## Vew Stencil................ and Their Use VANDERWALKER 

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# New Stencils and Their Use 

## A Practical Working Method for the Average Painter and Decorator

## By

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## PREFACE

In offering this work it is the author's hope that the organized, orderly presentation of the essentials of good stencil work will assist in solving the problems of furnishing better decoration for the average moderate-cost home, the average church, lodge hall, and small theater. That is an important field. The number of such jobs far exceeds that of the more expensive homes and finer public buildings.

Likewise it is expected that the subject matter and illustrations presented here will be of more service to the average painter and decorator than to professionals.

To keep the text matter well within the form of a practical working method, it has not been permitted to become too technical nor yet too artistic. To produce a work for the use of painters without experience in this line, and those who have little experience, was the accomplishment sought.

The Author.

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## New Stencils and Their Use

## CHAPTER I

## THE VALUE, USE AND ABUSE OF STENCIL DECORATION

The possibilities for artistic, inexpensive decoration by means of carefully colored stencils are great; and wherever exact and constant repetition of a pattern is wanted, the stencil is the practical, economical means.

Stenciled ornament is not a passing fancy, but an established mode of decorating that comes within the ability of painters who are ordinarily skillful with brush and color. In the design, color, and placing of stencils the decorator and house owner have a wide latitude in which to exercise individual taste and to put together decorations that exactly fit any particular room or suite of rooms. It is really surprising to note the variety of beautiful effects that can easily be accomplished with a little study and practice by the manipulation of designs, colors, and stencil location. They may be adapted to decorate almost every room in a home, as well as public buildings, in excellent taste. In recent years the able handling of stencils by well-known Chicago and New York decorators has placed this class of work easily among the fine arts of this country.

Use in Home Decoration.-Stencils today are used in home decorations chiefly to serve one of two purposes: First, to furnish the only and complete decoration or ornamentation for a room. In this case the stencil may be quite elaborate and colorful, although not necessarily


Plate 1.-Formal or Classic Designs for Stencils, Including Greek Frets or Greek Key Designs (center).
so, as for many rooms the simple treatment is most artistic, even when they lack interesting architectural features, such as mouldings, coves, cornices, and rails. At any rate, when an attempt is made to elaborate the ornament to relieve severely plain, uninteresting wall spaces, it ought never to be permitted to become gaudy and showy in design and color, producing the circuswagon and dime-museum effect.

The second purpose for which stencils are now largely used is that of supplementing architectural ornament built into the walls and ceilings-cornices, mouldings, plaster relief ornaments, and the like. Under these circumstances, stencils ought to form a treatment in design, size, proportion, and color which will be incidental and subordinate to the architectural ornament. It must not even pretend to compete with it for attention, but simply adds the needed touch of color.

When in doubt as to how extensive a stencil treatment ought to be carried by any room, it is well to choose the lesser plan every time. Too much ornament does not have the appearance of enrichment, but of intemperance, of being overdone and even vulgar. No ornament at all is better than that.

Use in Theaters and Stores.-Many of the best jobs of stencil decoration in the theaters, dance halls, cafes, and city shops are thought by most people and some painters to be freehand art. They do not, perhaps, note details of construction, but are interested only in the general effect. Artistic these jobs certainly are, but the means of production were mechanical; namely, the stencil, lining fitch, and straight-edge. The designing, planning, and making of specifications for these examples of fine applied art, rather than the execution of the work, are to be credited for their success, although skill in transferring the stencil impressions, in filling in and wiping out the colors, is vitally important.




Plate 2.-Classic Stencil Designs, Continued: Roman (top); Renaissance (center) ; Moorish (bottom).


Plate 3.-Classic Stencil Designs, Continued: Arabian (top) ; Persian (center) ; Egyptian (bottom).

Abuse of Stencils.-Now, as to the abuse of stenciled ornament little need be said. All have seen it. The careless, shiftless practices of some painters in the use of stencils have done much toward discrediting one of the oldest and most useful arts.

Before the days of wallpaper, "diaper" stencils were much used to produce an all-over pattern on walls. At the same time quick, cheap work was done in distemper (water color), and so the stencils too were transferred with water color, in extravagant, outlandish colors.

We also had a violent fling at unwise stencil use in the period of fresco popularity, when most unpardonable crimes against good color use were committed in wholesale quantities. Never shall we outlive the memory of the vivid greens, brilliant reds, and other howling, screeching colors in which stencil bands were carelessly painted in public places of the less expensive type.

True, there has been much really beautiful distemper decoration, and bad stencil and color use has occurred with oil colors as well as water colors.

Another manner in which the artistic possibilities of stencil decoration have not been realized, is through injudicious selection of designs. It is difficult to understand why anyone could select a stencil composed of nothing but meaningless scrolls, dots, dashes, and holes, without balance, proportion, and form, when there are easily within reach so many really beautiful classic designs by artists of other times-patterns which are interestingly symbolic of the religions, ethics, ideals, and accomplishments of nations at times when the world was more artistic than now.

We have today also the choice of multitudes of patterns of conventionalized nature. The flowers, leaves, insects, and birds have given subjects of universal interest, and many really beautiful stencil designs have been produced from these subjects.

## CHAPTER II

## CLASSIFICATION AND SELECTION OF STENCILS

Many really fine stencil designs are offered to the paint trade. There are some, however, which are crude in design and carelessly cut. As between good designs the necessity of selecting appropriate patterns requires your best effort in an attempt to choose the right stencil, both as to color and pattern, for each room, according to its architecture and the purpose for which that room is used. It is not, however, necessary to be an authority on historic ornament, or an artist of note, to use stencils artistically and to excellent advantage.

Briefly, choose designs that are simple and clear ; avoid complicated, uncertain figures. Choose designs of recognized artistic merit, rather than odd scrolls, squares and circles which one has never seen nor heard of before, and may never again.

Do not use strong, gaudy, ragtime patterns, but try to select such as produce a refined, artistic effect when carried out in carefully studied colors. Poorly selected and colored stencils make a messy, mussy room.

Classical designs are artistic, interesting and have stories attached to them known more or less to everyone; they are of common interest to all.

Plates 1, 2, 3, and 4 show a few classic designs which are perhaps typical of their periods-the Greek, Roman, Renaissance, Arabian, Moorish, Egyptian, Persian, and Gothic. A study of these is worth while, as a knowledge of the best and most beautiful of other times is the only basis for good judgment of what is good and bad in present-day designs. Some of these are ordinary one-


Plate 4.-Classic Stencil Designs, continued: Gothic (above) and Oriental (below).
color stencils as to form; some are outline stencils, and some background stencils. Plates 35, 36, 37, and 38 show many attractive modern English, French, American and Japanese stencil designs.

Of the modern stencils, those which are most likely to be of good design and well balanced are the simple motifs of conventionalized flowers, leaves, vines, etc. When you have looked over the patterns shown in the several plates of this book, you will readily note the character of good designs.

## CLASSIFICATION

Stencils come naturally within classes known as Ordinary One-Color, Background, Outline, and Color Stencils.

Ordinary One-Color Stencils.-(Figure 1, Plate 5.) This class includes such stencils as are transferred in one operation, and all are familiar with them. A one-color stencil may be made more effective by using different colors, or shades of one color, in different parts of it. This requires but little more additional time in its execution. The different colors must be put in with different brushes.

Suppose the rose design, Plate 17, is to be transferred. A small piece of paper tipped with a spot or two of mucilage would be placed over the flower while the leaves and stems were being transferred in green. Then the paper would be removed from the flower and placed over the leaves and stems while the flower was being transferred in red.

Background Stencils.-(Figure 2, Plate 5.) Background stencils are quite similar to the ordinary onecolor kind, except that in place of cutting out the design, as in Figure 1, when making the stencil plate, the background is cut out and transferred to the wall in color. The wall color shows through or between portions of the ground color, and forms the pattern. The background, not the pattern, is transferred to the wall in color.


STENCIL PLATE


STENCIL IMPRESSION
Figure 1.


STENCIL PLATE


STENCIL IMPRESSTON
Figure 2.
Plate 5.-One-Color and Background Stencils.

Sometimes a band of opaque color is laid on to the wall, just wide enough to have the background stencil cover it ; this colored band is allowed to form the stencil pattern, rather than have the wall color show through. Moorish and other Oriental stencils are effectively used in this manner for churches and lodge halls.

For instance, suppose the wall to be stenciled is a light warm gray. Mark off with a pencil and straightedge a band of six or eight inches wide (exactly the same width as the stencil pattern), parallel to and below the picture mould or just above the chair rail. Fill in the band between these lines solid with a fairly bright but soft red paint, made by tinting white lead with American vermilion and a touch of chrome yellow. Or, for a semitransparent red band, simply use the American vermilion alone, fairly thin. When this band of paint is dry, transfer the stencil impression on top of it, using perhaps ivory white paint for a good effect. A touch of ultramarine blue on the center figures would help bring out the right effect for this Moorish design.

The most simple use of these stencils is to transfer them in a darker or lighter shade of the wall or ceiling color, as the case may be. A background stencil transferred in dull blue on an ivory wall or band of color makes an attractive color scheme.

Outline Stencils.-(Figure 3, Plate 6.) As the name indicates, this outline stencil is merely a light outline of a design that is transferred usually with burnt umber or raw sienna to the wall, so as to form a pattern that can be filled in later with two or more colors.

In Tiffany wall glazing, the outline stencil is transferred to the wall when the second ground coat has become dry. The stencil is permitted to dry before your first glaze color is applied. When the glaze color has been blended out, wipe all color from within the lines of the stencil before it becomes dry. The object of this is to
have the flat ground coat show through the outline stencil and form a light uniform surface upon which to fill in stencil colors when the glazing coat is dry.


Figure 1.


Figure 3.
Plate 6.-Outline Stencils.
Often outline stencils are transferred in some light, soft color (such as a light but dull blue on an ivory ground) and left in that condition as finished. No other colors are filled in.

Tie-Less Stencils.-(Plate 7.) Double stenciling makes it possible to transfer practically any design without showing the ties. The Greek Key shown is an example


Plate 7.-Greek-Key Design for Double Stenciling, Using Two Plates A Make the Pattern Tie-less.
of a stencil that cannot be transferred with one plate without showing ties, but it could be transferred from one plate and the ties painted out with a small fitch. Another way is to make two plates, which will transfer the design complete in two operations and without showing ties.


STENCIL PLATE-FIRST COLOR


Plate 8.-Color Stencils for Two-Color Work. $G, G$, in Lower Stencil, Are Guide Marks.

With certain stencils that have many figures, or complicated patterns, it is often better to transfer them by means of two different plates than to attempt to make the entire design on one plate, thereby causing a great many ties and producing a frail stencil that is too intricate and delicate to withstand the transferring process more than a few times.

Color Stencils.-(Plate 8.) These should not be con-
fused with outline stencils. Both kinds produce a finished design in colors. The outline stencil, Plate 6, however, must be filled in freehand with colors, using small brushes, while the color stencil, Plate 8, is transferred in two operations from two plates, using a different color and stencil brush with each plate to be transferred.

Note the guide marks $G, G$, on the stencil plate for the second color. They consist of the tip of the lower leaf on the right-hand side of the completed design, also the tip end of the upper leaf in the upper left-hand corner. When the second color plate is placed upon the surface (after the first color has been transferred to the wall), these ends of the leaves enable the decorator to place the second color plate in exactly the right location to bring the balance of the design where it should go to complete the work. When these guide marks or holes are placed precisely over the leaf ends of which they are a part, the second color plate must of necessity register perfectly with the part of the design placed on the wall by the first plate.

Ordinary one-color stencils are often used for two and three-color effects, simply by transferring all colors at each setting of the stencil. A brush for each color is needed. The parts to be colored with the second color are covered with the hand, a piece of tin, or paper, while the first color is being put on. Then the first color is covered while the second color is being applied.

Sometimes one color is put on over another at the same setting of the stencil; that is, the leaves of a flower pattern, for instance, may be filled in with light green all over and then a darker green may be put on over it to the lower edge or base of the leaf. This gives a nice effect.

## diaper and all-over stencils-(plate 9)

Time was when the all-over pattern stencils were much used to decorate large wall areas. They are used oc-


Plate 9.-Diaper Stencil, with Wall Prepared for All-Over Stenciling. and Work Started in Lower Corner.
casionally today for unusual effects, but wall paper has largely displaced the all-over stencil method, because it requires much less labor. Some of the older expert decorators probably will never agree that wallpaper decorates as well as the all-over stencil in the hands of skillful men, but the saving of labor means dollars saved and the wallpaper is good enough for most jobs.

With diaper and all-over patterns the wall must first be accurately marked off into squares, circles, hexagons, or sections with diagonal, parallel, or vertical lines, using chalk lines, according to the shape and size of the stencil.

The idea is simply this: You cut or secure a stencil, of small size as compared to the wall- $10^{\prime \prime} \times 15^{\prime \prime}$ or $10^{\prime \prime} \times 20^{\prime \prime}$. Then mark the wall off into sections the same size and shape as the stencil. The stencil impression is then transferred to the first wall section, to the second, third, and so on until the whole wall is completely covered with repeats of the one stencil.

Plate 9 shows a suitable diaper stencil, also a wall marked off with chalk lines and then partly filled in with a stencil pattern.

Usually the same stencil pattern is repeated in each section until the whole wall is covered, but sometimes two different stencils and patterns are used alternately. Whatever kind of all-overs are used, extreme care is necessary in matching accurately and joining up each setting of the stencil on all four sides. Also the amount of color on the brush must be kept constantly the same, to produce uniform work.

It hardly need be pointed out that all-over patterns are usually stenciled in a lighter or darker shade of the same color as the wall is coated with ; a dark cream stencil on a light cream wall, a light gray stencil on a darker gray wall,--thus producing harmony of color by analogy, or likeness of related colors. Not necessarily so, however.

Harmony by contrast, the use of different colors which do not clash, is often to be preferred.

A light olive green stencil, such as the one shown in Plate 9, on an ivory wall, makes a combination which is beautiful beyond imagination. Likewise, just the right shade of pink for the light pattern spot stencil, Plate 10, on a light, warm gray wall, is indeed attractive for a bedroom. Decoration produced in this manner, by using


Plate 10.-Spot Stencil Suitable for Bedroom Decoration.
light, open, spot stencils to form an all-over pattern, is charming to a degree impossible to be equaled by wallpaper patterns of even the most expensive class. Time was when the large figured and heavily colored patterns of all-over stencils were preferred, but nowadays there can be no doubt that the light-lined, airy, and delicately colored stencils are much preferred.

Single-Spot Patterns.-The use of single-spot stencil patterns of symmetrical or conventional nature designs


Plate 11.-Single Spot Stencil Patterns.
offers an unlimited field for skillful decorating. Plate 11 illustrates a few such designs. The surface, after being ground-coated and finished as for plain colors, would be marked off in squares, rectangles or diamond sections, as in Plate 9, and the stencil pattern transferred to the wall at the intersection of the lines. Not necessarily at every intersection. The design may be placed at every other intersection, or every third, as may make the best appearance. One or two designs may be used (if they look well together), or a single design may be repeated to fill the whole wall space.

Detached Stencils.-These really do not form a separate class of designs. The term refers to a little different use of an ordinary stencil motif, or it may be a color stencil, an outline or background stencil. One or more separate motifs, such as are shown on Plate 11, are placed in the corners of panels, at intervals in the frieze, on the wall, or in some such manner, and are then connected by lines or band stencils. In other words these individual designs may be used on any area once, or repeated many times, and are usually, but not always, connected with narrow lines or a running pattern of stencil.

Plates 10, 21, 26, 28 indicate some of the uses made of detached designs. After some experience and study the decorator finds detached designs to have by far the greatest use of all. There is no limit to the ornamental effects which can be secured with them. They allow much latitude for exercising taste, for making up decorative schemes which just fit each room, and for producing special effects.

## CHOOSING A STENCIL DESIGN

Selecting stencil designs which are appropriate for each room to be decorated is fuiliy as difficult as the choice of the correct color effects, and is not less important. The help which others can give you to insure judicious selec-
tion is also about as indefinite at best as color suggestions and principles.

To be able to choose correct and tasteful designs, you ought to educate yourself to know the various orders in architecture and the style of ornament which was characteristic of each period of art history. With even a superficial knowledge along these lines, you can get on very well. This information is readily to be found in libraries, art institutes, encyclopedias, and illustrated dictionaries.

What Not to Do.-Further than what has been said and suggested in other chapters about selection and appropriateness of stencils, and their suitableness to the character of the rooms where they are to be used, a word about what not to do may help.

In a building of Oriental architecture use Oriental ornament in stencils, not Gothic or some other order.

Rose or other flower patterns nicely suit some bedrooms and sun parlors, but are ridiculously out of place in an office room.

It is not desirable that designs of fish, game, and other edible things be used in the dining-room just because that is where we eat. Neither is the bathroom the place for nude figures because that is where mortals bathe. The fish and game patterns may be interesting indeed in the gunroom of a club house.

Appropriate Designs.-The living room, reception hall, and library may well be stenciled with a formal classic design, perhaps some of those shown in Plates 1, 2, 3, and 4.

Nicely colored, conventional flower and leaf patterns are pleasing for dining-rooms, as a rule. Sometimes, however, the character of the furniture and the architecture of the rooms make it quite obviously necessary to use a stenciled design of like character.

Delicate, fine-lined stencil patterns fit most ap-


Plate 12.-Stencil Patterns $\underset{\text { Nursery. }}{\text { Appriate }}$ for a Child's Bedroom or
propriately the white enamel, ivory, and gray painted woodwork of bedrooms and the light, natural finished trim of other rooms. Rooms with mahogany furnishings require rather light, graceful stencils.

Where the furniture is heavy, massive oak and the rooms quite large to correspond, the stronger and bolder stencil patterns are suitable.

The interesting bird figure and animal stencils, some of which are shown in Plate 12, nicely fit the child's bed-


Plate 13.-Candlestick and Steaming Teapot Designs for Bedroom and Dining-room Respectively.
room or nursery and should be placed in a deep frieze at top of wall, or better yet in panels low down, the height of children. The steaming teapot design, Plate 13, carries out a dining-room scheme well, while the candlestick is a pretty pattern for almost any bedroom.

Those who do not care for flower designs in stencils usually are delighted with simple classic designs, delicately and softly colored to harmonize with the wall colors.

The Greek frets, or key designs, in all their variations, and many of the interesting conventional patterns lend
dignity to a hallway and are in good taste in living-room, den, library, or public buildings.

Form and Color.-Considering the effect of stencils as a whole, both color and form have their influence. Whether one or the other is more important is difficult to say. The highly developed art of Greek oivilization twenty centuries ago believed form to be the most important, and developed form to perfection, to the exclusion almost of color. The Greeks produced only a small number of designs, but gave their entire energies to improving the few to the point of perfection in form. As a result of this concentration, their designs are today standard, widely used and appreciated. Other less perfect art has been forgotten these many centuries.

Form, being more difficult to understand, is probably less appreciated by most people of today, even though it may be more important than color, as influencing our enjoyment of artistic design. Certainly it is true that good coloring of a stencil will be appreciated more on mediocre form in design than poor coloring of perfect form. This is due to the fact that we are developing more rapidly in the art of color than in form.

