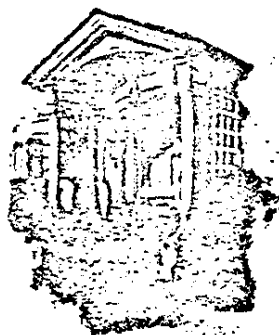


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PAINT

—what it is and how
to use it profitably

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Considering that it is his money which pays the bill, the home-owner often takes too little part in the details connected with saving the surface of his property and its decoration. He chooses the color scheme, perhaps, but too frequently takes no precautions that the material used shall be such as to give permanency to the colors and adequate protection in the surface underneath. The most important point—from the money standpoint—is thus neglected. It pays well to watch one's P's and Q's in surface-saving and decoration, particularly the P's—the Point, the Painter and the Pointing. To these three P's is this booklet devoted. May you, a property-owner interested in making your paint dollars go far, profit by its reading.

PAINT

What it is and how to use it profitably



NATIONAL LEAD COMPANY

New York Boston Chicago San Francisco
Buffalo Cincinnati Cleveland St. Louis
Philadelphia John T. Lewis & Son, Co.
Pittsburgh (National Lead & Oil Co.)

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THE PAINT

I. What Paint Is

PAINT is a mixture of solid particles (called the pigment) and a liquid (called the vehicle) which dries solid, when spread out in thin layers upon a surface, protecting and decorating the surface to which it clings.

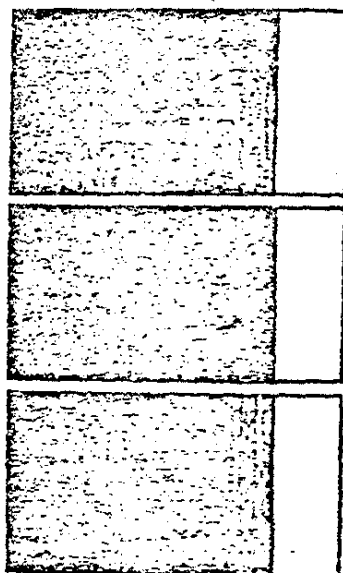
The Pigment

Nature has provided only one white pigment which *and alone* yields a perfect paint when mixed with a suitable vehicle. This is white-lead, known as "nature's true paint pigment." With linseed oil it makes an elastic film, takes the surface in a superior way, is extremely durable, and works under the brush to the supreme satisfaction of the painter.

White-lead can stand some adulteration without entirely losing the valuable characteristics which make it a natural paint. Its usefulness is impaired, however, in direct proportion to the admixture of other ingredients. The addition of other materials mostly decreases the great covering or hiding power of white-lead. More important still, the adulterations rob the paint of the lasting qualities which pure white-lead possesses.

What White-Lead Is

As its name suggests, white-lead is derived from lead. It is simply the metal converted by the chemical action of weak acetic acid (vinegar) and



The effect produced by the use of a white pigment of natural origin, when mixed with a suitable vehicle, is shown in the three panels above. The effect of the use of a white pigment of artificial origin, when mixed with a suitable vehicle, is shown in the three panels below.

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carbonic acid gas into a fine, white powder.

White-lead has many of the valuable characteristics of the metal, such as extreme durability, toughness and weather-resistance.

A Test for Purity

It is impossible to tell by the eye or any other organ of sense if white-lead is pure. There is a simple and infallible test, however, accessible to anyone who cares to make it. Take a small quantity of the supposed white-lead, say the size of a pea, in a hollow scooped out of a piece of charcoal. Direct the flame of a gas or alcohol lamp, or a candle, upon the material by means of a blow-pipe. If the white-lead is absolutely pure, the heat will reduce it in a few moments to metallic lead. If it is not pure, complete reduction will not take place. The adulterant will remain as an ash or residue.

Another way of making sure is to buy only a well-known, reliable brand of white-lead, such as Dutch Boy white-lead. The Dutch Boy trademark on white-lead of our manufacture not only guarantees its purity but makes the buyer certain of a perfectly made product as well.

The Vehicle

The other essential ingredient of paint is a vehicle—the liquid. Here, too, nature has supplied but one material which does more perfectly answer the purpose, namely, linseed oil. Poppy oil would do quite as well perhaps but it is more expensive and consequently cannot compare.

