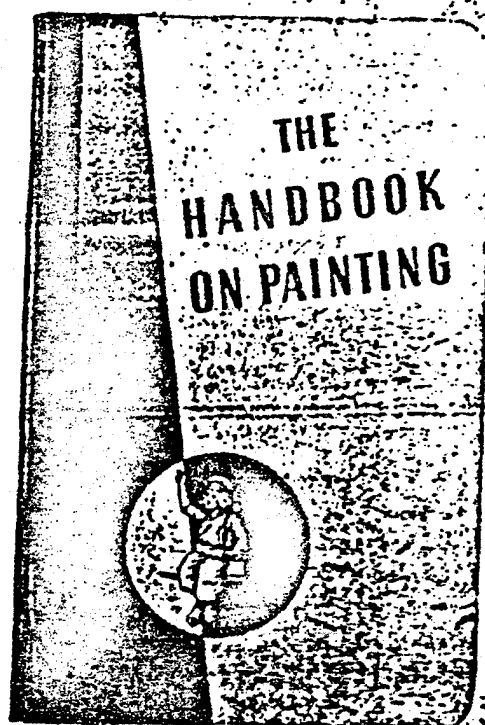


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The HANDBOOK ON PAINTING



NATIONAL LEAD COMPANY

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Cleveland • 222 Chestnut Street, St. Louis • 475 John Street, Seattle • 1215
N. W. 4th Street, Portland, Oregon • 502 N. Main Street, Los Angeles
270 1/2th Street, San Francisco • National Sales Lead Co., 270 Albany
Street, Boston • National Lead & Co. of France, 1178 Race Ave.,
Philadelphia • John T. Lewis & Son, Co., Walnut Building, Philadelphia

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INTRODUCTION

PAINING is an art that cannot be learned from books.
It requires practice under actual working conditions
combined with study and intelligent observation. This is
why the trained painter gets results that satisfy and please
his customer.

This Handbook on Painting is not designed to convert
an amateur into a skilled painter. Rather it is a storehouse
of practical paint knowledge and, as such, is a valuable
guide and reference work for the painter, the architect, the
builder, the engineer, the building manager as well as for
many other users of paint.

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THE INTEL BOY TRADEMARK



The famous character is put on our products as a source of identification and as a guarantee to the buyer. Look for the Intel Boy trademark on all of the Intel Boy paint. It assures you of high quality products made to fit the needs of the job.

CHAPTER I

Materials for Painting

BEFORE taking up the actual mixing and use of paint, it may be helpful to review briefly the various materials employed in painting. After checking over this information the painter will be able to decide intelligently what is needed to do the best job.

White Lead

White lead is derived from the smaller lead or laminae to extract. After a lot of washing and drying you are left to convert the metallic lead to heavy carbonate white lead. This heavy carbonate white lead, after a series of grinding and mixing operations, is reduced to an exceedingly fine white powder that, when mixed with the proper liquids, becomes white lead paint. The white lead paint that has been used on American houses since the earliest Colonial days.

Pure white lead paint has an excellent and well-known reputation for durability. The exterior, as made up of white lead, resists the effects of weather and wears down slowly by a very gradual chalking of the surface. This leaves an ideal surface for repainting, free from cracking, scaling or other defects that might interfere with the proper application of new paint. The ease of repainting is thereby rendered substantially less time consuming and less costly than when the old paint, has cracked, is repainted.

The exterior white lead is desired for its unique strength and solid layers of lead. Thus, the durability of white lead paint enables it to stand up under frequent washing—and to many more uses in such places as hospitals and hotels.

Soft Paint and Heavy Paint Pure white lead paint is made in two grades, soft paint and heavy paint. Soft paint is used with oil, water, linseed, lead, turpentine or kerosene oil—and to make more durable and does before it is ready to brush on the surface.

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MATERIALS FOR PAINTING

The paint is sold in two forms, white and lead. These forms refer to the paint's consistency. Both forms are ground in oil but the white paint has thinner added and is more quickly mixed into paint than is lead paint. The resulting paint, however, is exactly the same in color and use.