The following is a list of some of those from whom stencils of good design may be procured:
H. Roessing, 1314 Sedgwick St., Chicago.

Henry Bosch Co., 525 S. Wabash Ave., Chicago.
Geo. E. Watson Co., 62 W. Lake St., Chicago.
The Mayhew Studios, 515 W. 29th St., New York, N. Y.

## CHAPTER III

## STENCIL MAKING

A stencil is a design or pattern cut through a thin sheet of paper, zinc, brass or some other flat material, for the purpose of making a tool which will transfer an impression of that design to a surface repeatedly. Plates 5,6 , and 8 show stencils and the designs formed on a surface by their impressions.

Designing.-Until one has had considerable experience using stencils designed by others, no attempt should be made to compose designs. Excellent stencils can be secured conveniently and cheaply from paint supply houses. Until much experience has been gained, designs made by a novice would probably look amateurish and crude.

The use of ready-made stencils is discouraged by many decorators, and they base their advice on sound reasoning in many respects. It is true that stock designs are often used unwisely and with no credit to art. The young decorator, without the benefit of the apprentice system, which is lacking today, must begin somewhere, however, and surely the use of stock designs of merit is to be preferred to the kind an inexperienced man will design to begin with.

By all means learn to design. A special set of stencils to fit each job in size, color, and character of pattern, is the way to produce artistic effects and at the same time get much joy out of one's accomplishments.

To design, draw, and cut a set of stencils for a job is no small task, but rather one which calls for good judgment and good taste in color, form, and balance ; also a
sense of the fitness of things. Such qualities in a decorator come only after careful study, observation, and practice; these constitute experience.

Until you have worked long enough as a decorator to have gained a fair measure of experience, use the best ready-made designs you can purchase; but use them sparingly and see that they fit each job in character. When more than one pattern is to be used, have them fit each other.

Don't be afraid to worry about the suitableness of selected stencils. When you worry you think hard, and when you do that you are likely to make the best selections. The success of your jobs depends on your planning, upon the selection of designs, not so much on the execution. Any good journeyman can put the stencils on under clear instructions.

Knowing how to make stencils is valuable chiefly for the purpose of combining detached motifs, bands, runners, and solid lines so as to form a scheme for decorating a room. There are times when two or more good designs can be combined to advantage, when they go well together. Sometimes it is possible also to use certain parts of two or three patterns to form one new design.

Points to Remember.-When making up stencils and schemes for decorating keep these points before you:

1. All parts of a stencil and of a decorative scheme of lines and figures must balance well. A view of the whole layout should show that neither one side nor the other, nor yet the top or the bottom, is heavily overbalanced by too strong coloring or by wide, thick members. Of course a prominent figure on one side may be balanced by a like one on the other. A predominating central feature may constitute nearly the whole stencil and then be balanced by a like feature in the next position or setting of the stencil.
2. Don't produce a crowded pattern, but don't have
the detailed features too few. Blank space is as valuable and necessary as figures.
3. Have your curved lines gracefully curved and positively located.
4. Straight lines, squares, rectangles, circles, and all geometrical figures ought to be carefully measured to locate them. Then accurately rule in and cut. It will pay to spend as much time as is needed, in drawing the first stencil, to secure minute accuracy. Then keep it as a pattern from which to cut other stencils to be used on the work.
5. Keep in mind that a stencil designed to look well on paper, in black and white, will look far different when the impression is put on a colored wall in a color, rather than in black.
6. Do not use the same motifs, nor the same complete stencil designs, for more than one job in a neighborhood. The customer does not like to have his decorations duplicated, at least in the same neighborhood, and there is no need for it.

But, after all is said about using good taste and good judgment to secure nice balance, flowing lines, and graceful contour in your stencil designs, it must be concluded that words are as empty here as when trying to describe a beautiful color or music.

To study diligently the designs of master artists, and then practice, is the sure way to learn to do well on your own account. Fine designs are everywhere to be foundin the encyclopedias, the dictionaries and the hundreds of books on design for many purposes that may be consulted in the libraries. The museums, with their ancient pottery and metal products, also offer an endless opportunity to study the best.

The stencil process is not successful when it comes to transferring designs of animals, birds, and people in their natural state. The features invariably are distorted
and look freakish. Conventionalized natural subjects and silhouettes are transferred in excellent manner, however.

Conventionalizing.-Natural subjects are extensively used as motifs for stencil schemes, especially birds, insects, animals, and flowers. The Greeks and all civilized peoples since have used greatly the acanthus leaves in varying forms, also the anthemion (honeysuckle). The Egyptians used the lotus flowers, buds, and leaves. The Romans used the laurel leaves, making a crown of honor and symbol of victory. The French have their lily, the Dutch the tulip, the English the rose. All are changed to formal lines, conventionalized, and used the world over.

Some of these motifs - the rose and tulip, for instance -are much used in outline in their natural form, as well as conventionalized, and when so used ought to be colored naturally, or nearly so.

Plate 14 shows the natural lily with its conventionalized form, the fleur-de-lis, and several other conventionalized motifs.

## MATERIALS FOR STENCILS

Stencil Paper.-The material almost universally used now from which to cut stencils is a fairly, thin, tough, oiled paper, which can be purchased from paint supply houses in these sizes :

$$
\begin{array}{lc}
\text { Per 10 } & \text { Per } \\
\text { yd. roll } & \text { yard }
\end{array}
$$

Oiled stencil paper, ready for use, 36 in.
wide, weight 8 lbs .
$\$ 4.50 \quad \$ 0.50$
Oiled stencil paper, ready for use, 48 in .
wide, weight 11 lbs .
$6.00 \quad .70$

Unprepared paper, 48 in. wide, X......... 2.40 . 30
Unprepared paper, 48 in. wide, XX......... 2.80 . 36
Unprepared paper, 48 in. wide, XXX...... 3.20 . 40
Unprepared paper, 48 in . wide, XXXX..... 4.00 . 50
The above are "list'" prices, and subject to a discount of 50 per cent.


51823


Plate 14.-The Natural Lily and Its Conventionalized Form, the Fleur-de-Lis, with Other Stencil P'atterns.

Coating Ordinary Paper.-It is possible to use ordinary, heavy, brown Kraft wrapping paper with good results. Treat it first with a coat or two of paraffin wax, dissolved in turpentine. Shave the wax into small pieces, put into a pot and cover with turps. Then put the pot into hot water until the wax is dissolved. Do not melt on a fire. It is dangerous.

Another plan is to cut the stencil from this paper and shellac both sides of it. The English decorator prefers to coat all stencils made from paper, first with a mixture of one-third turpentine and two parts linseed oil. Then a coat or two of white lead and turpentine makes a flexible stencil, which lies flat on the surface and does not curl up on the corners nor catch the brush.

Other Materials.-Stencils to be used as patterns from which to make other stencils, and those which are to receive unusually hard service, are cut from a thin sheet of zinc, brass, or lead. Metal stencils do not lie close to the surface as they should in transferring, but are best for some jobs.

Many other materials are used in making stencils. Window shade cloth is excellent. Wall canvas, oil cloth, and filled muslin make stronger and more flexible stencils than paper. They are, of course, painted and shellacked before using, and usually before cutting.

## DRAWING THE DESIGN

The stencil design may be transferred to a new sheet of stencil paper, or metal, with paint through another stencil, making the same kind of an impression as would be transferred to a wall, or it may be drawn through such a stencil with a pencil. Again, the design may be put on to the stencil paper by tracing it through a piece of carbon paper or it may be drawn with rule, compasses, T-square, and triangle.

However it is transferred to the paper, have the sheet securely fastened down to a drawing-board (your wife's bread-mixing board will do, if you can get it) with thumb


SCALE
Plate 15.-T-Square, Triangle, Curves, and Scale Used in Stencil Design.
tacks. Be certain to have an accurate rule and a hard pencil- 4 H or 6 H , preferably the first.

Copying Designs from a Book.-Should the design you want to use be found in a book from which the page ought
not to be torn, or marked up by tracing the design through carbon paper on to the stencil paper, you can copy the design in this manner : Lay a piece of linen tracing paper, such as is used by architects for plans, over the design. Fasten it to the page with paper clips, pins, or thumb tacks, and proceed to trace the pattern with a hard pencil onto the linen, which, of course, is transparent. Thin, white, transparent letter paper, rice paper, and onionskin paper are just as good for the purpose, but not so tough and durable as linen.

When you have the design on the linen or thin paper, it can be transferred to the stencil paper easily, by placing a sheet of carbon paper between the two and tracing the pattern with a hard pencil. Keep the pencil sharp and follow the lines carefully, or you will lose some of the important details of the design during the transferring process. Study the design carefully before beginning to trace, and then you can do a more accurate job. After tracing, true up the straight lines with a rule and the curved lines with a compass or by freehand.

New Drawings on Stencil Paper.-When making a new drawing on stencil paper, without the use of tracings, and when laying out a new stencil composed of detached motifs or parts of other designs, start your drawing by making a base line square with the board, using the T-square for the purpose. Then use the triangle on top of the T-square for all vertical lines, as in Plate 15, and the stencil will be accurate when finished. That is exceedingly important.

If the stencil design and plate are not the same width at both ends, the design will not match and will not run straight. Square all-over stencils are especially particular in this respect; band stencils likewise. The curves used by draftsmen will be found very handy in making scrolls and curved lines. They are semi-transparent, so that the lines of the drawing can be seen through them.

Locate the design on the stencil paper so as to have not less than a two-inch margin on all four sides. Then the color from the stencil brush will not smear the wall up around the outside of the stencil plate. Be sure and cut the whole stencil plate square with the base line on all four sides.

## ENLARGING OR REDÚĆING SIZE

Use of the Pantagraph.-Any stencil in your possession can easily be made larger or smaller and at the same time keep each line, figure, and detail the correct size in proportion to the rest of the stencil design. The tool called a pantagraph, shown in Plate 16, accomplishes this purpose well. Instructions for using it are sent with each tool, so time will be saved by omitting them from these pages. Pantagraphs are listed by a Chicago paint supply house as follows:

No. 8864. Pantagraph, hardwood, simple construc-
tion, $171 / 2$ inches long ; price. . . . . . . . . $\$ 0.50$
No. 1149. Pantagraph, hardwood, nickel-plated mountings, lead pencil and tracer interchangeable in tubular holder for reducing and enlarging
No. 1148. $\begin{aligned} & \text { Pantagraph, hardwood, nickel - plated } \\ & \text { mountings, interchangeable for reducing } \\ & \text { and enlarging in } 25 \text { ratios, in plain box; } \\ & \text { price ....................................... } 3.00\end{aligned}$
No. 1144. Pantagraph, polished hardwood, fancy lined bars, 21-inch metal foot, interchangeable points for reducing and enlarging drawings, in 34 ratios, in plain box; price
Another Method.—Another way to enlarge or reduce a design is shown by Plate 16 also. Take the silhouette nursery stencil of a circus bear, by way of illustration.

Assume that the picture you have is four inches high and that you need a stencil of it to be eight inches high.


Plate 16.-Pantagraph, Used in Enlarging or Reducing Stencil Designs ; Also the Square Method.

To begin the enlarging, draw lines across the picture you have crosswise and up and down to completely cover it with little squares, say of one-quarter inch size. Now
number the squares across the top from 1 down to 144 as indicated by the drawing.

Now it is desired that the enlarged stencil shall be twice as large as the picture, so the first step is to draw a rectangular panel twice as large as the one occupied by the picture you have, which is $2 \times 41 / 2$ inches, so make the new drawing $4 x 9$ inches and double the size of the squares. The squares on the picture are $1 / 4$ inch each way, so make the larger ones $1 / 2$ inch each way. Then number them in the same order as those on the small picture.

This done, the new picture must be drawn in freehand, but the numbered squares show the location and curve of each line so well that the drawing amounts practically to copying. For instance, by looking at the picture, we see that the left-hand side of the parasol begins in the lower left-hand corner of square 18 , runs up to the lower half of square 13 , then down to the lower center of square 24 , and back again in a slight semicircle to square 18, where the line began. We notice that the handle of the parasol runs through almost the center of squares 29,37 , and 45 , not quite straight, but with a little slant. It is seen also that the bear's nose begins just a little below the center of square 45 , his forehead in 44 , one ear in 43 , one in 42 , and so on.

Now if you will begin to draw these portions of the design in on the larger squares, taking care to locate each line in the square bearing the same number as on the picture, and in the same relative position, you will have no difficulty in copying the design accurately to enlarge it.

It is well just to sketch in the whole design roughly first with a hard pencil, to locate the lines in the proper squares. Then go back, take one square at a time, and copy the direction and curve of the lines with care.

This done, go over the design as a whole, to comnect
up the sections of lines and smooth out the kinks. Next draw in the ties and cut the stencil. Obviously the drawing ought to be done on stencil paper.

This method should prove especially easy and handy for all who possess a little skill in drawing, and facility with a pencil. Anyone who is willing to make a few practice trials can readily use the method to advantage.

Use of the Scale.-The scale, shown on Plate 15, is a handy tool when laying out a drawing of some design which you want to make a smaller size, say one-half, onefourth, or one-eighth the size of the original, and still keep the different members of the design in the same proportion to each other as in the large design to be copied. The architect draws his plan of a house, making it a certain size in proportion to the house when built. He lets $1 / s, \frac{1}{16}$ or some other fraction of an inch represent a foot of the building itself. Then, when making his drawing, if the house is to be forty feet wide, he makes the drawing forty $1 / 4$ inches, or ten inches, wide.

A scale is used for obtaining the various measurements from a drawing. Scales are made in several forms, the most convenient being the flat with beveled edges and the triangular, like that shown in Plate 15. A scale is usually a little over 12 inches long, and is divided into sections for a distance of exactly 12 inches. The sections, or graduations, are arranged so that the drawing may be made in almost any proportion to actual size. The common divisions are multiples of two. Thus we make drawings full size, half size, $1 / 4,1 / 8, \frac{1}{16}, \frac{1}{32}, 1 / 64$, etc. When a drawing is to be $1 / 4$ size, 3 inches (being one-fourth of a foot) equals 1 foot. Hence 3 inches on the scale is divided into 12 equal spaces and each space represents 1 inch.

The scale should never be used for ruling lines, or it will become marked up and be difficult to read. It is a measure, not a ruler.

## GUIDE MARKS AND KEYS

Band stencils, color stencils, and all that run continuously, as when below a picture mould, are most satisfactorily used when guide marks, or register keys, are placed at the left-hand edge of the stencil plate, and cut through. The marks are transferred to the wall along with the balance of the pattern. The marks usually consist of a part of the right-hand side of the design.


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Plate 17.-Showing Guide Marks, or Register Keys, $A$, $\boldsymbol{A}$, on Design $B, B$.
Plate 17 shows the guide marks $A, A$. They are parts of the right-hand figures of the design, marked $B, B$. To transfer the design from this stencil plate, begin on the right-hand side of one wall, in the corner. Set the stencil plate in the first position to follow a chalk line previously snapped on. Transfer the design, including the guide marks $A, A$, to the wall with the stencil brush in color in the ordinary manner. This done, remove the stencil and place in the next position to the left, for the second impression.

The portion of the design on the right-hand side of the stencil plate marked $B, B$, should be placed exactly over the guide marks on the wall, marked $A, A$. The stencil
is now in the correct position for transferring the second setting of the design to the wall.

When the plate is made to register with each setting in this manner, it will run straight and each impression will match the one behind and ahead of it perfectly.

## MAKING COLOR STENCILS

Color stencils for a two-color set are made in the following manner :

Draw or trace your design complete on a piece of tracing cloth or ordinary wrapping paper (not too thick to be traced through, using carbon paper). Place this sheet with the design on top of the paper from which the stencil is to be made. Insert a piece of carbon paper between the two and square up the corners of the three sheets. Lay them on the drawing-board and make them fast with a thumb tack, push pin, or needle in the upper right-hand and left-hand corners.

Now select the part or parts of the design which are to be transferred in color No. 1; say the parts marked $C$ in Plate 8. Trace over these parts only with a hard pencil, so as to transfer them through the carbon paper to the stencil paper below. This done, pull all three sheets up, removing the thumb tacks or push pins.

To make the stencil for color No. 2, place another clean sheet of stencil paper on the board, the carbon next, and then the sheet having the complete design on it. Square up the sheets and again fasten down to the board with thumb tacks. See that the three sheets are even on all four sides, and that the two pieces of stencil paper from which the new color plates are to be made are exactly the same size as the sheet upon which the complete design was made. Trace the rest of the design, that is, all parts not marked $C$, which are to be transferred with the second color. The two plates are now complete, except for guides. Keep the original drawing
as a pattern for future stencils should one plate or the other break while in use.

Registering.-Nothing has been said yet about the most important feature in making color stencils, namely, the registering, which simply means making the design match up accurately when transferred in two operations and from two different plates, to get the second color in the right place. This is accomplished by means of color guide marks, as shown by $G, G$, Plate 8 .

See to it that the guide marks are transferred to the stencil plate made for the second color only. Cut them through the plate with the balance of the design, and do not transfer them to the wall with the second color. After transferring one color to the wall from the plate having the completed leaves on it, marked $C$, in Plate 8, you can set the second plate so that the guide marks will match with the ends of the leaves transferred to the wall by the first plate.

Two Kinds of Guide Marks.-Keep in mind that two kinds of guide marks are used. Those marked $G$, Plate 8 , are for registering the second color plate on top of the stencil impression on the wall, which has been transferred by the first plate. Guide marks $A$, in Plates 17 and 8 , are used to help set the first stencil in the second position on the wall, so that the design will match and join up closely, and run straight.

By having a plate for each color, made by repeating the above process as many times as need be, you can transfer a design in as many colors as you wish, without any freehand filling in of colors, as with outline stencils. The outline stencil makes a more attractive job, however. The color plate method is most useful for some kinds of work, notably where the surface to be decorated is large, and when the expense must be kept to a minimum.

Two-Color Stenciling with One Plate.-Stenciling is often done in two colors, using an ordinary one-color
stencil plate, and in one setting of the plate in each position. A separate stencil brush and pot of color is provided for each color. The brush must be fairly small. The stencil is set in place and held by needles or glass push pins, and the parts to be transferred in the second color are covered with the hand, a piece of tin, or cardboard, while the first color is being transferred. Then, without removing the stencil plate, the second color is transferred while the first is covered. Care is needed to avoid smearing a color in the wrong hole and to avoid moving the stencil, thus blotting the edges of one color or both.

When making a stencil for use in panels, such as are often part of a dining-room dado, and sometimes are found in friezes, it is best to make a stencil large enough to fill the whole panel, unless it be quite a large panel. The stencil plate may be held in place with glass push pins, and all color work and wiping can be done in one setting, so that the design will be complete when the stencil is removed.

## LOCATING TIES

How, when, and where to leave 'ties,'" that is, little pieces of the stencil plate left between the cut-out details to hold the stencil together, is the beginner's great problem. The best aids to its solution are common sense and that precious "sense of the fitness of things." The thickness and toughness of the stencil plate will help to determine how many ties are required, and how wide they must be to hold the plate together. Make them wide enough to be strong and at the same time to look well in proportion to other members of the design.

