complements; but as a matter of fact, as shown by Plate IV, each hue is a complement, not of another hue, but of the color between it and the next. Thus blue is complementary to orange-yellow, yellow to violet-blue, etc.

We have dealt so far with pure hues, with their tints and shades. We will now take up, in Plate VI, the neutral scale, or scale from white to black. There are nine successive stages, which are marked on the plate. Now, every spectral hue corresponds in value to one of the stages between white and black. We have chosen three colors to illustrate this, and have made scales of each, showing the different stages in passing from this color to its corresponding neutral tone. Examination of the plate will show that the effect of light is the same in each of the five steps. Some people have a natural aptitude for arranging colors harmoniously. To those who do not have, we can only say that it is not essential in the production of harmonious effects. A careful study of the laws of harmony will enable one to unerringly produce pleasing effects with color. For instance, an equal amount of two pure spectral hues is displeasing to the eye; but by a change in the quality of one by the addition of black or white, or by the addition of a third color harmonious to both, and various other devices, a beautiful harmony will be produced.

In order to familiarize the student with the use of color, ask him to make color notes -- mere dashes of paint-- on a sheet of paper every time he sees an unusual or striking effect. Then have him make scales of all the colors he can see in a leaf- a flower- a piece of cloth- or a bit of wood- and be able to explain just why there is harmony in the scales.

More advanced work, as the drawing and painting of flowers, or the making of simple landscapes, can now be given at the teacher's discretion.

Design.

Before taking up the study of design, we must study the principles underlying all good work of this kind, without which it is meaningless and uninteresting.

The most essential quality of good designing is order; by which we do not mean stiff and formal symmetry, but that principle which is embodied in the qualities of balance, rhythm and harmony.

By balance we mean rest. A design may be said to possess balance when it gives one a feeling of rest and satisfaction- a feeling that the design is neither top-heavy nor one-sided, but satisfying in every part. This balance may be obtained in various ways. First, there is a balance of symmetry, in which every part of the design corresponds to a similar part on the other side of a straight line drawn through the middle. This kind of design is very good for some purposes, but it is wearying if repeated over large spaces. Second, there is the balance obtained by arranging the design about a center- either radiating from it or pulling toward it.

Rhythmic designs are those which give the impression of movement.

Harmony in design requires that the different parts have something in common.

Give each student a piece of paper ruled off in squares, like that used in Plate VI. After showing him a few simple border designs let him make some original ones, both with straight lines and with curves. In Plate VI we have a number of these designs. Border No.2 uses the same lines as Border No.1, the only difference being that No.2 has some of the spaces between the lines inked. The same is true of Borders 3 and 4. The next three borders are built up on the curve. The first is the old familiar Greek Scroll, unsurpassed for strength and simplicity of line. The other two are simply curve designs.

Borders 8 and 9 show the method of turning the corner with the border designs. Some extra lines or spots are often added to fill out the corner.

We come now to that part of the design which is used in stencil work, and which we may call spot designing. With a brush full of paint we experiment a little, making spots of varying shapes and sizes. Some of these will be uninteresting and will look unpromising. This may be due to any of several causes.

First, the spot may lack rythm of shape, that quality so essential to good designing, which is gained either by interrelation of lines, as in the upward curl of smoke from a chimney, or by the repetition of a rythmic shape. Rhythm is found everywhere in nature, and consequently is best obtained by an adherence to natural curves, even though the spot does not suggest any definite thing.

Keep working with the most promising looking spot until you have a result which gives you a feeling of interest and a sensation of growth and developement.

Second, you may have failed to fulfill the conditions necessary

for a balance of measure. To obtain this measure, one must consider the quantity of space contained in a given shape. Batchelder illustrates the point as follows: "Suppose that we wish to place two measures of equal size within a space so that they will be properly balanced. The problem is much as if there were two men of equal size on a see-saw. The spots are to the eye precisely like physical forces in nature, at least in so far as the law of balance applies. Let us draw a line connecting the centers of the measures. It is evident that the point of balance will be in the middle of this line, for the measures exert equal attractions. Now, if we wish to place these spots within an enclosing form, this law of balance requires that the point of balance of the measures shall coincide with the center of the frame and the point half way between the two measures."