Black five paint white lead may be obtained at practically any store selling paint. It is sold in the ground and comes in 10, 25 and 125 pound packages.

Dutch Boy Pure White Lead Paint In addition to the pure form, Dutch Boy white lead is also sold as a paint already mixed. It is the same pure white lead mixed with the proper amount of oil, thinner and driers to make it ready for the brush.

There are two forms, an exterior primer and an outside white, especially designed for use together. They make a combination that is surface looking in comparison to any



MATERIALS FOR PAINTING

surface combination on the market and that, even on iron work, will produce a sparkling white job in two coats.

Dutch Boy Pure White Lead Paint is for exterior use. While it compares only in color it can be used with Dutch Boy white and put on one paint made with pure white lead. It is sold in four sizes, quart, gallon, five gallon and twenty gallon.

Red Lead

Metal surfaces that are subject to rust and corrosion should be protected with red lead paint. Red lead is a paint pigment made from metallic lead through heating processes that oxidize the metal and turn it to the bright orange color so frequently seen on metal structures. Finishing exposed iron and steel with at least two coats of pure red lead paint is a proved and tried method of preventing rust and decay.



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INSTRUCTIONS FOR PAINTING

struction from rust. Whichever is in a much longer or a small metal surface around the lower end lead will use it.

Black Red lead is available in both paste and powder form. The former is sold in 100, 25 and 12 1/2 pound packages. The paste is used for lead may be obtained mixed with linseed oil. This is known as Black Red Lead and comes in one, five and ten pound quantities. There are two types: Black Red Quick Drying Red Lead, which dries by reacting in from four to six hours, and Black Red Non-Quick Drying Red Lead which dries by reacting the following day. Both are packed in convenient use containers.

Red lead may also be obtained in dry form in 100, 25, 12 1/2 and 12 1/2 pound packages and in 400-pound casks.

Oils

Paste white lead is mixed with oil to make paint. For the average exterior job on a wood surface the oil used is pure linseed oil. The exterior masonry surfaces Lead Mixing Oil is recommended and for interior surfaces either Lead Mixing Oil or Fatting oil should be used with the white lead.

Linseed oil when mixed with white lead produces a glass paint for exterior use. The containers for pure linseed oil are made by mixing white lead with either Lead Mixing Oil or Fatting oil. If a high gloss is desired on an interior surface, a prepared enamel should be used.

Linseed Oil The linseed oil used with white lead should be of the best quality because pure oil will reduce paint life. Black Red linseed oil is carefully manufactured to insure the necessary high quality and to add to one and two-gallon containers that are sealed at the factory. Two forms are available: one and leaded. Both are pure linseed oil but differ somewhat in their characteristics.

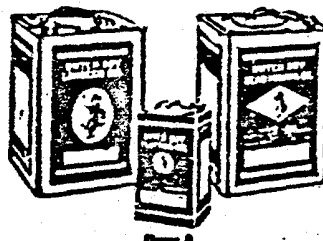
INSTRUCTIONS FOR PAINTING

Raw Linseed Oil Black Red raw linseed oil is prepared from selected flaxseed, aged and well-sifted to clear out the "lime" or pits like matter always present in fresh oil. White lead paint mixed with raw linseed oil will dry in half of even except time. However, due to its practical and therefore dries in added to the paint to speed up drying.

Bleached Linseed Oil To make Black Red bleached linseed oil the raw linseed oil described above is condensed at the factory, with certain drying compounds in the presence of heat. Since bleached oil already contains drying agents, it is not usually necessary to put additional driers in the paint when bleached oil is used.

Lead Mixing Oil Black Red Lead Mixing Oil, when mixed with white lead in the proper proportions, makes flat paint that can be used on exterior as well as interior surfaces.