That ties are necessary to the reproduction of most designs is obvious. Suppose you wish to stencil a hollow square pattern, as in Plate 18 . When you cut through the paper plate to follow the lines on all four sides, the


Plate 18.-"Ties" Correctly and Incorrectly Placed.
center section would fall out. The stencil plate would then transfer a solid, not a hollow, square impression. The center section must be held in place while transferring the impression, and to leave ties, or little pieces of paper connecting the center section with the balance of the plate like bridges, is the practical method. This illustrates the principle as it applies to all ties in stencils.

How to Place Ties.-Ties may be placed arbitrarily, making sure to have a certain number to each foot of stencil, or they may be placed only with the idea of making a strong stencil. But both methods are incorrect. Ties ought to be placed to make a stencil plate strong, but that can be accomplished while at the same time locating them so as to help the artistic appearance of the design. Make the ties help to improve the design, not interfere with its flowing lines and continuity. It is not necessary that stenciled ornaments be of a disconnected pattern, but many designs are more attractive with the blank spaces made by ties, if the ties are artistically placed to preserve the balance in design.

In placing the ties, parallel lines should always be strongly supported by direct ties, carefully placed. Ties which are introduced in a purely arbitrary fashion frequently have to be disguised by filling with color the blank spaces left by them in the design on the wall, to prevent their appearing too evident and obtrusive.

Ties come most frequently in long stems and lines. Sometimes it is possible to throw another stem, a leaf, or a tendril across at the weak point, and so get the desired strength without another tie. See Plate 18. This is the best way, as it adds interest at the same time. Of course, it should not be allowed to disturb the balance of the design. The tie can be made too evident in the design and may clearly intrude, completely breaking up the continuity.

Experience only will teach one the correct and incorrect placing of ties in stencil designs, but Plaie 18 will give an understanding of the most common errors. The plate also indicates the correct way to place ties. The background stencil at the bottom of the plate is of the class which requires no ties. The design is supported when cut out of paper by touching itself in many places.

Japanese Stencils.-A study of Japanese stencils is especially helpful as to the location of ties. They are indeed clever in this respect. Their ties are made to form the veins in the leaves and other natural parts of the design.

The people of Japan use stencils for many purposes besides house decoration, even on their clothes. One outstanding feature of their designs is that they excel in simplicity, never drawing in a complete motif, be it bird, insect, or flower. Enough is left to your imagination to excite interest. They suggest the outline merely. Yet their ideas in stencil are clear ; they "get over," and are not vague. The colors used are nearly always transparent dyes and stains, with only an occasional use of opaque color to emphasize a detail.

The Japanese decorator does not often use ties in his stencils, even though they are of a most delicate and complicated design. He handles the stencil in such a way as to gain the support given our stencils by ties. The Japanese pattern is drawn on a thin sheet of strong rice paper, which is then laid flat on top of a second sheet of the same paper. In cutting, the knife is made to go through both sheets, thus cutting two stencils at once which are exactly the same; they register. Next one sheet is coated with glue, and across all openings which need the support of ties, pieces of silk thread are laid arbitrarily as to design. The second stencil plate, the duplicate, is then laid on top of the glued-on threads, and a plate of double thickness results. It is strong enough
for all practical purposes. The threads do not leave blank spaces on the wall, as do paper ties, because the bristles of the stencil brush work the color under them. There seems to be no reason why this form of construction should not be used by American decorators for all the designs for which it is superior. It has in fact been used to some extent.

Complicated Designs.-The making of stencils to transfer complicated designs, those having many small details to be cut out, is usually handled most practically by making two or more plates in the same manner as when a stencil is to be transferred in two or more colors. That is, a plate is made for each color to be used, and each plate has cut into it only the part of the design to be transferred in that color.

Some designs from which stencils are cut make oneplate stencils which are frail indeed, and they do not last long. The brush tears the small ties after a few settings in decorating a wall.

But when two plates are made to transfer the same design in two settings, a stronger stencil results. Of course, it requires a little more time to transfer the impression from two plates than from one. It can be transferred in two colors, however, just as easily as in one.

In using two plates for a design, the details, such as leaves, stems, and flowers, for instance, can be made to connect more closely, or to join solidly if that is to be desired.

Metal Stencil Ties.-On metal stencils, except sheet lead, the ties are usually pieces of fine steel wire, soldered in place arbitrarily to make a strong stencil. The brush puts color on under the wire ties, and so they do not show. Metal stencils require few ties.


Plate 19.-Brushes and Tools Used in Stencil Work, also a Grapevine Design.

## CUTTING THE STENCIL

Paper Stencil.-The design to be cut is drawn on stencil paper. Then the first essential is a knife with a good piece of steel for a blade. Plate 19 shows the regular stencil knife sold by the supply houses. Sometimes a good pocket-knife is better. Any knife which is not too hard on the fingers when cutting, and which has a point that can be kept sharp, will do. An oilstone must be nearby, so that the knife can be sharpened at least once for each stencil cut. If not sharp, it will cut a stencil which will produce ragged, round edges.

A large piece of plate glass on a table is the best surface upon which to place the stencil while cutting. A small piece of ordinary window glass will do, laid on a flat table top. Just see that it is quite a little larger than the stencil to be cut. A piece of sheet zinc will serve for a cutting surface also.

If you wish, the paper from which the stencil is to be cut may be dampened slightly by laying a wet cloth over it. Then paste the four corners down to the glass. When the paper becomes dry it will shrink tightly and perfectly flat.

Arrange to move the stencil so that you can always pull the knife to you in cutting, rather than push it away from you; although it is true that the Japanese cutter pushes the knife away from him.

Cut with the sharp point of the knife and keep it sharp. When cutting a straight line, lay down a ruler to follow.

Take great care to avoid cutting through some of the ties. If you do cut through one, glue a strip of cloth or paper over it firmly, to hold it in place.

For cutting holes in a stencil, one quarter to two inches in diameter, steel leather belt punches are used for accuracy and speed.

Hold the knife not too straight up and down. Slant it toward you a little and it will turn the curves more easily and remain sharp longer.

Metal Stencils.-Metal stencils are placed on a lead block for cutting with chisels and punches. Files, drills, and hack saws are also used in the cutting.

## RELIEF STENCILS

The Greek civilization highly developed in art 2500 years ago, loved and developed the beauty of form rather than color. Among the oldest designs known today are the Greek frets, or key designs, shown in Nos. 1804, 1212, 1211, 1208, Plate 1, and they were cut in relief in beautiful marble and stone, usually without color.

This form of ornament can be produced with stencils. It possesses great merit from the artistic standpoint and deserves a much wider use. It consists, as the name implies, of raised designs set in relief on a flat or curved surface. The design is cast or moulded on the surface by filling a deep-cut, thick stencil plate with a plaster composition.

Relief stenciled designs may be colored with transparent colors, such as the umbers and siennas, or left in the white. Shellac the surfaces to stop suction before coloring. The color may be partly wiped off for a pleasing effect.

Materials Used.-Relief stencils are drawn the same as other kinds, but not on paper. The stencil plates are cut from some material which is one-eighth inch, onequarter inch, or three-eighths inch thick. Soft woods, such as basswood and clear white pine, are suitable. Good quality cork linoleum, made for floors, is excelient material because it is easy to cut, is flexible, and lies close to the wall.

Cutting.-The stencil when cut ought to be varnished or shellacked. The cutting is done with the scroll or fret
saw used by carpenters and cabinetmakers. A hand fret saw will do. Chisels, drills, and sharp knives are also needed. It is well to cut the design so as to taper slightly toward the back of the stencil. Then, when removing the plate, after filling in the composition material to form the pattern, it will come off easily without breaking the edges. The inside surfaces of the design must naturally be smooth and without suction.

Placing on the Wall.-The relief plaster design is best cast on to the bare plaster wall. Sandpaper thoroughly any paint on the surface to the bare plaster, and wet it before casting the new plaster design. The stencil plate must be held firmly and steadily in place for a few min. utes with each setting, to permit the plaster to set before removing it. As to location, point of beginning, etc., what has been said here about handling ordinary stencils applies to relief stencils.

Composition.-The plaster composition to use for this work can be purchased from decorators' supply houses in the dry form, ready to mix with water. You can make a suitable composition from plaster of paris chiefly, with a little whiting added. Dissolve just enough first-class glue in water to make a strong size. Mix the plaster of paris and whiting to a stiff putty with this size. Force this putty well into the stencil plate with a putty knife, trowel, or spatula, holding the stencil tightly against the surface at the same time. Smooth off the face evenly.

Even without the beautiful color effects which are to be obtained on relief designs by transparent colors, wiping out high lights, shading, etc., this work is wonderfully attractive when confined to simple patterns of perfect classic design. The depth of the design causes it to cast a shadow and to show perspective, which we do not have with flat ornaments on flat surfaces.

## CHAPTER IV

## COLORS AND COLOR HARMONY

So large a subject as that of color can hardly be covered satisfactorily in the limited space of a single chapter, yet there are some essential principles of color use, affecting the artistic employment of stencils, which ought to be presented, however briefly it must be done.

The coloring of stencils, obviously, must be governed in a large measure by the wall and ceiling colors of a room, by the trim and the furnishings. Yet this is not the place for a full consideration of these factors.

Cultivation of Color Sense.-We hear it said that but few people have a well developed eye for color selection, mixing, and matching. There is mighty little truth in such statements. To be sure, some people are color blind, while others have an eye for color and a color sense much more highly developed than the average person or painter, and so are able to distinguish and appreciate exceedingly delicate variations and harmonies of color.

Color management is gained through both sight and feeling. The study and application of well-known color rules will enable the average painter to get on well. The mastery of color harmony comes also through constant association with and study of the beautiful things produced by man, and especially the beauties of nature. Diligent observations and careful deductions from what you see in the coloring of the birds, the flowers, and butterflies will soon quicken your color sense and make it quite beyond a possibility for you to produce color schemes which do not have the harmony and feeling which please us.

Obviously, trials and practice in mixing and matching colors are as essential as to study the fine coloring effects produced by nature and by man. Without these individual tests, progress is not made. But get into the habit of enjoying the beautiful in color, proportion, and form. Read the history of art, and it will help your work.

Color Management in Stencils.-It may seem ill considered to try to give specific, definite ideas about colors, color schemes, and color use without showing actual colors in print. Color names are as a rule so inadequate and non-descriptive. But an attempt will be made to state the most important facts concerning color management as it relates to stencils-the points to be kept in mind and used. When specific colors are mentioned, they will be described by their ingredients or formulæ rather than by names alone.

Concerning the finished effect of stencil decoration on walls, keep ever before you the requirements of artistic and good decoration.

Stencil ornament must be in harmony with the general decorations and furnishings of a room, both in color and in form.

It must be restful to the eye and not too bold or too prominent to enable a person to relax and rest.

Walls, whether ornamented with stencils or not, ought to form a good background for the display of pictures and the right color setting for furniture, rugs, and drapery. When walls are painted or papered too strongly in colors or in the figure of stencil or wall paper, they attract undue notice, diverting attention from the effect of the room as a whole. It is just as poor taste to have spectacular furniture or overcolored rugs as to have walls out of harmony, but the painter exercises no control over these other details and he is responsible for the effect of the wall treatment.

Delicate Colors Preferred.-For interior decoration stencil colors should always be soft and delicate, with this exception: Some stencil designs contain small centers or areas which deserve strong, bright coloring in order to set off the whole design properly. These are called jewel points, and require bright, strong treatment in color. The area thus colored should seldom be more than two or four inches in diameter, usually less.

What are soft, delicate colors? And what are strong. harsh colors? Light colors made by tinting white with but a small quantity of any color are soft in tone, but as a rule they are made on a white-lead base and are, therefore, opaque. So they are not as useful for stencils as semi-transparent colors, such as the umbers, siennas, greens, and blues.

How then are you to secure a light, soft yellow, for instance? Chrome yellow alone is harsh and too strong. It is also opaque. Mix it with white lead to make a nice soft yellow and you have the color, but not the transparent effect preferred for stencil colorings. Yellow lake is transparent and will give you nice, light, soft tints, but it fades quickly.

Here is the way to produce the soft, durable yellow tint: Raw sienna in the can is brown, and on dark surfaces it is still brown; but spread this transparent sienna over a white or light colored ground-spread it thin, and a clear soft yellow tint will result.

This principle holds with all semi-transparent colors. A cobalt blue, used as it comes from the can, is far too strong and harsh to be used for even fairly large areas of wall surfaces. But mix it thin and spread over a white, light gray or ivory ground coat, and you have a pure light blue tone which is attractive indeed.

The term "harsh colors" is best used as describing crude colors, such as Prussian blue, which has a green-
ish cast. A little black, red, or yellow added to it will modify and soften the color.

It is a general rule that for many purposes a much more pleasing effect is produced by mixing two or more colors together than by using one clear color. You might, for instance, use a brown (burnt umber) for vines and stems of flower patterns; but add a little raw umber and a touch of red, and a more pleasing color results.

This principle is especially noticeable when mixing opaque colors by tinting a white-lead base. Mix a brown from white and burnt umber alone and it is lifeless, but add a touch of chrome yellow, a little raw umber, and red, and an exceedingly pleasing brown results. You cannot see the yellow nor the red in the brown, but it is there-you can feel its influence.

All tints and shades are more pleasing to the eye when two, three, or four colors are used in their mixing than when but one or two are used. The complicated formulæ, in other words, produce more attractive colors than simple formulæ.

## POINTS TO REMEMBER ABOUT COLORS

When equally light or equally dark colors are mixed together, the resulting color will be a little darker than either of the two.

Blacks, ochre, chrome yellow, and white lead are not semi-transparent, but opaque. They hide the surface. They are not glaze colors.

The lake colors are more transparent even than the umbers, siennas, cobalt blue, Prussian blue, ultramarine blue, chrome green, vermilions, Indian red, Venetian red, Vandyke brown, verdigris green, and some others less commonly used. Those enumerated are the most important and permanent of the glaze colors and are semitransparent.

Opaque colors (those which cover solidly) appear flat and uninteresting when used for stencil purposes. Semitransparent colors-umbers, siennas, chrome green, and yellow-give an appearance of depth which is good to look at. A transparent color laid on thin as a glaze over opaque colors or bronze metals is especially attractive.

When two or more colors of a stencil are a little out of harmony, a thin glaze coat of some semi-transparent color, spread over both colors, will often unite them and improve the harmony wonderfully.

Don't color natural forms inconsistently. It shows poor taste to tint the natural outlines of roses with blue. Nor should daisies be colored purple-they don't grow that way. On the other hand, conventional forms of the rose, the daisy, and other natural motifs may well be colored with any light tints which will harmonize with the rest of the color scheme.

Avoid using too many different colors. It is better by far to use a few shades or tints of one color.

## COLOR HARMONY

Color harmony is produced in two principal waysby analogy and by contrast.

Harmony by analogy results from using related colors, those which have something in common with each other. When you mix a light gray, by adding a little black and a touch of raw umber, for a ceiling color, and then produce a side wall color in the same way, but using more black and more umber, you harmonize by analogy. The two colors are related. They would still harmonize, by the same principle, if the lighter color had also some red in it, while the darker had yellow in its make-up. Both colors would still possess the black, white, and umber in common. Color harmony by analogy is by far the safest and easiest way to be certain about the outnome of combinations.

To secure harmony by contrast means the use of two or more unlike colors which appear well together and complement each other. Red and green, purple and yellow, orange and blue, all harmonize by contrast.

Lack of harmony between strong, pure colors is quickly detected by the average person. With medium and light colors it is not so easy to detect it. When it comes to very light colors in the transparent class, it may almost be said that all colors harmonize with each other.

The inexperienced decorator usually possesses a tendency to use too many colors, too strong colors, and to repeat a design too many times. Don't do it! One reaches the point of satisfaction with colors and designs, as with everything else. The simple, well-proportioned, tastefully colored decorations have the most charm. And remember, too, that blank space is needed to balance the ornament arid give a pleasing appearance to the wall as a whole.

## VARIATIONS OF COLOR

A tone refers to the comparative brightness of a color. Colors may be lighter or darker in tone according to the quantity of light they reflect.

A tint is produced by adding white to any color. Colors are of different tints in proportion to the amount of white in them.

A hue is the changed effect produced by adding one color to another. Thus we may add a reddish hue to a brown, a greenish hue to blue, etc.

A shade is a degree of difference in tone. When two colors have the same hue (quality of color) and tint, but are different in tone, the dull one is a shade of the other.

decorators' oil colors

Many of the colors used for stenciling, striping, and glaze work are those usually purchased for tinting white
lead. The umbers and siennas especially are suitable for stencil decorating, provided they are of first-class quality. For particularly nice jobs it is advisable to buy the special decorators' colors in tubes or cans, as they are clear in tone, brighter, and more transparent. They are ground very fine in linseed oil, and put up in one-pound friction-top cans, which may be easily opened and closed; also in large tubes, $11 / 4 \times 6$ inches. Substantially the same colors can be secured ground in japan or turpentine, also in water (called "distemper").

The principal advantages to be gained by using these special decorators' colors are that such colors are stronger in tinting strength, clearer in tone, and more transparent than ordinary house-paint tinting colors. For ordinarily good work, however, colors of the latter class are completely satisfactory. They are not muddy, nor short in coloring strength, when they come from reputable manufacturers.

Following is a list of special decorators' colors, "'ground in linseed oil," handled by one supply house.

Blacks.-Ivory black, lamp black.
Blues.-Antwerp, cobalt, Prussian blue, ultramarine.
Browns.-Burnt sienna, raw sienna, burnt umber, raw umber, Vandyke brown.

Greens.-Chrome green, light; chrome green, medium ; chrome green, dark; sap green, Zinnobar green, ultramarine green.

Lakes.-Alizarin lake, blue lake, carmine lake, crimson lake, geranium lake, green lake, light; green lake, dark; mauve lake, olive lake, orange lake, rose lake, scarlet lake, yellow lake.

Reds.-Decorators' red, Indian red, permanent red, rose pink, Turkey red, Tuscan red, Venetian red.

Vermilions.-American vermilion, English vermilion.

Yellows.-Chrome yellow, lemon; chrome yellow, light; chrome yellow, medium; chrome yellow, orange; Dutch pink, golden ochre, yellow ochre.

White.-Flake white.

## LIGHT AND COLORS

Electric and gas lights affect color schemes considerably. Pure yellow which is free from a greenish or reddish tinge appears under artificial light to be almost white. Pure blue seems almost black. Scarlet appears normal but brighter. Bright pure bluish green appears normal but a little dull.