Linseed Oil

Linseed oil is a yellow liquid obtained from the seed of the flax plant. The oil is extracted by

crushing the flaxseed.

The property which makes linseed oil the superior paint vehicle is that it gradually hardens into an insoluble, tough, elastic film when exposed to the air. It also possesses a natural affinity for white-lead, commingling with the fine white-lead particles in so intimate a union that it penetrates the pores of wood and other materials not as oil but as "lead and oil"—a new compound.

In the case of linseed oil, as with white-lead, substitutes claimed to be "just as good" are sometimes offered. Linseed oil, too, is occasionally "doctored" either surreptitiously or under pretense of improving it, especially at times when linseed oil is high in price. Do not under any circumstances allow yourself to be persuaded to use any vehicle for outside painting if made of pure linseed oil. There is no substitute for pure linseed oil and it cannot be improved by the addition of any other oil.

Other oils, if used alone, will not dry properly. If linseed oil is adulterated with corn oil, for oil, kerosene, benzine, etc., the mixture will break up the pigment and form a thin, spreading mass, and it will even penetrate the pores (just as water or any other moisture will), but it has no affinity for the pigment and therefore penetrates the pores alone, leaving the pigment to stick on the outside for a time and then scale off.

There is no simple and absolute test for purity in linseed oil as there is for white-lead. The proper owner's only safeguard is to mark upon the product of a reliable manufacturer. Naturally the best way of being sure is to buy the oil in sealed containers, such as Dutch Boy Linseed oil.

Flaking Oil

Paint that is made with flaked oil gives a glossy finish. Such a finish is desired for all

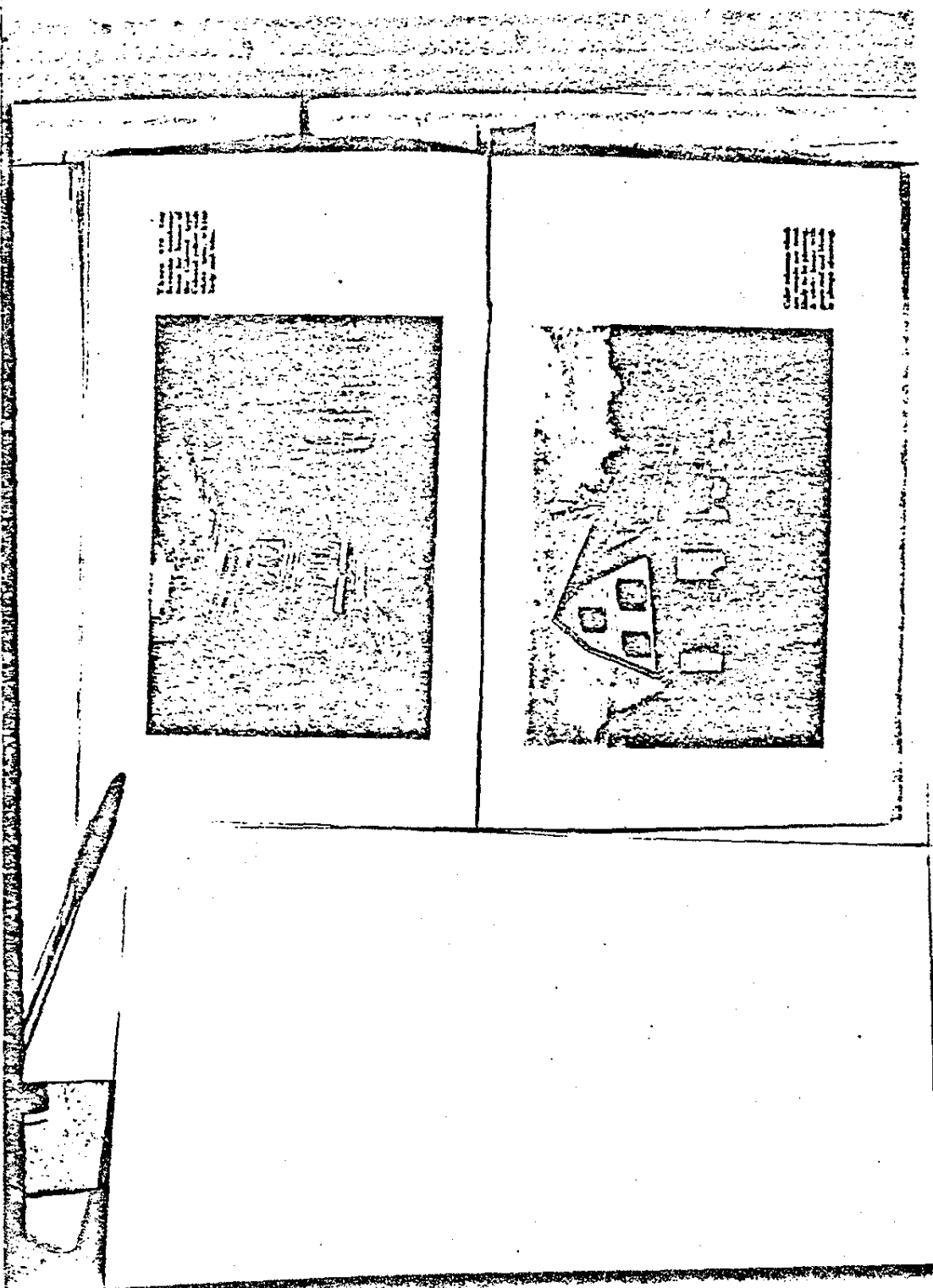
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exterior painting but for comparatively little interior painting. Nowadays most interiors are done in glossless or flat effects.