The surfaces of brick, concrete or stone the working properties of Lead Mixing Oil stop the surface surface and keep



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MATERIALS FOR PAINTING

are dampness and moisture. Furthermore, white lead and Lead Mixing Oil has the starchy odor and texture of such characteristics of all white lead paint, whether exposed to weather or not.

White lead and Lead Mixing Oil can be used for all coats on plaster and wallboard. It seals the surface and provides a base with the appealing texture that only a white lead flat primer can. It makes an excellent undercoat for an enamel finish.

Black No. 1 Lead Mixing Oil can be purchased in one and two-gallon cans.

Flaming Oil Black No. 1 Flaming Oil is a special solvent intended for mixing with white lead to produce a flat paint that can be stippled to a deep texture. It also can be mixed with color to make an excellent stain for wood. In addition it is a good glazing liquid and is the proper vehicle to use with white lead and chrome for plastic paint. Black No. 1 Flaming Oil is packaged in quart, gallon and two-gallon cans.

Glaze

Black No. 1 Glaze has been developed especially for use in white lead paint. Its formulation is properly balanced

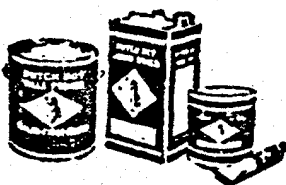


Figure 6

MATERIALS FOR PAINTING

to bring about efficient drying of the paint and it is chosen uniform in strength and quality. Colors in half-pint, quart, gallon and pail.

Colors

The materials used for tinting white lead paint are known as colors or pigments. These are various colors prepared such as, yellow, green, brown, red, blue and black, ground in linseed oil to make a paste. This paste is of such a soft buttery consistency that it can be readily stirred into the white lead paint.

Black No. 1 colors are carefully manufactured to produce clean, clear tints. They are also high in tinting strength so that a little goes a long way. And to make sure that they will mix into the paint evenly and quickly they are ground exceedingly fine in pure linseed oil and then combined with a small amount of volatile thinner.

Black No. 1 colors can be purchased in half-pint, quart and gallon. Some of the commonest used colors are also available in tubs holding about two liquid gallons.

Detailed instructions on tinting, together with common color formulas, will be found in Chapter III starting on page 21.

Wall Primer

Walls, of plaster or wallboard, that have exposed corners and have not been previously painted can best be sealed with Black No. 1 wall primer. Not only does this Black No. 1 paint product stop the surface corrosion and seal the cracks but it holds the surface so well. It is a water and a paint coat combined that provides an ideal foundation for the succeeding coats of white lead flat paint.

It is sold in quart and gallon as well as in five-gallon and twenty-gallon drums.

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MATERIALS FOR PAINTING

Volatile Thinner

The term volatile thinner refers to the liquid portion of the paint that evaporates before the paint dries. It performs a very useful function in making paint brushable. For example, a combination of one and one half gallons of linseed oil and one hundred pounds of white lead is too quired for the second coat on a new wood to produce a satisfactory hard film. Yet this mixture by itself would be entirely too heavy to brush. When one and one half gallons of turpentine are added, however, the paint can be easily applied and the resulting paint film, after it has dried, will still contain the proper proportions of white lead pigment and linseed oil.

Turpentine, derived from the pine tree, is one of the most widely used thinners. It is sold by every white lead dealer.

Varnish

Varnishes may be roughly classified in two groups—spirit varnishes, which are solutions of resin or resin in volatile solvents, and alkyd varnishes, which are combinations of resins and drying oils, also in volatile solvents.

A common example of a spirit varnish is shellac. Shellac is easily used for hand-applied finishes and, when properly applied, is a very satisfactory and durable interior finish. Most stains cover two types, orange and white. The latter, being much lighter, is used for work where the darker orange color might be objectionable. Stains usually carry the 1 pound cut, which means four pounds of shellac per gallon of denatured alcohol.

Alkyd varnishes are made for various purposes. Some varnishes in the form generally applied to these are meant to enhance exposure. However, there are also varnishes in quality among varnishes as the best guide is to

MATERIALS FOR PAINTING

select a reputable brand and follow the manufacturer's recommendations as to the product's use.