Other changes noticeable under the influence of electric or gas lights are:

| Azure blue. | pears | gray and dull |
| :---: | :---: | :---: |
| Cadet blue. |  | soft and dull |
| Peacock blue | " | soft and dull |
| Old blue. | '، | soft and dull |
| Robin's egg blue. | '6 | gray and dull |
| Brown | ، | softer |
| Buff | ، | to be little changed |
| Gray | ، | softer |
| Green | ، 6 | softer |
| Lavender | ، | adversely affected |
| Maroon | ، 6 | softer |
| Pink | ، | adversely affected |
| Purple | ، | adversely affected |
| Reds | '6 | to be little changed |
| Rose | ، 6 | adversely affected |
| Salmon | ، | adversely affected |
| Terra cotta | '، | softer |
| Violet | ، | to be little changed |
| Yellow | " | softer |

## PERMANENCE OF COLORS

As is pretty generally known, some commonly used colors are more permanent than others and so are serviceable for a much longer period without fading or changing from the influence of strong light. Following is a classification of many of the most useful colors, with respect to their permanence:

| Permanent | Fairly Permanent | Fugitive and Likely to Fad |
| :---: | :---: | :---: |
| WHITE- |  |  |
| Flake white |  |  |
| White lead |  |  |
| Barium white | zine white |  |
| RED- |  |  |
| Indian red | Vermilion | Red lead |
| Venetian red | Madder red | Crimson lake |
| Red ochre | Turkey red | Scarlet lake |
| Burnt sienna | Rose pink |  |
| Tuscan red | Orange chrome |  |
| YELLOW- |  |  |
| Raw sienna | Aureolin | Yellow lake |
| Yellow ochre | Barium yellow | Zinc chromate |
| Golden ochre | Cadmium |  |
|  | Chrome yellow |  |
|  | Indian yellow |  |
|  | Naples yellow |  |
|  | Dutch pink |  |
| GREEN- |  |  |
| Chrome green | Emerald green | Green lake |
| Cobalt green | Madder green | Sap green |
| Green ultrama. rine | Malachite Terre verte | Verdigris |
| BLUE- |  |  |
| Cobalt | Prussian blue | Indigo |
| Ceruleum | Antwerp blue |  |
| Smalt |  |  |
| (except with white lead) |  |  |
| BROWN- |  |  |
| Burnt umber Raw umber | Vandyke brown (mineral) | Vandyke browr (organic) |
| BLACK- |  |  |
| Lamp black |  |  |
| Charcoal black Ivory black |  | Bitumen black |
| Graphite black |  |  |

## COLOR SCHEMES

Naturally, the colors to be used for stencils are determined by other colors used in the room, and are governed by the character of the room, the light, and the color preferences of those who occupy the rooms.

A few color schemes in general will, nevertheless, be helpful as a means of stimulating thought and of suggesting others. When it is said that the color schemes which follow are interesting, in good taste, and suitable, it must be understood that this is true principally when the wood trim and furnishings are in harmony with the colors suggested.

For These Wall Colors
Cream
Buff
Fawn
Light cobalt blue Delft blue
Dull gray-blue
Graý-green
Olive
Sage
Yellow

Pearl gray
Tan
Umber grays

Use These Stencil Colors
Soft green, gray-green, sage, orange, brown, dull red, green, light tan, white, ivory.
Dark blue, orange, yellow, browns, sage, gray-green, light soft pink, black and light orange, white.
Brown, orange, ivory, cream, rose, light yellow, white.

Purple, light blue, orange, russet, white, buff.

Ivory white, light gray, olive, sage green, light blue, rose, white, orange. Cream, brown, white, dull green, ivory. Dull green, light gray, rose, orange, white, ivory.

Stencils always look well on a wall when transferred in the ceiling color, and vice-versa. Or a color midway between the wall and ceiling colors (mixed on the same formula), but a few degrees darker or lighter, may be used.

Ivory white, pure white, and light gray may be used for stenciling on practically any ground color.













Indefinite Color Names.-When a color is mentioned by name, keep in mind always that it is only a general term until more definitely described. The name "green" is indefinite indeed until it is described either as a bluegreen, meaning that it has a bluish cast; a gray-green, with a dull grayish cast; an olive or yellow green. The same holds true in describing, mixing and using most colors.

You will note that the blues, browns, yellows, and other colors are also specified as dull greens, pale yellows, soft grays, etc. That is to distinguish them from the full, clear colors, which are usually much too harsh to use until toned down by the addition of some other colors. A blue, especially Prussian, is far more attractive for interior decoration after you have added a touch of black and a bit of red, to make what is called an "old blue." The soft, dull appearance of pastel colors is the effect you want to approximate in practically all colors used on large wall spaces and on stencils.

In decorating the average home, no better color plan can be followed than to use one general tone throughout the several rooms. Of course the one color may well be made lighter or darker for each different room. The warm grays, dull, light gray-greens, and tans are excellent for this purpose, forming a good background for pictures and other furnishings.

## COLOR FORMULE

In connection with the color formulæ in the pages that follow, two points must be kept constantly in mind:

First, there are no standard names for colors. Perhaps it ought to be stated the other way,-there are no standard colors for color names.

Lay out a certain medium shade of warm yellow, and ask several people what color it is. One will say buff, another fawn, others goldenrod, russet, pumpkin color,
and so on. So it is with most colors. Perhaps some day our government will establish color standards, as it has already declared how much weight constitutes a pound, how much of any liquid equals a gallon, etc.

The colors produced by the formulæ given here are considered by the average decorator to be correct for the names attached to them. You must, however, mix any one of them lighter, darker, or a little different if necessary to produce what your customer thinks is a better color for the name given.

The second point to keep in mind is that the tinting strength of different brands of colors varies considerably. The writer has used seven pounds of a cheap yellow ochre to tint a batch of white lead to the same shade of cream as was produced by one pound of first-class French ochre with the same amount of lead.

Some brands of tinting colors are greatly extended by inert pigments, because some people want cheap colors. The high class, strong colors are cheapest in the end. and far better and clearer tints are produced. In mixing the colors to test these formulæ, first-class colors of a standard advertised brand were used. All the formulæ were carefully verified. The list is quite extensive, affording a wide range of color for selection and is arranged in alphabetical order, as follows:

Amber.-Burnt umber, 3 parts; middle chrome, 3 parts; orange chrome, 8 parts.

Argent (Gray).-Black, 9 parts; white lead, 16 parts; red, 1 part; trace of orange.

Ash.-White lead, 50 parts; raw umber, 5 parts; yellow ochre, 1 part.

Bay.—Black, 3 parts; Venetian red, 3 parts; slightly shade with orange chrome.

Black (Jet).—Ivory black, 10 parts; umber, 1 part; Prussian blue, 1 part.

Black (Olive).-Vine-black, 20 parts; yellow ochre, 1 part.

Black (Purple).-Lampblack, 5 parts; rose pink, 1 part.

Blue (Antwerp).-Antwerp blue. Or compound with bright green, 1 part; ultramarine, 2 parts; trace of zinc white.

Blue (Azure).-Azure blue. Or compound with: Ultramarine blue, 1 part ; zine white, 40 parts.

Blue-black.-Ivory-black, 40 parts; Prussian blue, 3 parts.

Blue (Bronze).-Black, 3 parts ; Prussian blue, 1 part.
Blue (Dark).-White lead, 1 part; chrome green, 2 parts; Prussian blue, 7 parts.

Blue (Delft).—Tint white lead with cobalt blue and a touch of lamp black.

Blue (Deep).-Prussian or ultramarine blue.
Blue (Gobelin).-Ivory-black, 4 parts; white lead, 2 parts; chrome green, 1 part; Prussian blue, 3 parts.

Blue (Granite).-Black, 2 parts; white, 6 parts; ultramarine blue, 1 part.

Blue (Grayish).-White lead, 20 parts ; Prussian blue, 2 parts; ivory-black, 1 part.

Blue (Indigo).-Indigo, or compound with: Black, 9 parts; Prussian blue, 4 parts.

Blue (Light Prussian).-White lead with a touch of Prussian blue.

Blue (Light Gray).-White lead with a touch of lampblack and of raw umber.

Blue (Marine).-Ultramarine blue, 1 part; ivoryblack, 9 parts.

Blue (Methyl).-Green, 1 part; blue, 12 parts; trace of red.

Blue (Misty).-White lead, 50 parts; ultramarine, 10 parts; burnt umber, 1 part.

Blue (Mountain.).-Mountain blue. Or compound with : Ivory-black, 1 part ; cobalt blue, 3 parts; rose madder, 2 parts; white lead, 4 parts.

Blue (Old).-Mix from Prussian blue and a touch of lampblack or ivory black.

Blue (Opaque).-Zinc white, 1 part; French ultramarine, 1 part.

Blue (Oriental).-White lead, 100 parts; Prussian blue, 9 parts; lemon chrome, 1 part.

Blue (Pale).-White lead, 30 parts; Brunswick blue, 1 part.

Blue (Pure).-Zinc white, 20 parts; English ultramarine, or cobalt blue, 2 parts.

Blue (Royal).-White lead, 1 part; ultramarine, 15 parts.

Blue (Sapphire).-Zinc white, 4 parts; Chinese blue, 1 part.

Blue (Sea).-White lead, 16 parts; ultramarine, 3 parts; raw sienna, 2 parts.

Blue (Pale Sky).-White lead, tinted with cobalt blue.
Blue (Sky). White lead, 300 parts; cobalt blue, 1 part; Prussian blue, 1 part.

Blue (Turquoise).-White lead, 20 parts; ultramarine, 2 parts ; light green, 1 part.

Brass Yellow.-White lead, 40 parts; light chrome yellow, 12 parts; raw umber, 1 part; burnt umber, 1 part.

Brick.-Venetian red, 2 parts; white lead, 1 part.
Bronze.—Black, 14 parts; yellow, 1 part; green, 2 parts.

Bronze (Asiatic).-Medium chrome yellow, 1 part; raw umber, 2 parts; very little white lead.

Bronze Green.-Middle chrome, 2 parts; raw umber, 5 @arts; burnt sienna, 1 part; black, 1 part.

Bronze Yellow.-White lead, 10 parts; lemon chrome, 4 parts; raw umber, 5 parts.

Brown. (Alderney).-Yellow, 3 parts; black, 14 parts; white lead, 1 part ; orange, 2 parts.

Brown (Amber).-Burnt umber, 9 parts; middle chrome, 5 parts; Venetian red, 3 parts.

Brown (Chestnut).-Medium chrome yellow, 4 parts; Venetian red, 2 parts.

Brown (Coach).-Indian red, 5 parts; ivory-black, 2 parts.

Brown (Cocoanut).-Burnt umber, 4 parts; yellow ochre, 1 part; white lead, 1 part.

Brown (Coffee).-Burnt umber, 9 parts ; yellow ochre, 4 parts; Venetian red, 1 part.

Brown. (Foliage).-Vandyke brown, 2 parts; burnt sienna, 1 part.

Brown (Golden).-White lead, 20 parts; yellow ochre, 3 parts; burnt sienna, 1 part.

Brown (Italian).-Vandyke brown, 4 parts; raw sienna, 1 part.

Brown (Leather).-Yellow ochre, 4 parts; Venetian red, 3 parts; white lead, 2 parts; blue-black, 1 part.

Brown (Olive).-Burnt umber, 3 parts; lemon chrome yellow, 1 part.

Brown (Orange).-Burnt sienna, 5 parts; orange chrome, 4 parts.

Brown (Pale).-White lead, 4 parts; burnt umber, 1 part.

Brown (Purple).-Indian red, 8 parts; burnt umber, 1 part; black, 1 part.

Brown (Seal).-Burnt umber, 4 parts; golden ochre, 1 part.

Brown (Snuff).-White lead, 9 parts; orange chrome, 1 part; burnt umber, 2 parts.

Brown (Stone).-Burnt umber, 10 parts; golden ochre, 1 part ; burnt sienna, 2 parts.

Brown (Thrush).-Yellow ochre, 1 part ; burnt umber, 3 parts; white lead, 12 parts.

Brown (Walnut).-Burnt umber, 5 parts; raw sienna, 1 part.

Buff.-White lead, 100 parts; yellow ochre, 7 parts; middle chrome, 1 part.

Buttercup Yellow.-Middle chrome.
Canary.—White lead, 10 parts; lemon chrome, 1 part.
Chamois Yellow.-White, 4 parts; yellow ochre, 5 parts; green, 1 part.

Chamoline (Yellow).-Raw sienna, 3 parts ; lemon yellow, 1 part ; white lead, 5 parts.

Chocolate.-Burnt sienna, 5 parts; carmine, 1 part.
Cinnamon.-Golden ochre, 1 part; burnt sienna, 2 parts; white lead, 6 parts.

Citron (Yellow).-Raw umber, 2 parts; lemon chrome 5 parts.

Claret.-Carmine, 2 parts; ultramarine blue, 1 part.
Copper.-White lead, 100 parts; middle chrome, 19 parts; Venetian red, umber, and green, 3 parts each.

Cream.-White lead, 100 parts; raw sienna, 3 parts.
Cream.-White lead, 100 parts; Italian ochre, 3 parts.
Crimson (Amaranthine).-Vermilionette, 3 parts, Prussian blue, 1 part.

Drab.-Burnt umber, 1 part; white lead, 10 parts.
Drab (Deep).-White lead, 20 parts; burnt umber, 14 parts; ochre, 2 parts.

Drab (Light).-White lead, 50 parts; burnt umber, 12 parts; ochre, 1 part.

Drab (Medium).-White lead, 100 lbs.; raw umber, 4 lbs. ; French ochre, enough to tone to tint wanted.

Drab (Warm).-White lead, 100 lbs. ; raw umber, $11 / 2$ lbs. ; French ochre, 2 to 3 lbs.

Ecru.-Brunswick green, 1 part; medium chrome yellow, 3 parts; white lead, 8 parts; black, 3 parts.

Fawn.-White lead, 60 parts; burnt umber, 5 parts; yellow ochre, 3 parts.

Fawn (Deep).-White lead, 10 parts; burnt umber, 4 parts; ochre, 1 part.

Flesh.-White lead, 50 parts; yellow ochre, 2 parts; burnt sienna, 1 part.

Gold.-Color white lead with yellow ochre, raw sienna, or chrome yellow, 5 parts ; vermilion, 1 part.

Granite (Blue).-Black, 2 parts; white, 6 parts; ultramarine blue, 1 part.

Green (Aloes).—Black, 6 parts; white lead, 3 parts; chrome yellow, 1 part; Brunswick green, 3 parts.

Green (Apple).-Medium chrome green, 1 part; white lead, 30 parts.

Green (Autumn).-Emerald green, 2 parts; black, 7 parts; chrome yellow, 1 part.

Green (Blue).-Deep green, 7 parts; Prussian blue, 1 part.

Green (Bottle).-Light green, 6 parts; lampblack, 1 part.

Green (Chartreuse).-Chrome yellow, 4 parts ; chrome green, 5 parts; tint with white.

Green (Chrome).-Chrome green. Or compound with Prussian blue, 1 part; lemon chrome yellow, 8 parts.

Green (Citron).-White lead, 40 parts; middle chrome, 3 parts; ivory-black, 1 part.

Green (Emerald).-Emerald green. Or compound with white lead, 8 parts; medium chrome green, 1 part.

Green (Foliage).-Blue-black, 1 part; lemon chrome, 4 parts.

Green (Gray).-Terre verte, 10 parts; raw umber, 1 part; white lead, 1 part.

Green (Invisible).-Black, 9 parts; bright green, 1 part.

Green (Light Olive).-Middle chrome, 3 parts; black, 2 parts ; burnt sienna, 1 part; trace of white lead.

Green (Marine).-Black, 4 parts; middle chrome green, 1 part.

Green (Middle Chrome).-Lemon chrome, 1 part; middle chrome, 1 part; Prussian blue, 2 parts.

Green (Mignonette).-Chrome green, 3 parts; black, 15 parts; Prussian blue, 1 part; chrome yellow, 1 part.

Green (Moss).-Medium chrome green, 30 lbs.; raw umber, $121 / 2$ lbs.; medium chrome yellow, 6 lbs.

Green (Moss Rose).—Brunswick green, 1 part ; yellow, 4 parts; white lead, 3 parts.

Green (Muscovite).-Prussian blue, 6 parts; chrome green, 13 parts; orange chrome, 3 parts; white lead, 8 parts; black, 20 parts.

Green (Myrtle).-White lead, 20 parts; middle chrome, 7 parts; ivory-black, 1 part.

Green (Nile).-Prussian blue, 6 parts; emerald green, 9 parts; white lead, 5 parts.

Green (Olive).-White lead, 12 parts; yellow ochre, 4 parts; umber, 1 part.

Green (Oriental).-White lead, 2 parts; lemon chrome, 2 parts; umber, 1 part.

Green. (Pale).-Zinc green, 4 parts; zinc white, $\bar{\sigma}$ parts.

Green (Pale Emerald).-White lead, 2 parts; emerald green, 1 part.

Green (Pea).-White lead, 100 parts; lemon chrome, 1 part; light green, 13 parts.

Green (Peacock).-White lead, 7 parts; emerald green, 50 parts; Prussian blue, 43 parts.

Green (Pistache).-Black, 7 parts; yellow ochre, 1 part; chrome green, $11 / 2$ parts.

Green (Prussian).-Prussian green. Or compound with emerald or medium chrome green, 12 parts; chrome yellow, 3 parts; black, 5 parts.

Green (Sage).-White lead, 30 parts; chrome green, light, 2 parts; burnt sienna, 1 part.

Green (Sea).-White lead, 100 parts; deep green, 4 parts.

Green (Slate).-White lead, 16 parts; black, 5 parts; raw turkey umber, 1 part; deep green, 3 parts; blue, 1 part.

Green (Velvet).-Burnt sienna, 3 parts; light chrome green, 5 parts; white lead, 8 parts.

Green (Water).-White lead, 25 parts; deep green, 1 part; yellow ochre, 5 parts.

Gray (Argent).-Black, 9 parts; white lead, 16 parts; red, 1 part ; trace of orange.

Gray (Ash).-Burnt sienna, 2 parts; ultramarine blue, 3 parts; zinc white, 60 parts.

Gray (Dove).-White lead, 50 parts; ultramarine, 4 parts; ivory-black, 1 part.

Gray (Greenish).-White lead, 100 lbs.; medium chrome yellow, 8 oz ; medium chrome green, 1 lb ; lampblack, 1 oz .

Gray (Jasper).—Black, 9 parts; white, 2 parts; trace of deep chrome.

Gray (Light).—Prussian blue, 1 part; lampblack, 1 part; white lead, 10 parts.

Gray (Light).-Tint white lead with a little each co lampblack, raw umber, and Prussian blue.

Gray (Light French).-White lead, 200 parts; ivoryblack, 2 parts; blue, 1 part.

Gray (Opal).-Burnt sienna, 1 part; zinc white, 30 parts; cobalt blue, 2 parts.

Gray (Pearl).-White lead, 50 parts; Venetian red, 2 parts; deep green, 2 parts.

Gray (Pure).-Raw turkey umber, 1 part; ivoryblack, 1 part; white lead, 40 parts.

Gray (Silver).-White lead, tinted slightly with a touch of lampblack and raw umber.

Gray (Warm).-White lead, 100 lbs.; French ochre, 4 to 6 lbs. ; lampblack, 2 oz.; Venetian red, 2 oz.

Hay.-White lead, 100 parts; yellow ochre, 4 parts; raw umber, 4 parts; deep green, 1 part.

Heliotrope.-Zinc white, 2 parts; red, 3 parts; ultramarine blue, 4 parts.