Up to a few years ago, flat finishes were obtained with white-lead by using turpentine as the vehicle. Very satisfactory results were thus produced, the one objection being that turpentine did not possess as strong blinding properties as were desired. This led to the development of special flattening oils and, with their advent, the popularity of the painted wall was immeasurably increased.

Flattening oils are made by combining certain vegetable and mineral oils and turpentine. One of the most successful on the market is our own Dutch Boy flattening oil. It is especially designed for use with Dutch Boy white-lead and produces durable, washable, flat finishes of unusual beauty. It is more than a mere thinner made of volatile petroleum oils. It is a carefully prepared vehicle of a varnish character and the highest in price per gallon than the mere thinners, is cheaper by the job and by the year because of superior results.

How Paint Is Made

White-lead is sold in paste form, that is, mixed with a small percentage of linseed oil. Simply thinning the paste white-lead to brushing consistency by stirring in more linseed oil (or flattening oil, if a flat finish is wanted) makes white paint.

To make colored paint, merely the addition of the proper tinting colors is necessary. These colors are sold in paste form ground in pure linseed oil and are called "colors-in-oil."

In the case of glossy paint (made with linseed oil as explained before) a small quantity of turpentine is usually added to induce better penetration and a little drier to make the paint dry more

quickly. No turpentine or drier is added to flat paint as the flattening oil already contains drier and dries very rapidly.

In mixing paint to order as described above, the painter is able to control it absolutely. He can mix it thick or thin and vary the proportions of ingredients to meet any surface condition. He is able to match exactly any desirable color, many of which are obtainable in no other way. And, what is especially important, he is absolutely sure of the composition of his paint.

Old-Fashioned "Lead and Oil"

Paint mixed to order of pure white-lead and pure linseed oil is the good, old-fashioned kind—"lead and oil"—which our forefathers knew. It is the same paint which has brought down to us the many fine Colonial mansions which we see today in an excellent state of preservation.

In the face of white-lead's long years of undisputed success, the burden of proof is on the person who proposes to tamper with it. Don't let experiments be made on your property at your expense.

II. What Paint Does

What do we do when we paint? How does the paint act?

With the answers to these questions better understood, the advantages of using a pure white-lead paint will be even more apparent.

Surfaces to be painted are porous. Take wood, for example. It is extremely porous. While the tree is growing, its pores are filled with sap. As the sap dries out, the pores are left empty. The perfect paint takes advantage of these pores. It penetrates them, making when dry a tough coating on the outside which is as-

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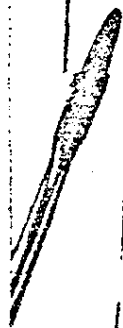
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ASTOR LENOX TILDEN FOUNDATION**

When pores have-and-paint hairless, we do not have oil in the pores and whitehead on the outside. We have a new substance made of oil and whitehead, both inside and outside, which cannot be separated from the wood either by force or time's changes. It will wear down gradually under the attacks of weather but wears smoothly—no cracking, no scaling.