In a similar manner we study the arrangement of measures of differing sizes.

In Plate VII we have shown four spot designs. The first three are designated to fill certain definite spaces; the fourth may be used over any amount of space.

Stencil.

In applying these designs over considerable surface, it is a tedious and laborous process to redraw the design each time a repetition is necessary, and various mechanical means have been discovered to simplify the process. The introduction of raised surfaces, such as type in block printing, is one of these, and stenciling is another. Stenciling consists of cutting the design out of a flat material, so that paint can rapidly be applied to the material on which it is desired to place the design through the spaces left when the design was cut out. To obtain a repeat, either in a very simple design where the spaces are very large and quickly filled, or a very complex design where there are

small spaces and intricate lines, stenciling is the quickest and best method that can be used, hence a very practical one for applying the principles of color and design in school work.

After the student has made a number of spot designs, both for definite spaces and for surface work, he is well prepared to make good stencil designs. In order to get him well started it is well to require that he make a stencil or two simply by tracing the outline of some natural leaf, vining it to break up the spaces that are too large for beauty. These leaf stencils, repeated to form a border for a curtain, or applied to any space where a decorative effect is required, are highly effective, often much more so than the more complicated designs. Conventionalized flowers may be used to a great advantage, or flowers drawn simply from nature, as the Columbine in Plate VII, Fig. 1. Very pretty designs can be made simply by the interrelation of lines, or by spot designs of good shape, rhythm and measure balance. We have not shown these, but the student can easily make them after taking the work we have outlined. We have shown merely stencils made from natural forms.

Plate VIII shows a maple leaf adapted to fill a border space which is vertical.

In Plate IX we have the first step in the designing of a stencil. The rose and its surrounding leaves was drawn with careful attention to its natural laws of growth. Now, having drawn the design, we must go over it carefully, and separate each part from those surrounding it, so that when the space is cut out, there will be a connecting link between it and the rest of the page. Ingenuity is often required to leave these ties of paper in such a way that they will not mar the design. When you are fully satisfied that nothing could be added or taken away to improve your design, trace it, by Japanese paper or by holding it up

to the light, on a heavy piece of manilla paper. Then oil the paper with linseed oil or machine oil, so that it will cut easily, and with a sharp knife, not sissors, cut out your design. The finished stencil will appear, as in Plate X, and it is now ready for application to any surface which will take the dyes. Ordinary linen makes a cheap and effective background for any stencil design, and is always obtainable. Crash, or heavy canvass are also good.

Plate XI shows merely the application of a completed stencil, built up from the study of the Oxalis plant. It will be seen that the flower is increased in size to establish a more perfect balance.

With a little encouragement, and suggestions from the teacher, the average student will make stencil designs which equal or excel any of the ones depicted in this thesis.