Indigo.-Indigo. Or compound with black, 9 parts; Prussian blue, 4 parts.

Ivory.-White lead, 56 parts; yellow ochre, 2 parts; Venetian red, 1 part.

Ivory.-Tint white lead with raw sienna and a touch of American vermilion.

Lavender.-White lead, 100 parts; ultramarine, 3 parts; madder lake, 1 part.

Lead.-White lead, 100 parts; ivory-black, 8 parts.
Leather.-White lead, 20 parts; yellow ochre 4 parts; Venetian red, 2 parts.

Lemon.-Lemon chrome. Or compound with chrome 5 parts; white lead, 2 parts; very little green.

Lilac.-White lead, 100 parts; ultramarine, 1 part; rose madder, 1 part.

Limestone.-White lead, 100 parts; yellow ochre, 1 part; raw umber, 1 part.

Mahagony.-Orange chrome, 10 parts; burnt sienna, 3 parts; white lead, 1 part.

Maple.-White lead, 100 parts; yellow ochre, 3 parts; raw umber, 1 part.

Maroon.-Venetian red, 2 parts; Indian red, 4 parts; lampblack, 1 part.

Maroon (Acacia).—Black, 4 or 5 parts; Indian red, 3 parts; Prussian blue, 1 part.

Maroon (Black).-Black, 4 parts; bright red, 1 part; trace of Prussian blue.

Mascot (Blue).-Black, 7 parts; blue, 1 part; trace of green.

Mauve.-White lead, 6 parts; Prussian blue, 2 parts; madder red, 1 part. Or add blue to brown.

Mouse Color.-Lampblack, 3 parts; Prussian blue, 1 part ; white lead, 16 parts.

Oak (Dark).-White lead, 2 parts; yellow ochre, 3 parts; Venetian red, 1 part; umber, 3 parts.

Oak (Light).-White lead, 6 parts; yellow ochre, 6 parts; Venetian red, 2 parts; umber, 1 part.

Ochre (Golden).-Yellow ochre, 5 parts; lemon chrome, 2 parts.

Ochre (Roman).-Yellow ochre, 50 parts; turkey umber, 3 parts.

Old Gold.-White lead, 6 parts; ochre, 12 parts; middle chrome, 3 parts.

Olive.-White lead, 12 parts; yellow ochre, 4 parts; ivory-black, 1 part.

Olive (Gray).-Chrome green, 1 part; lampblack, 3 parts; white lead, 40 parts.

Olive (Light).-Middle chrome, 3 parts; black, 2 parts; burnt sienna, 1 part; trace of white lead.

Olive (Yellow).-Burnt umber, 3 parts; lemon chrome yellow, 1 part.

Orange.-Orange chrome, 18 parts; white lead, 1 part ; yellow, 1 part.

Orange (Bright).-Orange chrome, 1 part; orange lead, 2 parts.

Orange (Scarlet).-Orange lead, 2 parts; white lead, 1 part.

Orange (Persian).-Orange chrome, 14 parts; white lead, 1 part ; yellow ochre, 5 parts.

Peach Bloom.-Indian red, 3 parts; white lead, 17 parts.

Pink.-White lead tinted with American vermilion.
Pink (Aurore).-Indian red, 1 part; orange chrome, 2 parts; blue, 2 parts; trace of lemon chrome; tint with white.

Pink (Coral).-Vermilion, 5 parts; white lead, 2 parts; chrome yellow, 1 part.

Pink (Indian.).-White lead, 100 parts; Indian red, 3 parts; rose madder, 1 part.

Pink (Light).-White lead, 100 parts; rose madder, 4 parts; vermilion, 1 part.

Pink (Royal).-Zinc white, 2 parts; carmine lake, 2 parts.

Pink (Venetian).-White lead tinted with trace of Venetian red.

Porcelain (Blue).-Zinc white, 1 part; chrome green, 1 part; ultramarine blue, 4 parts; trace of black.

Primrose.-Pale zinc chrome. Or compound with: White lead, 10 parts; green, 3 parts; yellow, 4 parts.

Purple.-White lead, 1 part; ultramarine, 1 part; Indian red, 1 part.

Purple (Anemone).-Black, 2 parts; white lead, 1 part ; bright red, 6 parts; Prussian blue, 6 parts.

Purple (Begonia).-Lampblack, 4 parts; bright red, 5 parts ; Prussian blue, 4 parts.

Purple (Royal).-Royal purple. Or compound with: Vegetable black, 2 parts; red, 3 parts; Prussian blue, 14 parts.

Red (Armenian).-Yellow ochre, 1 part; Venetian red, 2 parts.

Red (Bordeaux).-Black, 1 part; orange chrome, 2 parts; Prussian blue, 1 part.

Red (Carnation).-Carmine lake, 3 parts; white lead, 1 part.

Red (Cherry).-Rose madder, 1 part; vermilion, 2 parts.

Red (Deep Indian).-Indian red, 5 parts; lampblack, I part.

Red (Egyptian).—Black, 10 parts; white, 3 parts: orange, 4 parts; blue, 2 parts; trace of red.

Red (Geranium).—Bright red, 9 parts; blue, 1 part.
Red (Light Indian).-Venetian red, 1 part; Indian red, 3 parts.

Red (Mexican).-Red lead, 1 part; Venetian red, 4 parts.

Red (Mikado).-Blue, 3 parts; red, 7 parts; small quantity of white.

Red (Moorish).-Vermilion, 3 parts; rose pink, 1 part.
Red (Orange).—Orange chrome.
Red (Oriental).-Rose madder, 2 parts; orange lead, 1 part.

Red (Poppy).-Blue, 1 part; vermilion, 24 parts.
Red (Turkish).-Pale vermilion, 4 parts; mahogany lake, 1 part.

Red (Tuscan).-Rose pink, 2 parts; Indian red, 4 parts.

Rose (Carnation).-Rose madder, 1 part; zinc oxide, 8 parts.

Rose (Light).-White lead tinted lightly with rose lake, turkey red, or vermilion.

Rose (Old).-White lead, 16 parts ; crimson madder, 1 part.

Rosewood.-Bright red, 1 part; black, 6 parts; trace of green.

Russet (Dull).-White lead tinted to desired shade
with raw sienna and a touch of vermilion or Indian red. Salmon.-White lead, 40 parts; golden ochre, 5 parts; Venetian red, 1 part.

Sapphire.-Zinc white, 4 parts; Chinese blue, 1 part.
Scarlet (Bright).-Vermilion, 20 parts; pale chrome, 7 parts; golden ochre, 1 part.

Scarlet (Orange).-Orange lead, 2 parts; white lead, 1 part.

Slate.-White lead, 100 parts; ivory-black, 3 parts; ultramarine, 1 part.

Snuff.-White lead, 9 parts; orange chrome, 1 part; burnt umber, 2 parts.

Stone.-Burnt umber, 1 part; French yellow ochre, 2 parts; white lead, 5 parts.

Stone (Bradford).-White lead, 100 lbs.; raw sienna, 3 lbs.; shade with lampblack.

Stone (Brown).-Burnt umber, 10 parts; golden ochre, 1 part; burnt sienna, 2 parts.

Stone (Dark).-White lead, 20 parts; yellow ochre, 12 parts; raw umber, 4 parts; Venetian red, 1 part.

Stone (Light).-White lead, 100 parts; and either Italian ochre, 5 parts, or yellow ochre, 6 parts.

Stone (Middle).-White lead, 100 parts; yellow ochre, 12 parts.

Tan.-White lead, 20 parts; burnt umber, 6 parts; burnt sienna, 3 parts; yellow ochre, 2 parts.

Tan (Auburn).-Burnt umber, 1 part; golden ochre, 3 parts; white lead, 20 parts.

Tan (Coffee).-White lead tinted with burnt umber.
Tan (Soft).-Tint white lead with raw sienna.
Tan (Warm).-Tint white lead with raw sienna, chrome yellow, and vermilion.

Terra Cotta.-White lead, 2 parts; burnt sienna, 1 part.

Terra Cotta.-White lead, 2 parts; Venetian red, 1 part ; burnt sienna, 1 part.

Turquoise.-White lead, 20 parts; ultramarine, 2 parts; light green, 1 part.

Violet.-French ultramarine, 14 parts; crimson lake, 3 parts.

Violet (Transparent).-Ultramarine blue, 4 parts; crimson lake, 1 part.

Walnut.-Burnt umber, 5 parts; raw sienna, 1 part.
White (Clear).-White lead, 300 parts; ultramarine, 1 part.

White (Flake).-Pure English white lead.
White (Kremnitz).-Pure zinc oxide, 100 parts; ultramarine, 1 part.

White (Permanent).-Finest barytes, 200 parts; blue, 1 part.

White (Pure).-Equal parts white lead and zinc white.

White (Translucent).-White lead, 1 part; barytes, 10 parts.

White (Transparent).-Zinc white, 1 part; barytes, 20 parts.

Yellow (Alabaster).-White, 4 parts; middle chrome yellow, 1 part.

Yellow (Light Colonial).-White lead, 100 lbs . ; medium chrome yellow, 1 to 2 lbs.; raw sienna, 1 lb .

Yellow (Orange Chrome).-Use orange chrome yellow or same plus a touch of vermilion.

Yellow (Light Orange Chrome).-Use orange chrome vellow and a little white lead.

Yellow (Brass).-White lead, 40 parts; light chrome yellow, 12 parts; raw umber, 1 part; burnt umber, 1 part.

Yellow (Bronze).-White lead, 10 parts; lemon chrome, 4 parts; raw umber, 5 parts.

Yellow (Buttercup).-Middle chrome.

Yellow (Canary).-White lead, 10 parts; lemon chrome, 1 part.

Yellow (Chamoline).-Raw sienna, 3 parts; lemon yellow, 1 part ; white lead, 5 parts.

Yellow (Chamois).-White, 4 parts; yellow ochre, 5 parts; green, 1 part.

Yellow (Citrine).-Raw umber, 2 parts; lemon chrome yellow, 5 parts.

Yellow (Golden).-Middle chrome, 16 parts; yellow ochre, 1 part.

Yellow (Italian).-Yellow ochre, 14 parts; burnt umber, 1 part.

Yellow (Jonquil).—Indigo, 1 part; light red, 2 parts; white lead, 16 parts; tint with chrome yellow.

Yellow (Lemon).-Lemon chrome.
Yellow (Olive).-Burnt umber, 3 parts; lemon chrome yellow, 1 part.

Yellow (Primrose).-Pale zinc chrome.
Yellow (Transparent).-Yellow ochre, 1 part; barytes, 10 parts.

## CHAPTER V

## WORKING OPERATIONS

Size of Stencil.-The size of a stencil ornament must be carefully figured in proportion to the size of the room or the panel. It will not look well if either too large or too small in size. A large stencil is needed for large wall spaces and high ceilings; a small one for small panels and walls.

The higher up and farther away a stencil is used, the stronger it may be made in both design and coloring, in order to assure its being seen. Likewise, rooms that are not well lighted permit the use of stronger coloring and designs than may be used in light rooms.

The surest way to handle such problems is to lay out roughly large rooms, such as church auditoriums, lodge halls, etc., to scale on a piece of paper. By this means you can easily work out the problem before hand, and determine stencil sizes, the number of repeats, the connections, and colors.

It is not best to combine stencil patterns with other means of decoration; that is, with wall paper, for instance.

When to Transfer Stencils.-Ordinary stencils, color stencils, and background stencils are transferred to the wall after the ground coat and the glazing coat have been completed and are dry.

Outline stencils are to be transferred to the ground coats when dry, and before any glazing color has been put on. Outline stencils should become dry before beginning to glaze over them. The design will show through the glazing coat. The glazing color ought to be
wiped out between the lines of an outline stencil, so that the ground color will show through.

## LAYING OUT FOR STENCILS AND SPACING

The best decorators usually mark off with a chalkline a horizontal center line, or two lines defining the outer edges of the stencil to be transferred. The chalkline is coated with chalk, held taut against the wall by a man at each end, and then, by pulling the center of the line away a few inches and letting go, a straight chalk mark is snapped on the wall.

Practically every room is out of plumb and is not level. Rooms do not measure accurately. You can see, then, the necessity of having chalklines carefully laid out by measure, which can be followed with the stencil plate.

With a repeat pattern, one setting may be out of line only a small fraction of an inch, but by the time several settings or transfers have been made, the inaccuracy becomes so great that the pattern does not match up and does not run straight.

It is often advisable to run chalklines both horizontally and vertically, notably with all-over diaper stencils, in order to secure accuracy. The horizontal lines are marked off a certain number of inches below or above a picture mould, below a cove mould or cornice, regardless of the fact that in so doing the line at one end of the room may not be the same distance from the floor as at the other end. In other words, make your stencil run exactly parallel with the picture mould, or whatever line it is nearest to, and not with the floor.

Perpendicular lines had best be run perfectly straight up and down, because the corner lines on each side of the wall may be running at different angles from each other. Take a carpenter's plumbline, mark off a true vertical line in the center of each wall with it, and
then mark all other vertical lines, if any are needed, parallel to it.

It is especially necessary to run these true chalk lines when placing all-over or diaper stencils. A line being out of place even as little as one-eighth of an inch at one end, will cause a misfit of the pattern. It will not match at the end.

Where to begin the transfer of a stencil design is often a little puzzling' at first thought. The answer to the question will come easily, however, after sizing up the room construction and noting the character of the stencil.

Certain stencils consist of a succession of figures, repeated constantly like the links of a chain, while others include continuous lines that are broken regularly by figures in pairs, triplets, or quads, like the grapevine design in Plate 19, with its clusters of grapes and of leaves.

The first class of stencils can obviously be placed on the wall to begin and end without reference to spacing, except the last link or two in the chain, which you may have to make a little longer or shorter than the others, to make it meet the first one. A continuous design, like the chain bands, is usually started on the right-hand side of the wall and transferred working to the left.

It is not so with the second class of stencils. They ought to be started at a point on the wall that will locate the principal parts of the design regularly in the panels or spaces between corners, rather than have an odd number of groups in a wide panel poorly spaced, or have a principal part finished in a corner. It may be necessary to transfer the lines or band portions of this stencil (which connect the principal parts) more often than the strong parts, to gain a nice balance and spacing. See Plate 20, the central illustration.

When three sides of a wall have been stenciled with a pattern of the second class, and the central


Plate 20.-Methods of Laying Out and Spacing Stencils.
figures are nicely spaced, turn the corner on to the fourth side and transfer one section. Now measure the wall yet to be stenciled; divide this distance by the length of your stencil, and you get the number of times you must use the stencil to finish the wall. Probably it will figure so that a certain number of transfers will fall short or be too long to match up exactly at the beginning.

Thus, if, for instance, five transfers of the stencil fall short of meeting the other end of the stencil by five inches, you must gain one inch on each of the five settings of the stencil to come out even. So, in using the grapevine stencil mentioned, begin your second transfer, after turning the last corner on this wall, one inch from the end of the previous setting, and so on with each transfer of the stencil, and you will have gained five inches and come out evenly matched. Fill in the one-inch breaks by freehand, or with the stencil over them.

Another Method.-Another and better way, perhaps, to handle a design composed of strong or principal figures recurring regularly, is to mark a chalk line up and down in the center of each of the four walls. Place the center of the grapevine stencil over the line and transfer the first impression to the wall. Place the next setting to the right, and continue the impressinns until the last setting of the stencil brings the design within a foot or so of the corner. Then, go back to the center and transfer the pattern until near the left corner in the same manner. Stencil all four walls in this way, leaving the corners unfinished until the last. By the time you get around to them the paint on the corner ends of the stencil pattern will be dry enough to work over and you can then crease the stencil and carry the design around the corner and match up at both ends. Do not permit the leaves and grapes to locate in the corners, but on either side. Plate 20 shows this method of laying
out the work. This method will not succeed with all stencil designs, however.

Treatment of Mantels, Etc.-When a room includes a chimney, fireplace, or mantel, the stencil design should be so started as to bring one, two, or three of the principal figures so as to occupy the wall over the chimney in a balanced manner. See the center illustration, Plate 20.

In placing detached spot designs, study the room construction. Note about how many settings will look best. Measure to locate them, and then proceed to transfer these impressions first. When all are on, place chalk lines running between these principal figures, to mark the location of the stencil band or lines which are to connect all figures into one continuous scheme.

Arrange to have equal spaces between these principal figures, or at least balance up the spaces on walls of the same size. Do not, however, place any of the central motifs in corners.

## HOW TO TRANSFER THE STENCIL

Tidiness in keeping the back of the stencil and your fingers clear of color, so that the wall will not become marked and soiled, is the first requirement for a successful transfer. The stencil must lie flat on the wall in transferring it. Have a clean pot and brush for each color. A picture mould or chalk line should be used as a guide to keep the stencil running straight and in the proper place.

When a pattern is continuous and is to be regularly repeated time after time, it is, for the sake of general effect, absolutely necessary that the impressions shall be joined together so accurately that not the slightest unevenness is left to show where the joints occur.

To make it easy to connect up each section of a continuous stencil band, which is transferred one section at a time, the stencils are usually so designed that the last
portion of the pattern on the stencil plate is incomplete. Perhaps only one-half of the last leaf or bunch of grapes, for instance, shows on the plate. Or sometimes one extra leaf or stem from a group is shown on the left-hand side of the stencil plate, as a guide to follow when the plate is lifted to transfer the next section. The right-hand side of the stencil plate is then lapped over the last figure transferred to the wall, which insures perfect register and alignment. See Chapter III about guide marks.

Begin to transfer the stencil in the right-hand corner or center of the wall, holding it with the left hand and using the brush with the right. Hold the brush at right angles to the stencil. With the stencil plate on the wall the brush handle should point straight out toward you. The brush should be used like a hammer rather than be rubbed over the stencil, as a brush ordinarily is used. Swing the brush back and forth, so it will pound the wall through the stencil holes.

When the brush is held at any other angle than a right angle, the bristles get under the stencil and produce a ragged, mussy edge.

When the transfer is complete in the first position, lift the stencil carefully, pulling it straight out to avoid smearing. Wipe off the back of the stencil plate as often as is necessary with benzine, to keep it clean. To avoid injury, lay the stencil on a flat surface when wiping it off.

Have a helper hold the stencil for you at first, or fasten it to the wall with push pins. Large stencils are usually a two-man job, or they must be fastened with push pins so that the left hand is free to press the stencil against the wall while working the brush over the openings. It is an advantage at times to tack a strip of wood, like a lath, on the top and on the bottom of large stencils, to help hold them in place. Tack it on the face of the stencil, letting the brads go through and extend beyond
the stencil plate a triffe. The points will help hold the stencil steady by penetrating the wall a little.

Gelatine Mixture.-A gelatine mixture is used sometimes to eliminate the use of stencil pins or push pins when working with stencil plates. One ounce of gelatine is soaked for twenty-four hours in four ounces of water, and then heated in the inner vessel of a double pot, water being placed in the outer vessel. The whole is placed over a slow fire. (A glue pot answers the purpose admirably.) When melted, six ounces of glycerine are added and two ounces of fine sugar, all the ingredients being measured by weight. The mixture should be allowed to get fairly hot, but not to boil. For some surfaces, such as flat paint and distemper, a somewhat stiffer mixture, obtained by using more gelatine, will give better results and not leave marks on the surface.