The intimate union formed by "lead and oil" with a wood surface is comparable to a good joint which everyone knows is harder to break apart than the wood fillets themselves. It is nicely shown, too, by an experiment which you can make yourself. Find a piece of wood which has been painted for some time with "lead and oil." You can scrape off the lead film in fine dust with a knife blade, just as you can scrape away the wood, but you cannot get a knife point under the paint film and lift it off of the wood. Properly mixed, applied and set, lead-and-oil paint is so all intents and purposes a part of the wood.

The elasticity of pure white-lead paint is one of the secrets of its freedom from the cracking and scaling evil. As the surface shrinks and expands from the action of cold and heat, or bends in response to the swaying of the wind, the lead paint film easily accommodates itself to the changes and its bond is not loosened. Hard paint films cannot stand the action. Not being able to bend or give, they break, crack and scale off.



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III. What Paint Costs

The home-owner should spend little time in the consideration of the price per gallon or per pound of the paint material which he contemplates purchasing. But he should pay much attention to the price per year.

We do not say this because pure lead-and-oil paint fears comparison on price per gallon. As a matter of fact, the price per gallon of "lead and oil" always compares favorably with the price per gallon of other paints. You can satisfy yourself on this point by simply getting prices from your local paint dealer.

Length of wear is so much more important that it really makes no difference whether the white-lead paint figures high or low per gallon in comparison with others. It always turns out to be the most economical in the end. That is what counts.

A paint job is about three-fourths labor and only one-fourth paint. You have to spend the same for spreading the paint whether it be good or bad. If it is going to cost \$75 to spread the paint, it makes little difference whether the balance is \$25 or \$30 or \$35, but it makes a lot of difference whether your selection of the \$75 paint or the \$30 paint makes the expenditure of the \$75 for labor or protects it. The important consideration is not what you pay for the paint but how long it will last. That determines the cost per year not only of the paint but of the labor. When property-owners learn this one little lesson, they will have money on their property maintenance.

A Little Arithmetic

If the paint you are comparing with "lead and oil" happens to be higher per gallon, then the conclusion is simple: for there is no paint which

lasts longer than "lead and oil." If the other paint happens to cost less, a little exercise in arithmetic may help you to see how much it would be to be tempted by its price.

It takes, at present wage scales, about \$5 worth of labor to apply one gallon of paint—good, bad or indifferent. If a good paint (one which will last say four years) costs \$5 per gallon, that will mean \$11 per gallon applied. As it will last four years, the painting job will cost \$2.75 per year.

Now suppose we were tempted to buy an inferior paint because of its attractive price, figuring that even if it did not last so long it would be cheap. If such a paint should turn out to last only three years instead of four, what amount of price have been to make it an "even break" with the better paint? Would \$4.25 per gallon (that is, three-fourths of \$5) be right?

The limit per year which we may pay for both labor and paint is \$2.75. For the three years then, the total expenditure should not exceed \$8.25. The labor of applying is the same in each case, namely \$5. This leaves only 25 cents available for purchasing the gallon of paint. The three-year paint at \$4.25 now looks rather high, doesn't it?

This is why we say, forget the price per gallon. Look well to what the paint will do!

"Spreading and Covering"

How far a paint will "spread" indicates nothing. A paint may spread a thousand square feet to the gallon and yet not actually hide a square inch of surface. Lined oil by itself, for example, will spread farther than any paint but it will not hide the surface beneath, as it is not opaque.

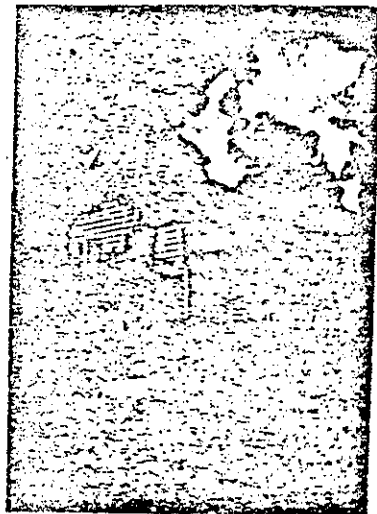
There is a vast difference between hiding or covering power and mere spread.

White-lead is an extremely fine pigment and

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Plaster, increased in
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here, these and
more.

when mixed with linseed oil possesses great hiding power. Under average conditions, a gallon of pure white-lead paint will cover about 800 square feet of surface, one coat.