PLATE I



Stained Glass Effect



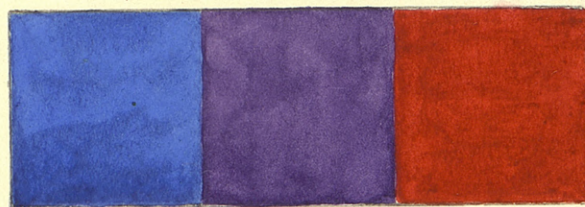
Elementary Landscape

PLATE II



Spectral Hues

PLATE III

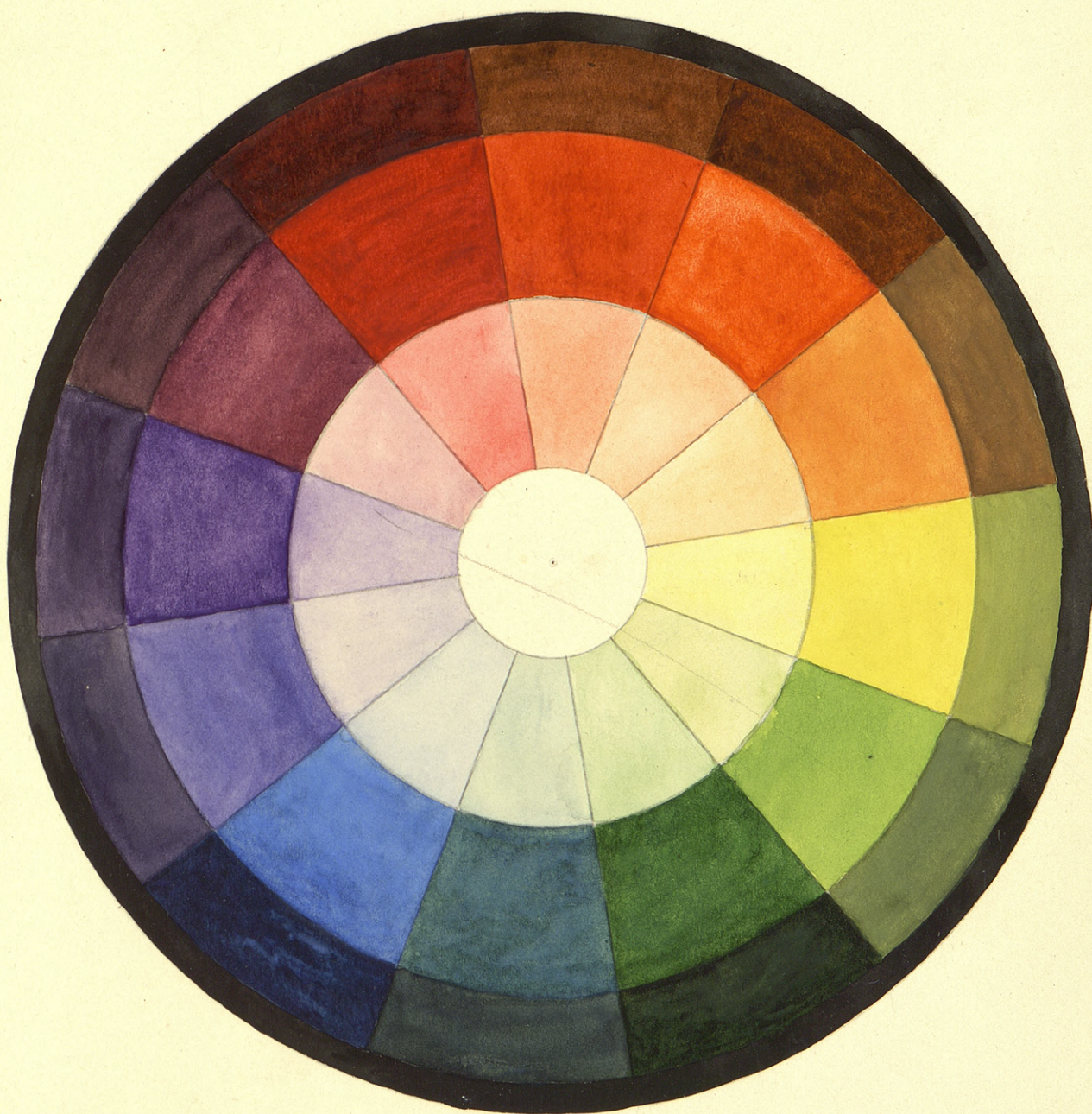


Mixing Binary Colors



Mixing Tertiary Colors

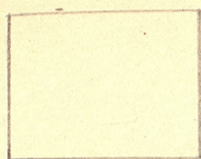
PLATE IV



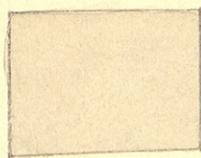
Complementary Colors

PLATE V

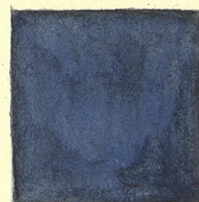
White