The four corners of the stencil plate (and one or two other convenient points if the stencil plate be large) are coated with the hot mixture and allowed to cool. If the places to be coated are punctured with a number of fine holes first, the coating will adhere quite firmly. The burr caused by puncturing should be removed with glasspaper before coating, or the projections may prevent the tacky surface from properly adhering to the wall during operations.

A stencil plate so treated has only to be laid on the surface and pressed into contact, and it will remain fixed in its place while the stencil brush is operated. It can be removed at will, leaving no trace of its attachment. This method not only saves time, but it does away with the unsightly holes made by the use of stencil pins.

Masks for use with stencil plates can be temporarily fixed in like manner, in cases where it is necessary to prevent some of the cut-out places becoming marked with the color of the remaining cut-outs.

A pot of the gelatine mixture will keep almost indefinitely and can always be warmed up for use.

Keeping the Color Even.-When transferring stencil impressions to a wall, a surprisingly dry brush works best. Runs, round edges, and messy effects result nine times out of ten from too much color in the brush, or from using a too thin color mixture.

Never dip the stencil brush in a pot of color. Use another small brush to spread a little of the color on a board or a palette. Then pick up the color from the board on the bristle ends of the stencil brush. When the color works up into the heel of the brush after long use, wash it out. By this method you can easily keep a uniform amount of color on the board, in the brush and on the stencil design.

It is essential that you add a little turpentine to your pot of color every few hours, to make up for that which has evaporated. If you do not, the stencil pattern will not possess a uniform color.

The Stencil Brush.-(See Plate 19.) Stencil brushes of various sizes can be had from $3 / 8$ of an inch to 3 inches in diameter. Use No. 2 for small and No. 4 for large stencils. It is important that the correct size brush be used for each stencil.

Use of the Sponge.-For the purpose of transferring a stencil impression in calcimine, cold water paint, or distemper, a sponge is the tool to use rather than a stencil brush. Soak the sponge in cold water and then squeeze out as much as possible. Mix the color and size stiff, so that it can be pressed into a cake and will hold together. If you get it too hard, the sponge will not pick it up. Rub the sponge over the cake to pick up color, hold the stencil close to the wall with the fingers, and proceed to rub the colored tips of the sponge over the stencil openings in a circular manner. Don't press too hard, and don't rub straight over the openings, or
runs are likely to occur to spoil the work. The sponge must not contain too much water or color. A com. paratively dry sponge makes the cleanest and sharpest impression.

A small sponge is sometimes used for oil color stenciling to produce a little different effect than with a brush. The sponge must be cleaned out in benzine often.

## MIXING STENCIL COLORS

Colors used in transferring stencils may be either tube glazing colors or ordinary house tinting colors which have been thinned with the glazing liquid, composed of one-fourth linseed oil and three-fourths turpentine. Some painters prefer three-fourths turps and one-fourth japan gold size.

In Tiffany wall glazing, the outline stencil is transferred with burnt umber usually, regardless of the colors that will finally be used to fill in the stencil, although it is not necessary to use it. Any dark color will do. An outline stencil transferred with whiting, dry raw umber, and glue water will dry quickly, so that you can glaze immediately over it.

Color mixed for stencil use ought to be of a thick consistency, about like thick cream. Do not use too much japan, or the color will dry with a gloss.

Opaque colors are mixed by tinting white lead to the desired shade with oil-ground colors, and thinning the same as for transparent colors.

To Stencil on Calcimine.-For this purpose use colors ground in turpentine and thinned with japan gold size, colors ground in japan and thinned with turpentine, or colors ground in oil and thinned with gasoline. It is well to draw the oil out of the lead first by mixing with benzine and letting it settle. A little japan gold size ought to be added as a binder. Sometimes one of these will work better than the others. Try the color on a hidden or re-
mote portion of the room before stenciling the whole room. It will be easy to see whether the color is going to spread or not.

When calcimining a wall to be stenciled, the size binder ought to be made stronger than the binder of the stencil color.

Another way to stencil with calcimine, water or distemper colors on the same kind of surface, is to mix the dry color to a paste with water and add a little cooked starch to bind it together. A few drops of turpentine in the water will help prevent clogging of the stencil.

While stenciling with water colors and calcimine, the paper stencil gets soft from the water and must be dried out every little while. Have two stencils, so one can be drying while you are working with the other.

To Stencil on Paper.-Use colors ground in oil or lead, tinted to suit. Mix first with benzine, let stand, and pour off all liquid. Mix again with gasoline or benzine and a little japan gold size to bind it.

## STENCILING WITH METAL BRONZES AND LEAF

For theater decoration, churches, and in some other places it is sometimes desirable to transfer a whole stencil pattern in gold, copper, silver, or aluminum bronze, or a mixture of two of these. There is also frequent occasion to produce nice effects on spot designs used in panels, as shown by Plate 21. Comparatively small areas, termed jewel points, can be nicely set off in bright metal leaf or bronze, and it will improve the whole decorative scheme.

Bronze Powders.-For the application of gold, silver, copper, or aluminum bronze powders, either oil gold size or japan gold size can be used with a stencil in the ordinary way. Japan gold size is preferred. With it the metal doesn't tarnish as soon as with oil gold size.

Oil gold size will set in about 24 hours and become

ready for gilding. Japan gold size will be sufficiently tacky in from 10 to 30 minutes, according to its drying power. The period of time during which the metal powder or leaf may be applied to japan gold size is much shorter than with oil size.

Bronze powders can then be dusted on with a pad of cotton when the size is just sticky enough to hold it. If you wait too long, the size will set hard and then the bronze will not adhere to it. It is well to add a little color to the size, red for gold, yellow for copper, etc.

Or another and quicker way is by use of the following mixture put on with a stencil brush: Mix bronze powder with 1 gill pure honey to a smooth paste, 1 teaspoonful refined glycerine, enough soft water (boiled) to make of the right consistency for the brush. If it sets too rapidly, add more glycerine.

Or mix the bronze powder with good varnish, thinned with turpentine or benzine to brushing consistency. Put on with a brush. Bronzing liquid will also do.

Metal Leaf.-Gold, silver, and aluminum metal leaf, also Dutch metal leaf, are put on to small areas and jewel spots in the same manner as the sign painter uses it for letters. The areas are coated with japan gold size or oil gold size (using a small fitch as the brush), and allowed to stand until sticky enough to hold the leaf. Then the leaf is picked up out of the book with a gilder's tip (a brush), after rubbing it on the hair of the head to gather static electricity. The leaf can then be laid on to the sticky size. Smooth down with a wad of cotton and let dry. After twelve hours burnish the metal with cotton and brush off the ragged edges of the leaf which are outside of the design being gilded. The size is brushed on only within the outline of the part of the design to be gilded, but the leaf is put on in square shaped pieces which overlap the edges of the design. The leaf will adhere only where there is size.

Do not lay the metal leaf on to the size too soon, that is, while the size can be pushed around on the surface with the finger, or the metal will become dull soon after applying it. If you wait too long, the size will dry hard and then the metal will not adhere to it at all. Follow the directions, as to time allowed for setting, given by the manufacturers of the size being used.

Brightening Jewel Points.-There are various ways to fill in these spot designs to make them brighten up and add life to the room. As just suggested, they may be filled in solid with bronze powder or with metal leaf and burnished. Then, if varnished to exclude the oxidizing action of the air, the metal will remain bright for a long time.

Sometimes these jewel points are filled in solid with brilliant reds, yellows, greens, and blues in opaque colors, instead of metal.

However filled in, whether with metal or opaque color, it is well to brush on a thin glaze coat of transparent color over the top of the metal or opaque color. This gives a depth and sheen which enriches the ground color.

For instance, if the ground is gold bronze, gold leaf, or bright chrome yellow, coat over the top with a thin glaze, a stain, made by thinning American vermilion or rose lake, with one-fourth linseed oil and three-fourths turpentine, or use varnish and turpentine as a thinner. Over a silver, aluminum, or white ground, lay a cobalt blue glaze. Over copper or gold ground lay a medium chrome green glaze.

## TURNING CORNERS

In turning corners when stenciling a wall, first bend the stencil by laying it down flat on a table and placing a straight-edge at the point where the bend is to come. Bend the stencil over with the hand to crease it sufficiently. The point at which to make the crease is determined
by measuring, after transferring the stencil pattern to within a few feet of the corner to be turned.

A corner chimney that projects can be stenciled without bending the stencil; that is, transfer one side of the chimney at a time. An extra stencil for corners is handy.

Turning a Miter Corner.-To turn a corner with some stencils, transfer them nearly up to the corner, letting about one-half of the stencil plate run over and beyond the point where the turn comes. Place a rule or piece of paper over the stencil plate at the correct angle to form the corner miter. Hold with left hand and transfer the stencil up to the corner. See Plate 21. Take up the stencil plate, turn the corner, and repeat by holding the rule over the half of the corner just transferred, and in the position indicated by the drawing.

## TOUCHING UP TIES

Difference of opinion has long existed among decorators as to the advisability of touching up stencil impressions with a brush, to rectify imperfections and to eliminate the blank spaces left by the ties. On outline stencils it should not be done.

From the standpoint of the labor cost of touching up many rough places, it is obvious that the objection is well founded. From the artistic viewpoint, the practice is objected to justly, because the brush touching-up must be skillfully done or shiny spots of color, brush marks, and a different texture will be noticed. If the stencil is so poorly cut as to make much touching up necessary, cut a better one. If the man is careless about his color, correct him. Clean stencils (both sides) and ordinary care will do away with touching up.

As to painting out the tie marks,-many stencils are so artistically designed that the tie blanks are an addition to their good appearance. Plates 5, 13 and 17 show designs, the ties in which ought not to be filled in.

On the other hand it is poor judgment to permit such designs as 1804 and 1212 on Plate 1 to be considered finished without touching up the ties.

Use color and turpentine, no oil, for touching up. A fine soft brush is needed and do not make a single unnecessary stroke of the brush. Cover the spot with material and let it alone. Fill in ties while the stencil color is wet. Brushing makes shiny spots. Also remember that the stencil brush makes a rough surface. Don't make your touched-up spots too smooth.

## FILLING IN COLOR ON OUTLINE STENCILS

Before beginning this work it is obviously necessary that the stencil shall have been transferred to the surface, in burnt umber color or with a dull gray green. It may be transferred, of courso, with any color which fits in with your color scheme, but usually it is brown or dull green outline, as stated. This should be dry before fill, ing in with other colors.

Colors used for filling in purposes are the semi-transparent glaze colors listed in the chapter on color. Opaque colors are seldom used, but can be for emphasizing certain parts of the ornament. Thin the color to a brushing consistency with turpentine. When it sets up too quickly to permit brushing it out smoothly, add a few drops of linseed oil. Make no attempt to cover the surface solidly to hide it. Just stain the surface within the outline of the design, permitting the ground color and the brown or gray color of the stencil to show through the glaze color. Spread the glaze color over the top of the stencil lines, as well as between the lines.

Filling in outline stencils after the glaze coat of Tiffany finish or last coat of flat wall paint has become dry, is freehand work and is accomplished by the use of round and flat fitches of various sizes, ranging from about $1 / 8$ inch to 1 inch according to the size of the stencil.

You will need some sharp, also square point fitches. See Plate 22. Begin filling in the stencil by coloring one part, for instance the flower or leaves, that may form the central portion of conventional patterns. Carry the operation all around the room before beginning with the next color.


Plate 22.-Fitches Used in Stenciling; Below, Suggested Treatment of a Small Pond-Lily Border.

If two colors are to be used on the central figure of the pattern, fill in the light color first at the outer edge of flowers, the conventional design, or the outer tips of the leaves. The center of the figure is then filled in with a darker color, to form the shadows. For shading have the brush nearly dry. Too much color in it spoils
the work. With a clean brush blend the light color gradually into the darker center color. Do not begin the other way around, working the dark color into the light, because you will then get the entire figure too dark.

When making outline stencils, such as that shown in the lower left-hand corner of Plate 17, which are usually filled in freehand with a small fitch, using semi-transparent colors, it is often desirable on large walls and when the work has been taken at a low price, to make a second stencil plate which will fill in the color between the lines of the outline stencil. That saves labor, as the filling in of color progresses much more rapidly using a stencil than when a fitch is the tool.

In the lower right-hand corner of Plate 17 is shown the impression from the stencil plate used to fill in a color on the outline stencil impression to the left of it. The making of this second color plate is simple. Transfer an impression from the outline stencil plate to a clean sheet of stencil paper. Then mark off ties and cut out the solid paper between the lines.

Working on the wall with these two stencil plates, the one to the lower right of Platc 17 would be transferred first in one color,-a light color usually. Then the outline stencil would be transferred on top of it in a darker color, often raw or burnt umber. The outline stencil plate simply makes a dark border around the light color put on by the color plate.

In coloring flowers the tips of the petals should, of course, show the light tint and the darker shade comes in the center of the flower. With fruit, pottery, and the like, decide beforehand where the high light would naturally fall; then shade outward from there to the edge, making the color darkest around the high light.

It is sometimes desirable to blend together two or more colors that may come alongside of each other. It may easily be accomplished by lightly patting the work with
a small wad of cheese cloth, but do not rub it. Blending colors does not mean mixing them together to form a third color. It means spreading one clear color over another, so that both remain pure. When worked too long they mix.

When filling in stencils, avoid violent contrasts and spotty stencil effects. Fill in every other, or every fourth or fifth, flower or space if necessary to preserve the continuity of design and avoid spotty effects. A uniform soft general effect is the standard to work for.

## WIPING OUT HIGH LIGHTS AND SHADING

Light and shadow in leaves can be obtained as above, or fill in the leaves solidly with the dark color, and with a piece of cheese cloth wrapped around the first finger, wipe the color out of the tips of the leaves, allowing the light-colored ground coat to show through and form the high light. Wipe lengthwise of the leaf, not across. It may be necessary to dampen the cloth with turps.

The same may be done in producing high lights on fruit or other details that ought to show them. Conventional designs and geometrical figures are often wiped out in the centers or in other portions arbitrarily, taking care only to give a good effect.

Study flowers particularly for the light and shade of color, which may be carried out even in conventional flower patterns. Notice that the coloring is not such as can be represented by the use of raw, crude, solid paint colors. For instance, tone down a strong green with a touch of red, or for stems and vines with a touch of brown or black. Prussian blue should be toned down lightly with lampblack and red, as it is not a good color by itself.

In some instances ordinary one-color stencils (not outline) are filled in with color, using the stencil brush. Then while the stencil plate is still in place, the high
lights are wiped out and shading is done at the same time.

Two-toned effects, obtained by the use of one color on a lighter colored ground, are interesting and easily produced by wiping out the color from the center or other portion of a pattern to be high-lighted. . Another way to accomplish this effect will be stated.

Frequently there is occasion to use the narrow stencil borders, which we technically call dividers, and these are generally applied in one solid color, without any attempt at a more elaborate treatment. This method has the virtue of greater simplicity, requiring less labor, and, therefore, less cost-dominant factors with most painters today. And yet we sometimes feel the need of a treatment that is a little different; the need of something that will relieve the monotony or harshness which the use of a solid color generally entails.

On such occasions we may decide on the use of a second color for a part of the design, perhaps shading a portion of it. But a method that is even more suitable for this class of ornament is to use one or other of the various glaze colors, and by strengthening the shading, according to the subject, secure a two-tone effect that will harmonize with the background, and blend with the decorative scheme as a whole.

Two-tone effects are easily obtained after a little practice, and are particularly suitable for the majority of the narrow border designs that are in general use. The most successful results are obtained by selecting patterns that are bold and yet simple, and it should be the object to arrange the shading so as to strengthen and emphasize the features, thereby bringing out the full character of the design.

Treatment of a Border.-Plate 22 illustrates the suggested treatment of a small pond-lily border, and it is particularly suitable as a practice illustration, as it is
both simple and effective. As a test of this method, try this, or a similar pattern, on a background that is painted a cream color or a light stone. Mix a small quantity of burnt umber, ground in oil, with a little turpentine and dryers, taking care that the color is of a reasonably thick consistency.

Keep an old sash tool on hand to supply this color as desired on to a piece of board, as it is advisable to charge the stencil brush in this manner, instead of dipping it into the color can, in order to avoid having an excess of color on the brush.

Place the stencil plate on an old sheet of paper, and, using a small stencil brush, work a small quantity of color all over the pattern, in the same manner as you would stencil the pattern solidly on the wall. This gives a certain amount of color on the edges of the design in the plate, so, after pinning the plate in position on the wall, take a large dry stencil brush and commence pouncing all over the pattern, using only the color that adheres to the plate, and which the dry stencil brush will distribute in a light tone. Now take the small stencil brush, and, with a little of the color which was spread on the board, begin shading the pattern by working from the parts of the design that your fancy tells you should be darkest, until you blend into the lighter color where you wish your high-light to remain.

After completing each length the plate should be moved on a stretch and the process repeated, the small stencil brush that is used for shading being the only one that is charged with color. The dry brush should be used only to distribute the color that adheres to the plate from the shading of the former stretch, and this distribution of a limited amount of a glaze color gives a light, semi-transparent tone that is very suitable for a highlight and which is sufficiently emphasized by the stronger shading tone. This design is quite effective also when
treated in its natural colors, dull green and soft yellow, characteristics of the pond lily.

## WHERE TO USE STENCILS

To Apparently Change the Size of a Room.-It has long been the practice of decorators to place stencil designs, picture moulds, cove moulds, chair and plate rails, friezes and colors in such a manner as completely to


Plate 23.-1, Trade Names for Different Parts of a Room Wall ; 2, Position of Dado; 3, 4, Examples of Vertical Stenciling.
transform the appearance of a room. Stencil location, design, and color may readily be used to modify or to accentuate certain architectural features, to direct attention to or divert it from defects. See Plates 23, 24, 25 , and 26.

Wall Space Trade Names.-For convenience in designating different spaces in a room, walls have generally been divided into sections and designated as wainscot ing, filling, frieze, and dado. See Plate 23.

Stencil Placing in Small Rooms-Low Ceilings.-The essentials are to decorate walls and ceilings in plain, light tints or delicate Tiffany glaze,-use narrow moulds, and simple, open-pattern stencils, softly colored.

Place stencil, picture mould or a narrow cove mould at top of the wall where it joins the ceiling. Allow no frieze if a bedroom or living room. Figure 6, Plate 24.

In dining rooms where the wood trim is painted or enameled white, light gray, or ivory, a plate rail is often placed high, usually on a line with the top of window and door casings. The dado between the plate rail and baseboard should not be paneled off, but rather painted or mottled in a light tint and stenciled vertically, as in Figure 3, Plate 23, or else use wall paper having stripes up and down. When the space above the plate rail in this location is 18 or 20 inches high, an open, lightly designed and colored stencil may be run horizontally, just above the plate rail.