In addition to covering exceedingly well, pure white-lead paint works easily under the brush. It has the quality of becoming apparently more fluid the more it is brushed. The maximum surface can therefore be covered with it in a day. In other words, it takes less time to paint a given surface with white-lead.

Great covering power and easy-working qualities are two factors which reduce the comparative cost of pure white-lead paint.

Wear Is Another Factor

Experienced painters will tell you that for long wear, and consequent lower cost per year, you should use pure white-lead and oil. A good job of white-lead may be expected to last four years. Right along we receive letters from painters describing buildings which were painted from ten to fifteen years ago and which are still well protected. These, of course, are exceptional cases but they serve to show the long wear which a pure white-lead paint. It is a well-known fact, on the other hand, that many a cheap paint will last scarcely until the painting bill is paid.

Seeing on the Next Bill

The fact that white-lead paint wears down uniformly, leaving a perfect surface for repainting, takes off a good portion of the next painting bill. Oftentimes a painter has to charge more for scraping and scraping off an old spotted surface than for applying the new paint when once the surface is ready for it. A preliminary dusting of a bill that a properly white-lead surface needs much repainting time comes.

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THE PAINTER

EMPLY a good painter. It is not economy to get unskilled labor at a job of painting just because anyone can spread paint on in some sort of fashion. The skilled painter's experience in diagnosing the needs of the surface and his knowledge of just the right proportions of lead, oil, turpentine and drier to fit the case make him a good investment. Like good materials, a good painter pays for himself.

Once you are sure of your painter, you will have gone a long way toward making sure of your paint and of your painting. The good painter is partial to "lead and oil" and he can be depended upon to apply it with skill and judgment.

Picking a Painter

An excellent way to choose a painter is to find out what class of work he is doing—who are his customers. If he works for particular people, if he can refer to satisfactory jobs he has done, he is probably competent and reliable. Do not expect him, however, to compete in price with the fellow who sprang up a full-fledged painter overnight.

Specify the Materials

The real painter has nothing to hide and is anxious to work for property-owners who know something about the relative merits of paints. The painter who knows his business is also always glad when good materials are specifically named. It gives him a definite basis on which to estimate and enables him to furnish a completed job which will add to his reputation.

Color Suggestions

You will find that the really competent painter will be able to help you often times in selecting suitable color schemes. Most painters make no pretenses at being color experts but, dealing as they do constantly with color combinations, they soon develop a color sense and come to know the colors which look right on certain types of houses and on the walls of different rooms.

The next two chapters of this booklet are given over to suggestions on color. The fundamentals which lead to color harmony in the decoration of any house, elaborate mansion or modest cottage, are stated and in so far as it is practicable an attempt is made to fit certain color schemes to particular types of dwellings and rooms. With the fundamentals and suggestions fixed firmly in mind, the selection of a correct color scheme becomes a comparatively easy matter. At the same time, the home-owner is left fairly free to choose those colors which appeal particularly to his fancy.

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THE PAINTING

I. Exterior

IT IS just as easy and just as inexpensive to have a home which is tastefully decorated as it is to have one which is fantastic and unattractive. Good taste is always a higher and safer standard than a mere fad or fashion. It outlasts any passing fancy and is never freakish. It rests on the laws of harmony which do not change.

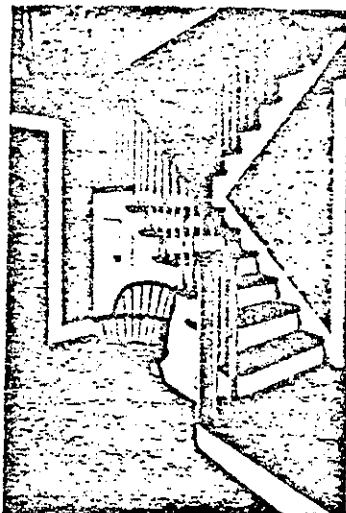
The first principle in the making of an artistic home is simplicity. Stick to simple color combinations. A scheme which is simple is most likely to be pleasing and therefore successful.

You have probably noticed that a house painted pure white, with dark green blinds and sash, always looks well. Simplicity is the chief reason. Another way of securing a simple and pleasing effect is to use one color for the body of the house and a darker or lighter shade of the same color, or white, for the trim. For example, pearl gray for the body and dark gray or white trim.