These varnishes are not as satisfactory as paint for exterior exposure on surfaces that are not to be frequently handled. Exposed to weather, varnish soon loses its gloss and compared to white lead paint, its life is short.

Enamels

The characteristics of any enamel finish are one-thickness and hardness. The degree of gloss or sheen is dependent upon the type of enamel used and there are several variations available. The enamel work, where a glass finish may be desired, an enamel should always be used rather than a linseed oil paint.

Enamel should be applied over a flat paint such as is produced with white lead and lead mixing oil. The surface should also be well rubbed before enamel is applied.

Stains

There are several types of stains classified according to the vehicle or liquid used.

Stain is an effective preservative but care is taken when the surface cannot be painted satisfactorily with a light-colored oil paint. Usually the stain will "blend" through and through and paint applied over it. This is true even when the old stain is well weathered.

The stain is generally most satisfactory for either exterior or interior use. It is durable and can be painted over if it is desired to change from a stained to a painted surface. For the exterior, use a mixture of three parts Dark Blue Lead Mixing Oil and one part Dark Blue Linseed Oil. For the interior, use, if preferred, one part two pounds and two parts Dark Blue Linseed Oil.

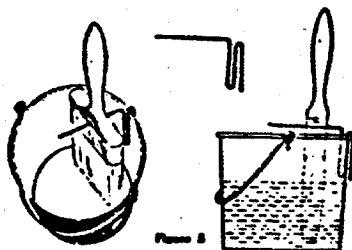
MATERIALS FOR PAINTING

MINIUM STAIN COLORED SUBSTANCES

Quantities of Dutch Boy colors in all per gallon of liquid

Copy	Black Green
2 1/2 pt. white lead	1 1/2 pt. carbon black green
work of lampblack	Red Brown
Red	1 pt. red oxide
1 pt. vermilion red	Golden Brown
Deep Red Brown	1/2 pt. iron oxide
1 pt. Indian red	1/2 pt. burnt umber
Permanent Green	Deep Brown
1/2 pt. chromium oxide	1 pt. burnt umber

Straight Dutch Boy coloring oil is an excellent vehicle for an interior woodwork stain. A mixture of one part Dutch Boy two barrel oil, one part turpentine and one half part Dutch Boy liquid drier may also be used. Color formulas for oil stains will be found on page 54.



"Brush-dipper" consisting of a 24-pound white lead pail partially filled with turpentine or kerosene. The brush is suspended in the liquid by a heavy wire bent as shown. Brushes should not touch the bottom.

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MATERIALS FOR PAINTING

The use of preservative stains, like water stains or acid stains, is usually confined to inside woodwork and furniture. In this type of stain, the dye used is waterproof mahogany or walnut with fibred through oil paint. Two thin coats of good shellac applied before any painting is done will usually prevent such trouble.

Brushes

Use good brushes and keep them clean. In purchasing a brush, see that it is well loaded and that the bristles are square. A poorly made brush will neither hold paint nor distribute it evenly. This is the disadvantage of having a cheap brush with the intention of throwing it away when the job is finished.



Left to right: 3 inch round brush, 2 inch paint brush, 4 1/2 inch paint brush, 2 inch paint brush, 1 1/2 inch paint brush.

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EX-114

INSTRUCTIONS FOR PAINTING

The most of keeping a brush clean is to move the paint or wash it out as it flows from the brush. It is very difficult, and often impossible, to clean the brush properly.

During the course of a job, every brush out of use for more than an hour or so should be put in a "brush keeper". A simple type is shown in Figure 5. When the job is finished, clean the brush as thoroughly as possible.

A brush used in shellac should be thoroughly cleaned with denatured alcohol immediately after use. If the brush has been used on mineral-spirit lacquer it will be necessary to clean it with lacquer thinner.