Or place the plate rail one-third of the way down from the ceiling, stencil on an open pattern (with the ceiling tint) from 2 to 4 inches wide, immediately below the picture mould. Fill in the dado with small vertical stencil figures as in Figure 4, Plate 23. Use no chair rail.

In other rooms of these proportions, if stencils are used they should if possible be run vertically from a narrow picture mould at the top of the wall, where it joins the ceiling, down to the baseboard, and it will cause the ceiling to appear higher up and the side wall higher, as in Figure 5, Plate 24. Use neither a frieze nor drop ceiling.

When a ceiling is only moderately low, a lightly-designed, open stencil may well be placed below the picture mould, as in Figure 6, Plate 24.

When the wall is plain and the wood trim is not ornamental either, a stencil is often used decoratively to follow the baseboard and door casings, as in Plate 24.

In any use of the stencil in small rooms the wall color, ceiling, and stencil tints must all be just as light and soft in tone as possible. The ceiling tint is always appropriate for transferring stencils to the side walls.

Where the wood trim of a room is painted or enameled in a light tint, the picture or cove mould should carry the ceiling tint.


Plate 24.—Stencil Treatment for Small Rooms with Low Ceilings.
When the picture mould is too dark in color, the stencil bold in design or strong in color, the effect of apparently raising the ceiling and increasing the size of the room by vertical stencils and light-tinted or mottled wall colors will be lost, and the reason for it is obvious. The mould or stencil will mark clearly the top of the wall, to show where it leaves off and the ceiling begins; dark colors on the walls define the limits of the room too clearly, making them seem near, while light-tinted walls appear to be farther away; they do not call attention to their presence as do dark colors.

Hang pictures with quite long chains or wires from the picture mould.

Painted or enameled woodwork in white, gray, ivory or some such light tint, assists in apparently increasing the size of the room.

Placing Stencils in Small Rooms-High Ceilings.-In such rooms horizontal (not vertical) stencils may be placed, as in Figures 1, 2, Plate 23; 7 on Plate 24; 8, 9,


Plate 25.-Stencils Appropriate for Rooms with High Ceilings.
10 and 11, Plate 25. Designs to be open, simple, and of delicate construction.

Dining room stencils are often handled as in Figures 11 and 12 , Plates 25 and 26 , respectively.

Hang pictures with concealed wires rather than from the picture mould.
'Placing Stencils in Large Rooms-High Ceilings.Large rooms offer an opportunity for a greater variety of stencils, colors, panels and moulds. Arrangements shown in Figures 1, 2, 4, 6, 7, 8, 9, 10, 11, 12, 13, and 14 , Plates 23 to 26 , are appropriate. Some fit rooms bet-
ter than others. The stencil pattern may be a little bolder in design and colors a little stronger, while the walls may be tinted or glazed fairly dark. This does not, of course, mean that suitable decorations can be secured by using real dark wall colors, by making too free use of stencils on the walls, or by vivid, brilliant colors in large quantities.


Plate 26.-Appropriate Stencils for Largs Rooms ; No. 14 Illustrates the Use of a Spot Design.

Placing Stencils in Large Rooms-Low Ceilings.Stencil placing, design, and coloring ought to be virtually the same as for other rooms with low ceilings. Wall tints may be a trifle darker than in rooms that are small in addition to having a low ceiling. The same principle is involved as was mentioned before. Light-tinted walls and ceilings appear to be farther away than those painted in fairly dark shades. In large rooms, nothing will be lost by having walls fairly well defined by color, as they will in fact be far enough away. It is possible even in a large room to make the walls so dark in color, the stencil design so bold, and color so strong, that the walls
will seem very near at hand and cause the room to appear crowded. Paneling is more suitable for large and fairly large rooms than for small ones.

In selecting your wall colors, ceiling tint, stencils, and stencil colors, as well as in placing of picture moulds, plate rails, chair rails, etc., the object to be gained in such a room is to apparently raise the ceiling by making it extremely light in color; and by using vertical rather than horizontal stencils on the side walls, which latter tend to lower the ceiling in appearance.

Placing Stencils With Extremely Plain Wood Trim and Walls.-Assuming that the proportions and size of the room are not to be apparently altered, the use of stencils in such a room is solely for ornament. In design they may be more decorative and elaborate than in other rooms, and may be repeated more often. The stencil pattern, as well as colors, should be allowed to be more prominent, even to the extent of drawing a little attention to themselves. Stencil patterns should never be real bold or the colors what might be called vivid or brilliant. Vivid colors may not be used anywhere except in small areas. A very small quantity of bright color is sufficient to balance a large area of soft, dull tints. The wall color should be quite a light tint, and the ceiling should be very light.

Placing Stencils Where the Wood Trim Is Fancy and the Walls Are Decorative in Themselves.-Many of the rooms in older houses have heavy moulds, beading and ornamental wood trim, while the ceilings often have relief medallions and are otherwise decorative. Obviously, stencil designs and coloring ought to be very small, simple, and delicate for such rooms. They should be used sparingly and placed judiciously, so as not to add too much decoration to a room that is already quite ornamental in itself. What are often called spot designs, as in Figure 14, Plate 26, are best suited to such rooms.

## CHAPTER VI

## SOME GOOD JOBS ILLUSTRATED

Undoubtedly the very best way to become proficient in the use of stencils and colors as a means of decorating rooms in public buildings and private homes, is to study the finished work of other decorators who are capable and experienced. But it is not convenient for a large number of painters to do that, and so the next best opportunity is to study pictures illustrating the work and written descriptions of it.

It must be borne in mind, however, that such descriptions of jobs necessarily omit one of the most important elements-namely, color. And color can make or break almost any scheme of decoration. By all means study the fine stencil jobs to be seen in all cities-the hotels, libraries, restaurants, and the better class of stores -whenever it is possible to do so.

The decoration of a moving picture theater ceiling and a photograph studio, recent jobs done in Chicago by well-known professional decorators, will now be described and illustrated.

## PICTURE THEATER CEILING DECORATION

Plates 27 and 28 show pretty well the mechanical appearance of the ceiling stencil decorations of a Chicago theater, but they do not give even a fair conception of the artistic appearance of the finished job, being without the color values.

This job was executed by experienced professional decorators, with mechanical means rather than freehand. Any decorator who can do neat, careful work can pro-
duce just as fine results by careful study. The skill in the execution of this ceiling is not so much shown in the actual work of decorating as in the designing and laying out of the lines and colors.


Plate 27.-General Layout of Ceiling Decoration of a Chicago Theater. An Artistic Job, Though the Illustration Does Not Show the Color Values.

This really is a very simple, yet charming, piece of work; much more simple, because of the soft, delicate colors used, than the black-and-white drawings indicate.

Observe that the nice balance and proportion of the whole ceiling could easily have been disturbed by a simple mistake. Suppose a small rectangular border and stencils, like those used in the other panels, had been placed in each of the six small center panels, in place of the two long rectangles used, which apparently run under two of the beams on each side. Would not that have wrecked the success of the treatment? The whole ceiling would have been spotty and confusing to the eye.

Plate 27 shows the general layout of the whole ceiling. Notice that identically the same treatment was given all of the rectangular panels. The center panel has been treated in the same manner, using a circular border in place of the rectangle.

Method of Procedure.-The procedure in executing a job of this kind was about as follows: The beams or trusses of this ceiling had been covered over with plaster ornamental mouldings, as is usual with buildings of this character. Two coats of lead, oil, and turpentine, tinted to light ivory with raw sienna, were brushed on with a size coat of glue or varnish between the two. Of course the second coat was thinned with turps only, so that a flat surface would result. The beams were given no further finishing. If they had been made of natural or stained wood the whole ceiling would have been quite as attractive, treated as it was, but a little different to be sure.

All of the spaces within the beams, the panels, marked $A$ and $G$ in Plate 28, were then painted two coats and a size to finish with a flat surface. The color for these areas is a warm, light gray, made by tinting white lead with a bit of raw sienna and raw umber.

With the beams and panels finished and dry, the ceiling was measured off and laid out for the lines and stencils. The line $F$ was located 16 inches from the beam all around on four sides. Either a chalkline or a brass-

bound straightedge and a pencil were used to run a temporary line on the wall, to be followed by the stencil.

When a chalkline is used it is first coated well with chalk. Then, being held taut against the measured marks on the ceiling by a man at each end, it is pulled down a few inches in the center and when let go quickly it snaps a straight line onto the ceiling.

Next a stencil was cut to transfer two dotted lines each one-eighth of an inch wide and one inch apart, as shown by $H$, Plate 28. The dotted stencil lines were transferred with burnt umber thinned with turps. The space between these two lines was filled in by hand, using a half. inch fitch. The color was raw sienna, thinned a little with turps and a few drops of linseed oil. This operation made line $F^{\prime}$ complete.

Lines $E$ are one-half inch wide, solid rather than dotted stencil lines, and were painted with burnt umber. The lines are four inches apart and two inches from line $\boldsymbol{F}$. An angle lining fitch and a straightedge were the tools used in running these $E$ lines, as described in Chapter VIII on Lining. They could also be marked on with a pencil, using a straightedge to keep them true. Then they could be filled in with an ordinary fitch. This would require more time, however, than to line in the regular manner.

Bear in mind that the lines, flowers, leaves, and stems are all painted with the clear colors as they come from the can, and are not mixed with lead. These are semitransparent colors, which permit the ground color te show through.

The roses, leaves, and stems ( $C, D$, ) were transferred with an outline stencil, as shown in Plate 14, Figure 649. There are many other stencils which would serve quite as well. This one was transferred in raw sienna, which simply made an outline of the flowers, leaves, and stems.

When the outline was dry the leaves ( $D$ ) and stems were filled in by hand with a small one-quarter-inch fitch, using chrome green with a little raw umber added. The stems were made a little darker than the leaves. The color was used quite thin.

The flowers ( $C$ ) were next filled in with a thin, transparent red-rose pink or American vermilion probably -using a small brush as for the leaves and stems. While the red was still wet the color was wiped thin at the edges of some of the flower petals, leaving a lighter pink. A cloth wrapped over the thumb or forefinger is used for wiping out these high-lights and shading, as a rule. The end of a small brush or pencil may be used, wrapped in cloth, for small parts.

When stenciling on residence walls and others to be seen in daylight and bright light, the colors must be kept soft and delicate. On this theater ceiling, however, which is seldom seen except with dim electric lights, the colors were necessarily made fairly strong, so as to carry well in the dark. Observed in bright light, the stenciled flowers and leaves appear rough, crude, and altogether too strongly colored. As with oil painting, bulletin and seene painting, stencils must be colored only bright enough to give a soft, delicate effect at the proper distance from which they are regularly seen, and with the regular light.

## A PHOTOGRAPH STUDIO DECORATION

By carefully going over Plates 29, 30, and 31, you should get a pretty fair idea of how the stenciling was carried out to decorate one of the best studios in Chicago. These drawings, limited to black and white as they are, do not give a good idea as to color values, nor yet the attractiveness which the colors add. In Plate 29, for instance, the stencils $D$ and $E$, shown in black on the drawing, are entirely too strong in contrast with the
white wall $A$. Likewise the ceiling, Plate 31 , does not appear in the drawing to be nearly as attractive as it really is, because the stencils $F$ and $H$ contrast too strongly in the drawing with the white ceiling $J$.

This studio is on the ground floor of an ordinary store building and is in proportion rather too long for its width, and the ceiling is a trifle too high. One not looking for these details would likely not notice them, because the decorator with his deep stencils and the architect who


Plate 29.-Decoration of a Chicago Photograph Studio.
planned the deep cornice and high wall panels have produced a very attractive interior.

The cornice, mouldings, base board, the stiles of the wall panels, and all other wood trim are of red gum, varnished and pumice rubbed, after a very light application of thin brown stain. It appears very much like walnut, and probably is thought to be such by most people. It is possible that the gum was not stained at all. That wood, when finished naturally with varnish only, is a medium dark brown, and after two or three years turns much darker, like most trim lumber.

The filling or upper side wall $A$, Plate 29 , is a rough sand finish. The panels $B$ are of coarse weave wall can-


##  WALL AND CEILING STENCIL



[^0]vas, decorated with a Vandyke brown or burnt umber glaze, nicely mottled or stippled out with a wad of cheese cloth. This transparent glaze stain was put on over an opaque flat cream ground (white lead tinted with raw sienna).

The filling $A$ was glazed with the same brown stain color used on $B$, but over a much lighter cream or ivory ground color. $A$ is several shades lighter in color than $B$.


Plate 31.-Layout of Studio Ceiling Decoration.
The stencils $D$ and $E$ were transferred with the Vandyke brown or burnt umber, and are not very strongly in contrast with the mottled color of $A$.

Plate 30 shows the handling of the rear wall of the room, which separates a small workroom in the rear from the main display room. Obviously the decoration was handled the same as in Plate 29. Plate 30 also shows large-size reproductions of the stencils.

In Plate 31 is shown the ceiling layout. The cornice at the top of the side wall, of course, forms a brown frame around the entire ceiling, as indicated by the wide black line. The ceiling color is the flat light cream or ivory, whichever you choose to call it, which was used as the ground coat on the filling $A$.

The stencil $F$, which you will note is the reverse of
stencil $D$ on the wall, is transferred in a soft, light blue (white tinted with cobalt blue) about a sky-blue shade.

Stencil $H$ is the same as was used on the wall above the wainscoting and is used on the ceiling in the same color also-dark brown.
$G$ on Plate 31 indicates the light chandeliers, and $I$ the ventilators.

## SOME PANEL IDEAS

Writing on the subject of adapting certain stencil designs to artistically decorate different rooms, Reginald Ware, in "The Canadian Painter" has presented some valuable ideas for the use of detached designs.

A style of decoration that can be obtained by a slight alteration of the laurel-leaf design in shown in Plate 32, Figure 1. This is worthy of a little consideration, not only because of the excellent decorative results to be secured by its application on a suitable background, but also because it affords us a simple illustration of the adaptability of certain designs.

Much might well be written and illustrated on this subject that would prove of great benefit to the beginner, as it is a study worthy of the careful attention of every decorator, and a necessary acquisition to the ability of those responsible for the arranging of the interior decorations of churches and other large public buildings, where the harmony of the types of design used are second in importance only to the harmony of the color scheme of the decorations as a whole.

Utilizing Old Stencils.-We can profitably spend some time in carefully looking over our old stock of stencil plates and designs, and noting how, by minor alterations, we can adapt portions of certain patterns so that they enable us to obtain decorative effects totally different, perhaps, from that for which they were originally intended. The beginner, no matter how limited his pre-


Figure 3


Figure 2.


Figure 1.

三: Plate 32.-"Suggestive Paneling" for Decoration of an Upper Wals space.
vious experience, would be well advised to devote some time in this manner, as by thus educating himself to the useful possibilities of the different motifs, and by building from parts complete patterns to suit his fancy, he will acquire the ability to complete different arrangements of the same motif, suitable for the different size spaces of the larger buildings, when he undertakes this class of work.

Unsuitable Designs.-Many elaborately executed interior decorations are seriously marred from an artistic standpoint by the inclusion of unsuitable patterns as parts of the ornaments, the effect appearing just as objectionable to the true artist as a serious clash of coloring would to the average eye.

In one of our big cities the interior decorations of two prominent churches are glaring examples of the lack of appreciation-or shall I say "interpretation'? ?-of their requirements by their decorators. One, an Oriental type of building with a large central dome, contains an assortment of ornaments, chiefly of the Gothic and Tudor period, that are entirely out of place. Scarcely a section of the designs used is in keeping with the architecture of the building, which should have been treated more sympathetically with suitable Oriental designs. The second church shows the effect of a too elaborate treatment, as the interior appears to contain one large assembly of stenciled patterns on ceilings and walls, with scarcely a portion of the background visible. The impression created in the mind of the average person is that the decorators accidentally omitted stenciling the floors and pews.

When engaged in domestic work, there is not the same danger of the clashing of the types of designs, as it is seldom that two distinct motifs are needed in the same room or hall, yet it is essential that a pattern suitable
to the features of its surroundings be selected, and that, a too elaborate treatment be avoided.

Suggestive Paneling.-One of the illustrations shown in Plate 32 is a modification of the panel effect and might be termed "suggestive paneling," as it is a compromise between the ordinary band-border and panel decorations, with a very decided suggestion of the latter. It is suitable for the decoration of an upper wall space, and its use can be recommended where the heavier panel effects are not desired. The illustration conveys an idea of the suggested arrangement. In this instance the larger panel is central.

The lower part of Figure 1, Plate 32, resembles a broken band-border effect, and is suitable alone as a decoration beneath the moulding or cornice of a livingroom or reception room. When applied on a blended background (whether the latter be painted or covered with an oil-coated wallpaper) the results are good, as it gives just that suggestion of ornament necessary for this type of room, without the harshness of a continuous, narrow band-border.

To secure a good effect in the average room, the top of the design should be kept a few inches below the top of the side wall, parallel to the base of the cornice or moulding. Having struck a chalk line around the room at the distance suggested, we find the center length of this line on the main wall, and stencil our center pattern. After marking off the approximate distance from each side, where our large central section shall end, we complete the stenciling of this section from both sides of our center pattern, arranging so that our respective ends shall finish with an unbroken leaf at the point where this occurs, nearest to our "approximate"' marks. This gives us our central section completed. From the extreme ends of this section we next find the center of the distance to the angles, and stencil our centers of the shorter sections.

From these centers we stencil our patterns toward the middle section, again finishing at an unbroken leaf when within a few inches of the ends of our central length. By continuing a similar distance towards the angles we have our short section finished.

This is repeated on the opposite wall, but on the narrower sides of the room, where, perhaps, only two sections of pattern are required, we first find the center from corner to corner, which in this case becomes the center of the center "stile.' From this center we measure a small distance each way, equal to half the distance of the division between sections on our main wall. From each angle towards the center we measure the full distance of the "stile," and within these marks again have the approximate length of our sections. By working from the center of these sections and finishing at an unbroken leaf as before, we are able to complete the decorations on these walls.

To secure the best results the use of at least two different colors are necessary, and on the blended backgrounds a soft two-tone effect for the leaves can be recommended. The illustrations shown are in one solid color. This was done for the sake of "clearness" when reproducing, and because of the large reductions of the proportions necessary to include the complete sections in the plates.

Maple-Leaf Effects.-Many pleasing decorative effects can be obtained by various arrangements of the maple leaves as the motif of the ornament. Some suggestions are illustrated in Figures 2 and 3, Plate 32. No. 2 shows an adaptation suitable for the crown or top of a panel, the narrow border being continued down the sides. The width of the panels can be enlarged by extending the extreme leaves of the former pattern, as shown in the center section of the portion of paneling illustrated in Figure 3.

When using the perpendicular border, illustrated in

Figure 3, it is not necessary to attempt to turn the bottom corner of panels and continue along the base. Instead a finish should be secured at a leaf when within a suitable distance from the base, thereby securing a suggestion of paneling that will look quite as effective as the completed panels.