Choose Warm Tints

The range of colors suitable for exterior painting is somewhat limited. Brilliant colors are too conspicuous and many of the beautiful soft tints available for interiors will not stand either the glare of the sun or the rigors of rough weather.

If you would have the utmost wear out of your paint, choose warm tints rather than cold ones. Tints based on the reds, browns and black are, as a rule, the most durable. Thus the grays, the slates, the browns, and richer yellows, etc., are excellent for wear and, at the same time, are the most pleasing on the house. It has been found



The color scheme of the last house may not be pleasing and is shown with an eye to harmony with adjacent houses.

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that grass green, blue and cool shades of yellow hasten the deterioration of the paint film. This is due to the fact that they do not reflect or turn back the heat rays of the sun but allow them to penetrate the film.

General Color Suggestions

A house which is set closely among trees or other verdure should, as a rule, be painted in white or light colors. Dark colors, such as green, brown, olive and the darker grays, do not contrast sufficiently with the surroundings to make the house stand out with some emphasis. White, buff, cream and light grays are more suitable.

Nothing is more charming than a white house set snugly among trees and shrubbery. White, however, is a poor scheme for factory towns or other smoky localities. A very light gray, like French or pearl gray, does not become dirty as quickly as pure white and yet gives nearly a white effect.

Consider the houses of your neighbors before painting your own. It is best always to bring your house into harmony with those on either side unless the other houses happen to be some distance away.

If a house is low, with a tendency to "squatness," a dark color should not be used. Paint it light. This adds height to its appearance.

On the other hand, large houses look smaller when painted in dark colors. In the case of large houses having spacious grounds, white or light colors may be used very successfully for such houses have the advantage of distance, looking smaller than they really are.

A darker trim — than the body makes a house appear smaller. A lighter trim makes it look larger. The trim of a cottage, therefore, should be lighter than the body color.

As a rule, the lower story of houses with shingled upper stories should be painted a lighter shade than the shingles. The shingles may be Indian red, dark brown, dark green or some olive shade. The body should harmonize, as light as dark olive with Indian red, cream with browns, the grays with dark green or dull red.

Custom has associated yellow or white with Colonial houses. It is possible, however, to use grays to great advantage on houses of this type or those closely resembling the Colonial.

The timelier feeling of houses built of concrete and stucco, such as English half-timbered, Italian or Renaissance, etc., are usually painted a dark color as to give a pleasing contrast. Such, if painted, may be treated in bright or dull red or green or the same color as the timbered construction.

It is a mistaken notion to think that bungalows look best in dark colors. Many pleasing effects, especially on bungalows built partly of concrete, may be secured by the use of white, and light colors, such as buff, gray, light brown, etc. The roofs of bungalows are nearly always painted or stained in strong, dark colors—venetian red and olive green for instance.

II. Interiors

In the case of interiors, as with exteriors, color rules are safer guides than color preferences in working out a scheme of decoration. Only by heeding the laws of harmony before considering individual likes and dislikes is it possible to arrive at a wholly pleasing and satisfactory result.

Treating a Floor as a Unit

A mistake made oftentimes is to introduce a variety of color schemes on a floor or in a suite.