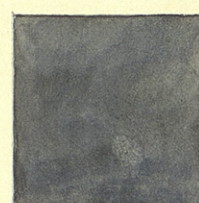
High Light



Light



Low Light



Middle Value



High Dark



Dark



Low Dark

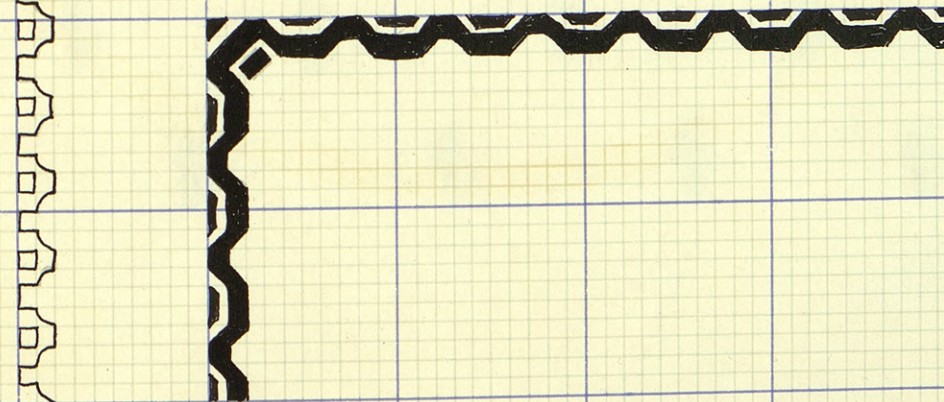
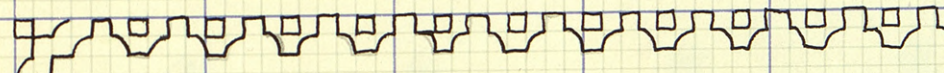
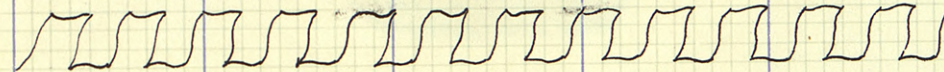
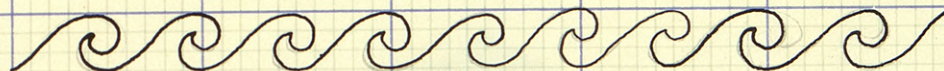
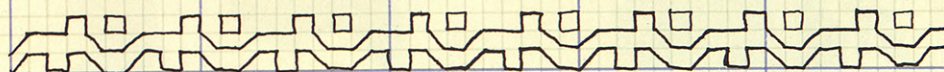
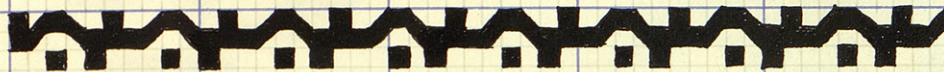
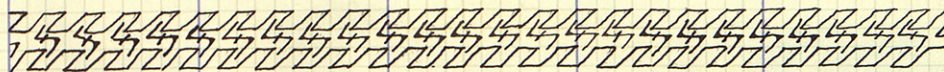