By using the crown section of ornament only, another style of decoration may be obtained, suitable for the same class of room as suggested for the lower part of Figure 1. This decoration also should be kept a few inches below the base of the cornice or moulding, and the side leaves extended to suit the space to be occupied by the design. In a room where the chimney breast projects, and the main wall is thereby divided into three sections, it is particularly appropriate, and on a blended background soft colorings of the leaves in autumn tones are all that can be desired

## CHAPTER VII

## CEILING, FLOOR AND FABRIC STENCILING

Many ceilings of rooms in our homes are the better in appearance for not having any ornamentation whatever placed upon them. 'There are ceilings in living rooms and libraries, however, which might well be given a very light and simple treatment, both in color and design, which would add materially to the effect of the room as a whole.

The use of detached motifs, or spot designs, is most effective for ceilings, because of their simplicity and adaptability. They can be used often when more solid, continuous stencil designs on a ceiling give an impression of its being over-decorated.

Selection of Ceiling Color.-Colors for ceiling use may consist of any which will be in harmony with the general color treatment of the room, but they must be very light and airy. Dark colors cause the ceiling to appear too low. The light-blue sky tint is suitable in some instances, but at other times the very light yellowish and grayish whites are needed. When the ceiling is high up, and when usually seen in darkened rooms, as with theaters, the color must be stronger than for low-down residence ceilings. The effect of artificial light on color's is also a necessary consideration; blue, you will remember. is only barely visible at night, yellow is not strong, and most other colors are changed more or less by night lighting.

Drawings Should be Made.-Before attempting to decorate a ceiling, make a drawing of it on paper to scale, so that your proportions are correct. Then figure out the
best location of your stencil designs, lines, and colors. Mark your drawing to show in inches the exact position of every line and every setting of the stencil. It is much easier to figure these things out on paper, seated at a desk, than to lay out and judge distances, balance, proportion, and so on with the head bent over in a neckbreaking position while you try the stencil and lines on the ceiling by the "cut and fit" method.

With the scheme of design all laid out on paper and the measurements marked, the next step is to mark off the ceiling with chalk (never pencil), to locate the position of each setting of the stencil and each line. A threefoot flat rule, straightedge, and a chalkline will enable you to lay out the work quickly. Snap the long, straight lines on with the chalkline. The chalk will rub off when the job is finished.

If the decorative scheme looked well proportioned on the paper drawing laid out to scale, it will look well on the ceiling, put on to correct measurements, so you will not be required to spend any time wondering how the design will look while doing the actual work on the ceiling.

Transferring the Stencil.--It is not so easy to stencil on ceilings as on walls. For that reason one ought to take advantage of every little help and short cut. For large and high ceilings scaffolding built up high, so that one can lie down on it and face the ceiling while transferring the stencil impression, helps to make it easier and saves time. The stencils ought to be made of heavier paper than for side walls, and may be fastened with glass push pins.

Sometimes many repeats of the stencil are cut through a strip of stencil paper ten or twelve feet long, to save moving a short stencil plate so many times.

Certain kinds of stencils may be transferred with a paperhanger's rubber roller instead of a brush. A piece
of long-nap plush is sewed on to completely cover the roller. The color is brushed on to a board. From there it is picked up by the roller and transferred to the wall through the stencil plate.

Whatever the method it is not so easy to transfer a clean, sharp impression to a ceiling by means of stencil plates, so don't be discouraged if it becomes necessary to wash off a stretch or two with benzine, and begin all over again.

The straight lines so often used for connecting detached pot stencil designs are usually run on with an angle liner (a brush), when smaller than one inch wide. See Chapter VIII, about Lining. Lines one inch and over may be stenciled on; that is, an outline stencil is cut, which simply consists of two parallel lines one inch apart or whatever width is wanted. Ties are left in cutting the stencil and so the lines are disconnected. The space between the lines is filled in with semi-transparent glaze color, using an ordinary fitch. Just how far the lines should be placed from the edge of the ceiling depends on the size of the room and the massiveness or delicacy of the wood trim.

Designs for Ceilings.-The kind of stencils usually found suited to ceiling decoration are the spot designs shown in Plates 28 and 11 and continuous patterns of the character shown in Plates 31 and 1. Of course, any designs which seem to fit and look well may be used with good effect.

Just how a ceiling should be laid off in panels, or treated without them, depends on many things,--the architecture of the room, cornices, mouldings, beams, and other features. Plates 27,28 and 31 will illustrate how some ceilings have been well decorated. There are about as many styles with more or less merit as there are decorators.

Often where a ceiling or panel is small and is sur-
rounded by moulding, it is much better to place the stencil ornament only in the four corners, with very light lines or no lines connecting them. The temptation to place a fifth spot in the center of the ceiling must be resisted. When a fifth spot is used, make it larger and somewhat different, so as to form a centerpiese.

## FLOOR STENCILING

The stenciling of floors does not offer a very wide opportunity for business, but still one ought to keep in mind that it is sometimes done with good effect. There are jobs upon which it is desired to do "something different," either for the novelty of it or because the conditions are different.

Many houses still have the old-fashioned soft-wood floors, and they offer a painter an opportunity to create some new business. Rugs have displaced carpets almost altogether, and they do not look well unless the floor is well finished. The cost of replacing these old floors with hardwood is considerable, and as satisfactory results can be attained by using the new method of finishing floors, the difference in cost makes it attractive to the average house-owner.

Briefly, the method is to paint the floors, then decorate them by separating the border from the center by plain strips or stencil designs. The color of the border and center may be different shades of the same color, the idea being to produce the effect of a rug sometimes, but more often merely to run a stencil border around the edge of the floor, a real rug being used in the center. Bedroom floors are most often decorated in this manner, although an old floor in any room can be made much more presentable.

Preparation.-To begin with, scrub the floor and give it time to dry out well. Cracks must be free from dust and dirt before a filler will stay in place.

Fill small cracks with putty, made from two-thirds whiting and one-third white lead, linseed oil, and floor or zubbing varnish. Fill large cracks with putty made by mixing whiting and fine sawdust with water, to which has been added enough glue to make it stick. Cracks in new lumber should have a coat of oil first.

When the filler is hard, sandpaper the floor smooth, cutting down with a plane any edges of boards that are warped.


Plate 33.-Common Methods of Striping Floors.
First Coat.-Thin white lead with one-third turpentine and two-thirds linseed oil. Add about a tablespoonful of drier to the gallon of paint if raw oil is used, and tint to suit.

Second Coat.-Mix white lead with raw linseed oil. Put in the drier and add some floor varnish to make the paint tough; one-half to one pint of varnish to the gallon of paint will serve the purpose. After your floor has become dry and hard, it is ready to stencil or stripe.
Striping.-Plate 33 shows the common methods of striping, although these may be varied by making the stripes any width desired or by using several narrow stripes. The lines are laid out with a straightedge, rule, and pencil and should be at an equal distance from the
baseboard all around the room, disregarding small offsets.

Stenciling.-Stencils most appropriate for floors are those of simple, strong design. The Greek key design is perhaps most frequently used. The width of the stencil or lines used will be governed by the size of the room. A stencil 4 to 6 inches wide will be most useful, although there are places where 2 and 3 -inch stencils are needed, and some where 8 or 10 -inch patterns can be used. You will have to do a little scheming to select just the right stencil or method of striping to fit each room. Plates 1,7 , and 33 show suitable stencil designs.

First lay out the floor with a chalk mark as for striping, so that you will be sure to get the stencil straight. Use thumb tacks to hold the stencil in place while transferring it.

Ordinary tinting colors ground in oil are used for transferring stencils. Thin with turpentine two-thirds, and linseed oil one-third, to a thick brushing consistency. A stencil brush is required for putting on the color, and should be well wiped out on a board after dipping it into the color and before putting it on to the stencils. Or, better yet, do not dip the brush in the paint; spread the paint on a board with another brush, then pick it up on the stencil brush from the board. The brush must be used almost dry, to avoid runs in the stencil and ragged edges.

For this stenciling and lining work you will require several small brushes from 1 to 3 inches. Probably $1 / 4$ and $1 / 2$-inch angular fresco liners would be useful also.

Colors.-Select the floor or ground color to harmonize with the wall and woodwork colors, but make it a little darker than the wall.

Stencils and lines should be put on in colors that harmonize with the floor, and contrast not too strongly. The center portion of the floor may be the same color as the
stripes, but not necessarily so. In any event do not use too many colors, nor too bright; usually two are plenty, and these should be selected after studying well patterned and colored rugs.

"By courtesy of Mr. G. N. Maim, author of "Treatment of Walls and Ceilings" published by Acme White Lead, and Color Works, Detrolt, Mich."

"By courtesy of Mr. G. N. Malm, author of "Treatment of Walls and Ceilings' published by Acme White Lead and Color Works. Detroit. Mich."


[^1]Plate 34.-Lining with the Angle Liner Brush and Yardstick.
It is possible to carry out some stencils in two or even three colors. For instance, the leaf design in Plate 33 might be used in quite a large room (it is 15 inches wide) to form a border for a painted rug. The two stripes in the outer edge can be outlined in pencil and filled in with raw umber tint. The first set of leaves


Plate 35.-English Stencil Designs.
fill in with a green and the second pair tint with a raw sienna. Tint the third pair of leaves like the first, and the fourth pair the same as the second, and so on alternately. With the other stencil shown in the plate a two-color scheme could be carried out by filling in one section with one tint and the second section with another alternately.

Wax or Varnish.-Floors are expected to stand extremely hard wear. Varnish put into the paint will prolong its life, but it is well worth the additional expense to varnish the floor over the paint, which will protect the stencil or striping design. Two coats of varnish and a coat of wax is best. To wax the floor without the varnish will protect the paint somewhat and is better than no protection at all.

Color Suggestions.-Lighter tints may be used appropriately in bedrooms than in other rooms. In every instance the stencil color ought to be but a shade or two darker or lighter than the floor color. A strong contrast does not look well.

Floor color, Bedford stone; stencil or border, pearl gray.

Floor color, light slate; stencil or border, dark slate.
Floor color, slate; stencil or border, dark bottle green.
Floor color, pearl gray; stencil or border, medium olive.

Floor color, French gray ; stencil or border, dark bottle green.

Floor color, warm gray ; stencil or border, maroon.
Floor color, medium drab; stencil or border, warm drab.

Floor color, tan ; stencil or border, chocolate brown.
Floor color, dark umber tint; stencil or border, French gray.

Floor color, bronze gray; stencil or border, medium olive.

## STENCILING ON CLOTH

The ornamentation of fabrics is of interest to the decorator, because he is occasionally called upon to carry wall designs on to furnishings such as window drapes, table covers, and portières in order to complete a decorative scheme. There is not much difference between the methods required for transferring the designs to fabrics and for wall work; still some details are manipulated differently, so only the points of difference will be touched upon. There can be no advantage in repeating unnecessarily what has been said in other chapters about stencils and stenciling in general.

Method of Procedure.-The work on fabrics is best done by doing the stenciling on a drawing-board. Lay several sheets of newspaper on the board first. Then a sheet of blotting paper (white is best), to take up any excess of color and avoid having it crawl. Now stretch the fabric to be decorated on top of the blotting-paper and smooth it out. Place pins in the four corners to hold the fabric in place. See that the horizontal threads run square with the vertical threads before pinning the corners.

Next mark off with chalk, a soft pencil, or thread, the guide lines locating the design where you want it. Lay the stencil plate square and in the correct position. Pin it down fast with thumb tacks or push pins. You are now ready to lay the color on with the correct size of stencil brush.

Colors.-Mix the same semi-transparent colors as are used for wall decorating, with turpentine, adding a few drops of japan gold size or varnish as a binder, so that the color will remain fast during the washing. It is obvious on first thought that the color should be mixed thinner for thick woolly goods than for fine smooth fabries, but do not thin it to the point of running. If you


Plate 36.-French Stencil Designs.
use too much japan gold size, varnish, or drier, the color will finish with a gloss instead of flat, as it should be.

Use tube oil colors for stenciling on linen, cotton, canvas, muslin, and other fabrics except silk velvet and velours. Use dyes for these latter fabrics. The dyes needed are those commonly used for clothing. To one package of the dye add two tablespoonfuls of water and the white of one egg.

Whether you use colors or dyes, do not dip the stencil brush into the mixing pot. Spread a little of the color on a piece of glass with another brush. Then pick it up on the stencil brush from the glass. A surprisingly dry brush transfers the cleanest and sharpest impressions, especially on thin, smooth goods. Too much color in the brush gives a mussy, ragged design.

Fixing Dyes on. Velvet.-After stenciling with dyes, when the dye is dry, lay a damp cloth over the top of the design (with fabric on the ironing-board) and press with a hot flatiron. The steam sets the dyes, so that it stands washing.

When stenciling on velvet and velours, which have a long nap, do not use a stencil brush and the hammer stroke as with other fabrics. It roughs up the nap too much. Put the color on with a small artist's brush, using careful, smooth strokes as when painting any surface. Before stenciling, wet the surface of the cloth and let dry, to lay the nap flat. It can be brushed up again after pressing to set the dye color fast.

It is best to stencil all fabrics with as few strokes of the brush as possible, so as to avoid roughing up and pulling out the fiber threads.

When your color runs on smooth fabrics, even though little color has been taken into the brush, the color is setting too slowly. Add a little more japan.

Two or more colors may be used on fabrics, with a plate and brush for each color as on walls. The color
may also be shaded by brushing some places longer than others.

Always hold the stencil plate down with one hand while working the brush with the other. Then the fabric can not move and spoil the job.

## CHAPTER VIII

## LINING AND STRIPING

Lining is a branch of decorating that is indeed useful. lt is an accomplishment that would be gained by a larger number of mechanics if they but realized how easily it can be learned by anyone willing to practice diligently for awhile. Fairly straight lines can be made by the stencil and filling-in method, but the work done in this manner can never equal the clean-cut lining resulting from the use of an angle liner brush, a yardstick, and a practiced hand.

Lines of correct proportion and location in a room can be made to supplement stencil or freehand ornaments, or the lines may be the only means of decorating panel, ceiling, or frieze.

Tools and Materials.-Brushes, called flat or round angle fresco liners, made in sizes $1 / 2,3 / 4,1,11 / 4$ and $11 / 2$ inches, for making lines of these widths. Shown on Plate 34.

A yardstick. Bevel or chamfer one edge with a plane to make it like a rule. For long lines a stick $1 / 4 \times 11 / 2$ inches, 4 feet long, is best.

A chalkline and chalk.
Japan or oil color, thinned with turpentine a little to brushing consistency.

Aluminum, gold, copper, or other metal bronze powders are used for lining also. They should be mixed with good varnish which has been thinned with benzine or turpentine to the consistency of linseed oil, or use bronzing liquid to thin.

The surface to be lined may consist of almost any material, but ought to have a flat or semi-flat finish.

Laying Out the Lines.-The first thing to determine is the location of the lines. Measure and mark the location at each end of a panel, for instance, with a pencil. Then chalk your line. Fasten one end over the upper mark, or have a helper hold it. Place the other end of the line over and against the lower mark, and draw the line taut. With the hand that is free pick up the line as near the center of its length as possible, and snap it by letting go quickly. The line will thus transfer a light chalk mark to the surface, which serves as a guide when painting the line in color. The chalk mark should be snapped on both sides of each proposed line to be one-quarter of an inch wide or wider.

Another way, and a better one for some surfaces, is to mark out the lines with a knife, using a straightedge as a guide. Cut only into the ground coats of paint with a paperhanger's blade. Such a line can be followed with the lining fitch, the paint will run only to the knife cut, and a much sharper, cleaner line will result in less time than can be produced with the chalkline method.

Holding the Brush.-Having the lines marked out with chalk or knife, you are ready to proceed. The next, and perhaps the most important of all points to observe, is the holding of the brush. Hold the extreme end of the brush handle, between the thumb and fingers, the thumb on top, as in Plate 34. It is important to have the brush ride at the correct angle. It should sit flat on the surface, not on the point or the heel.

When the brush has been well worked into the color, wipe it out on the edge of the pot. Now place the yardstick on the chalk line, bevel edge next to the wall, and draw your line with one long stroke; do not lift the brush from the wall until you come to the end of the yardstick. The edge of your yardstick, which the brush


Plate 37.-American Stencil Designs.
follows, should not come in contact with the wall, or it may smear paint on it.

Move the stick, letting six inches of it remain next to the end of the line just completed, so that an even start can be made on the next section of line. Repeat until the corner is reached, where exceeding care must be exercised to avoid running the line beyond the mark. Lines run too far, or located in error, are difficult to re-

move. They may be wiped clean with benzine or turpentine, if at all.

When the color does not flow steadily and evenly from the brush or slides over the surface, it is too thick.

If the color runs and spreads, add a little more pigment color; it is too thin.

Your hands, the yardstick, and the brush handle must be kept clean. When color is allowed to crawl under the yardstick, you soon have a messy line that is a disappointment.

Take care of your brushes. Clean them thoroughly
with benzine, fill the bristles with vaseline, and lay away flat where they can keep their original shape.

In conclusion, it should be noted that the tools and method are extremely simple. The one requisite to insure success is to practice. Practice continually, and then practice some more. You will then surprise yourself by the really fine work you can turn out rapidly.
where to secure the stencils illustrated in
this book
Plate 1-Nos. 811, 812, 1804, 1208, 1209, 1210, 1211, 1212. From H. Roessing, 1314 Sedgwick St., Chicago, Ill.
Nos. 207, 208, 211, 212, 213, 214, 201. From The Sherwin-Williams Co., Cleveland, 0.
Plate 2-No. 1496. From H. Roessing.
Nos. 701, 703, 705, 706, 801, 804, 805, 900, 901, 902, 903, 904, 906. From The Sherwin-Williams Co.
Plate 3-Nos. 601, 602, 402, 403, 405, 407, 409, 300, 306, 305, 303. From The Sherwin-Williams Co.
Plate 4-No. 171. From H. Roessing, Chicago. Nos. 500, 502, 503, 504, 505, 506, 509, 516. From The Sherwin-Williams Co.
Plate 5-No. 11. From The Mayhew Studios, 515 W. 29th St., New York, N. Y.
Plate 6-No. 1542. From H. Roessing.
Plate 9-No. 273. From H. Roessing.
Plate 11-Nos. 83, 98, 99, 103, 113, 115, 110, 64-B, 84 , 107. From The Sherwin-Williams Co.

Nos. 1009, 1013, 1012. From The Mayhew Studios.

Nos. 1290, 1289, 1286, 1276, 1267, 1268 and 1825. From H. Roessing. No. 1535. From Henry Bosch Co., 525 S. Wabash Ave., Chicago, Ill.
Plate 12-Nos. 1593 and 1598. From Henry Bosch Co. Nos. 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 75, 76, 77, 79, 80, 81, 82. From The SherwinWilliams Co.
Plate 14 -Nos. 1823 and 649. From H. Roessing.
Plate 17-No. 1730. From H. Roessing.
Plate 28-No. 649. From H. Roessing.
Plate 37 -Nos. 707 and 209. From The Mayhew Studios. Nos. 1192, 1481, 630, 931, 932. From H. Roes. sing.

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[^0]:    Plate 30.—Stencils Used in Decorating Rear Wall and Ceiling of Studio.

[^1]:    "By courtesy of Mr. G. N. Malm, author of 'Treatment of Walls and Cellings' published by Acme White Lead and Color Works, Detroit. Mich."