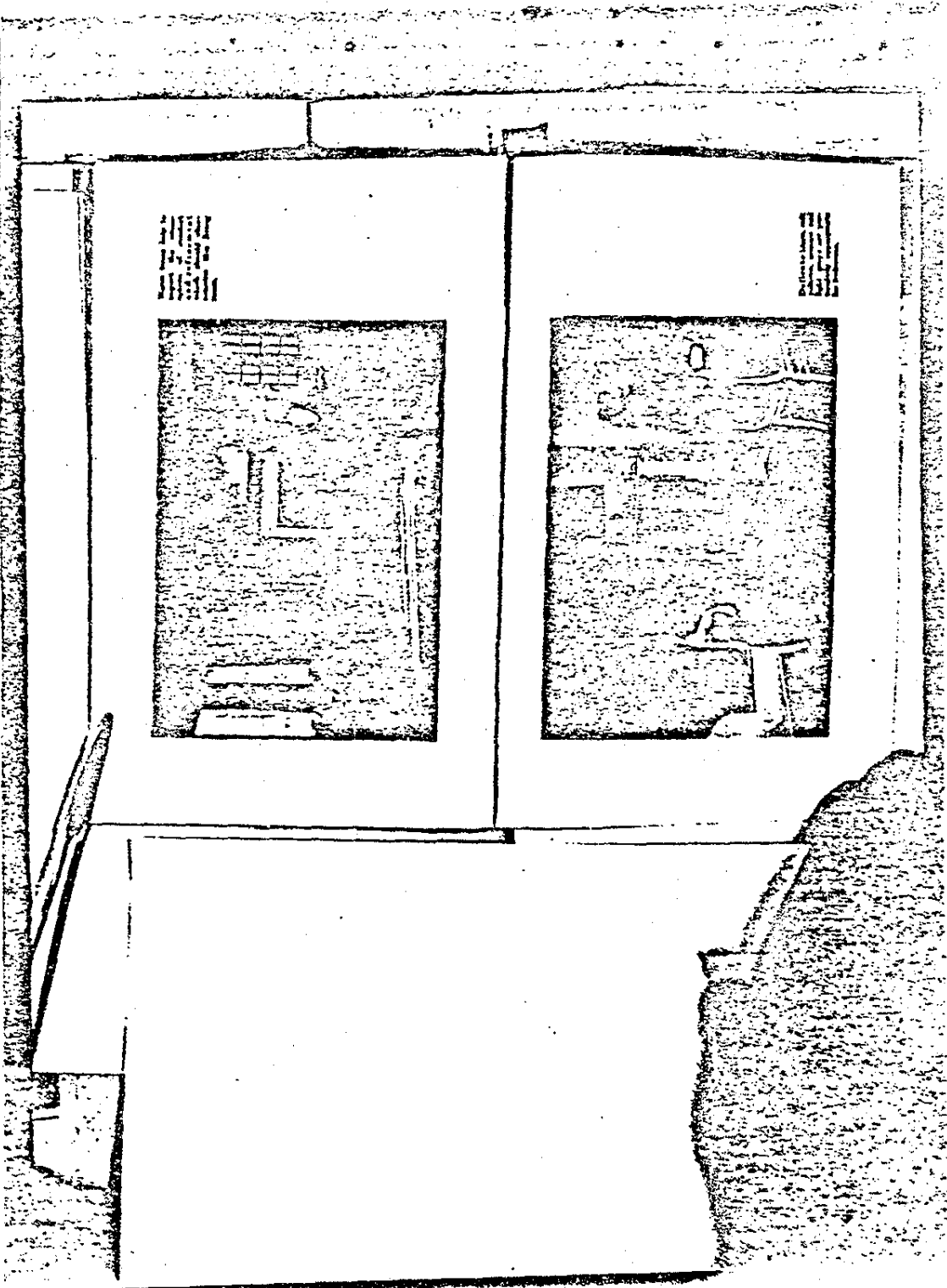
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If the living room, library, dining room and hall, for example, communicate by wide openings the scheme may well be generally the same throughout these rooms. It is not necessary to use the same tint in all the rooms, but it is wise to use the same color, varying upon different tints of that color to relieve the monotony. Where a hall separates two rooms a different scheme is allowable in the two rooms providing there is a key color that ties them together. Plan the coloration so that when seen from a chief viewpoint, as the entrance to the house, or from the head or foot of the stairs, the general effect is a complete harmonious unit.

Decorating Single Rooms

If the openings between rooms are single doors, greater freedom is permissible but it is best always to avoid violent contrasts. Keep the colors subdued.

Bear in mind that the scheme of decoration, for a single room, as well as a suite, should harmonize with the rug, hangings, etc. A simple way of securing complete harmony is to take the prevailing color of the floor coverings and use a tint of it on the walls.

Distributing the Color

Walls, floors, and ceilings should be less intense than the objects which appear against them. Using delicate, neutral tones, with ceilings lightest, sides next, floors darkest, and trim either a deeper or lighter shade than the sidewall color, gives a room an air of restful comfort. This order of coloring is seen in nature. The sky is light, the trees darker and the ground darkest.

Light cream, ivory or light gray is preferable for ceilings. Never use pure white. It is not a color and does not blend with any color. The same is true of white for wood trim. If lovers of

white enamel paint would consider that the whole function of color is to unite all the elements in a room into one beautiful color unit, they would select one of the soft, light colors instead of pure white.