Black



Neutral Scale

PLATE VI



Border Designs

PLATE VII

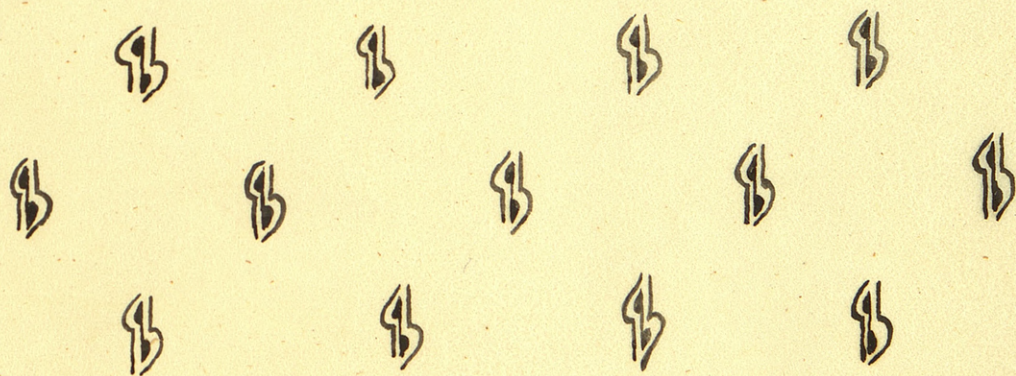


PLATE VIII



Stencil of Columbine



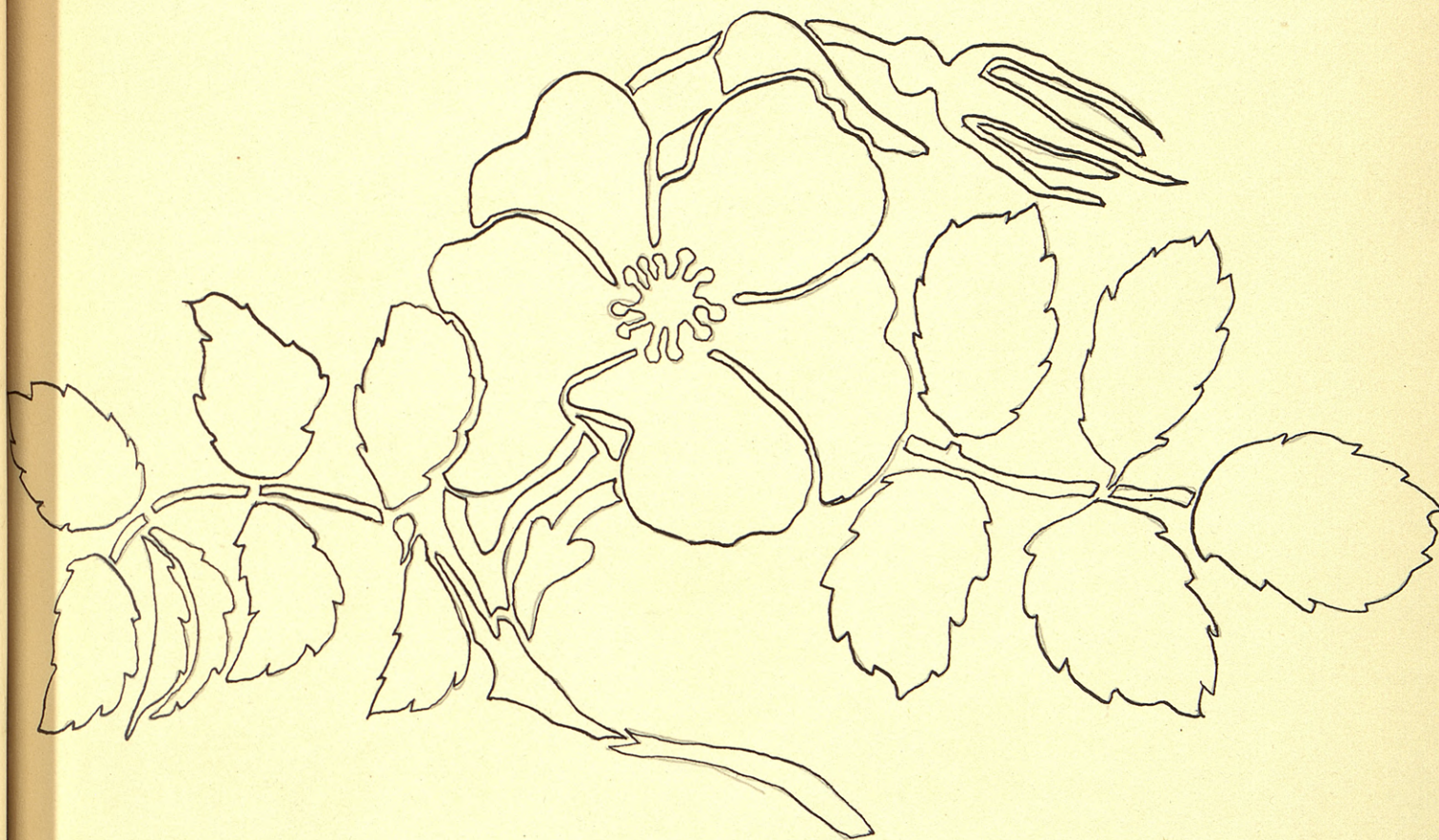
Stencil of Virginia Creeper

PLATE IX



Stencil of Maple Leaf

PLATE X



First Step in making Stencil

PLATE XI

Applied Stencil



PLATE XII
Finished Stencil Design