How Color Affects Rooms

Light colors are best for dark rooms and vice versa. For rooms on the sunny side of the house, use the cooler colors. The warmer colors are best suited for rooms on the north or shady side.

Colorists tell us that yellow, red and orange are advancing colors and make a room appear smaller. On the other hand, blue, green and gray enlarge the apparent size of a room, being receding colors. Whatever selections are made, large areas should be in subdued tones. Bright reds, deep blues, purple, orange and brilliant green may be effective in certain combinations when used in small areas; when overdone, they become vulgar. Grays, tans, browns, gray greens, etc., are more tasteful.

Function of Rooms

The use to which a room is put determines to a considerable extent the color scheme which is suitable. Is it a living room, dining room or sleeping room? Each serves a different purpose and is accordingly treated somewhat differently.

Living Room

The living room is the place of family intercourse and rest. Friends and callers are entertained and made happy there. It should be comfortable and express refinement. Tans, medium brown, warm gray, old blue, gray green, blue green and other soft colors are excellent for living rooms.

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Hall

Guests are welcomed in the hall. It should be inviting and suggest hospitality. In general, the color tone should be close to that of the living room.

Dining Room

This room exists not alone for the purpose of eating the human fare with food. The daily meals are made a pleasant function if china and linen and conversation are agreeable. So, too, may proper room decoration add to or mar the hours spent here. Soft old blue, dull orange, gray green, dark tans and rich browns are suitable if the dining room is not too dark.

Kitchen

The kitchen should be bright, cheerful and clean-looking. An all white kitchen is preferred by many but a color just off the white, such as cream, is more satisfactory. It is less glaring and does not soil so readily. Light grays, greens, and yellows may also be used to good advantage.

Bedrooms

Bedrooms are for rest and sleep. Everything about them should make for tranquillity. Consequently quiet tones should prevail. As bedrooms are shut off from each other, each room may be considered independently. Creams, soft yellows, delicate blues and light grays are restful colors and appropriate for bedrooms.

Bathroom

The bathroom is shut off from the rest of the house. It may be treated as a separate unit but preferably in light tints to give an atmosphere of cleanliness. Ivory, creams, light grays and buff are suitable.

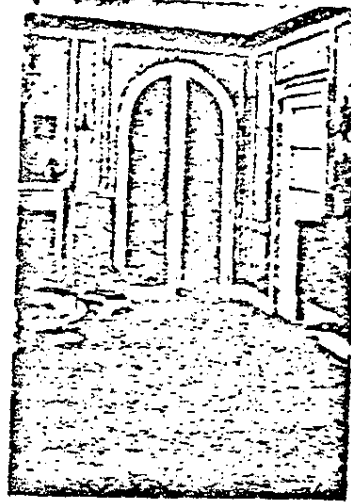


FIG. 1

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Soft Flat Effects

With white-lead and flattening oil, it is possible to obtain the most beautiful, soft effects on interior walls and woodwork. You cannot get an idea of a beautiful white-lead wall if you have never seen one done as the real decorator does it. There is no gloss. There are no brush marks. As for tints, the most delicate and elusive are obtainable. There is a character and a distinction to white-lead interiors which can be had in no other way.

Good decorators have always known how to get these effects and, in homes where cost has been no drawback, white-lead walls have been enjoyed for years. With the coming of flattening oils, the daintily tinted white-lead can be applied more rapidly and cheaply and the washability has been increased. Three coats now give the most beautiful effects whereas in the old days it was quite common to put on from six to ten.

Dutch Boy Paint Materials

Emphasis has been laid in the preceding pages on the importance of securing good paint materials. We trust you will want to know more about our white-lead, linseed oil and flattening oil which are guaranteed by our famous Dutch Boy trademark to be absolutely pure and of the highest quality. Dutch Boy paint materials are sold by all leading paint stores and are used by skilled painters all over the country.

An Advisory Service

Should you at any time desire additional help in the choice of a color scheme for the house outside or any rooms inside, we shall be glad to work out the problem for you. We maintain a staff of colorists for just this purpose. Their advice is yours for the asking—no obligation.

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If you are interested in learning how to determine the quantity of paint needed for your house, how to get certain colors, how to paint a floor, boat, vehicle, metal, etc, write for a copy of our Handy Book on Painting. It is a valuable storehouse of practical paint knowledge intended for those who are desirous of pursuing further the subject of paint and painting.

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