If the brush is not going to be used for some time, it is good practice to supplement the above procedure. Wash the brush with a soap solution made with ordinary white laundry soap, rinse with clear warm water, and

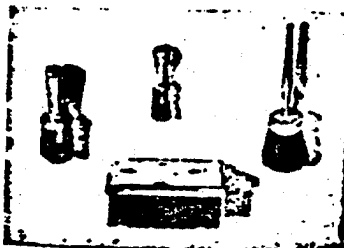


Figure 5

A box-shaped brush keeper. Upper row, left to right: 2 inch and 4 inch round brushes, painter's duster. Lower row: straight brush.

INSTRUCTIONS FOR PAINTING

after the brush has thoroughly dried, wrap the handles in paper to keep out dust and dirt.

It is also important to select a brush that is the right size for the job. Using a brush as large as brush on large surfaces not only wastes energy but it also prevents proper spread of the paint. On the other hand, the shape of a large brush will be spoiled by using the narrow edge to paint in small corners that should be done with a one or two inch brush.

Patty

Patty is a very important part of the painter's kit. Properly used, every surface he is called upon to paint has nail holes, cracks, hammer marks and other defects. These can be filled in with patty and, when painted over, will be completely hidden.

The type or grade of patty is important. For fine work on such surfaces as interior trim nothing but the best white lead patty should ever be used. The cheap types of patty, made with marble dust or with petroleum oils, are not suitable for any job that is to be painted. This kind of patty will show up after and mar the paint.

White lead patty can be easily made by using French Rosin paste white lead and two boiled linseed. Work the mixture in thoroughly, breaking the mixture with the hands as soon as it is dry enough to handle. The weight of mixture required will be about one-fourth that of the white lead paste.

Commercial white lead patty usually contains two white lead and more whiting than is given in the above formula.

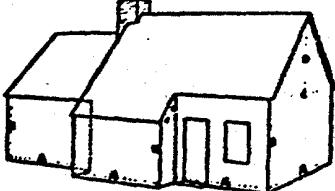
If patty has dried out or hardened in the container it can be softened up by mixing in a small quantity of linseed oil. Never use a petroleum oil for this purpose.

Patty should be kept in an airtight container which should be filled or nearly so. For periods of a month or two patty will stay soft if kept under water.

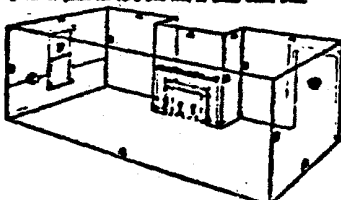
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HOW TO MEASURE SURFACE AREAS



Multiply 6 x 12 for square feet area of each section of house. For gables, multiply their widest part by feet (12) to half the height (6). Add together all these square feet figures to obtain the total area to be painted. For area, square one gallon of paint for each 200 feet of usual wall area.



Multiply the area of the 12x12 measurements for feet by the height of room to feet (8) to get the square feet area of the wall surfaces. For the ceiling multiply length by width. From the total deduct the square feet area of doors and windows (12). For shut off of 12, basement, window frames and outside area, measure the number of remaining feet and then divide one gallon of paint per hundred feet.

CHAPTER II

Estimating Amount of Paint

THE following how much paint will be required for a given job is as first necessary to measure the number of square feet on the surface to be painted. The accompanying diagrams show how this can be done for both the exterior of a building and the rooms inside a building.

The conversion of these data into gallons of paint is done by dividing the total area of each type of surface - clapboard, wood shingle, plaster, concrete and so on - by the number of square feet each gallon of paint will cover. The spreading rates will be found in Chapter IV under each surface section. Of course, as will be seen, the spreading rate figure varies for the different surfaces and for the different coats. This is because surfaces differ in the degree of absorption and also in smoothness. For example, plaster absorbs paint and metal does not; the rough surface of a wood shingle takes more paint than the same area on smooth clapboard.

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**FROM PASTE TO PAINT
IN TWO SIMPLE STEPS**



Figure 10

Use the paste exactly as directed in the formula. Add water if desired.

Before the paint is used, stir it well in a bowl or other liquid called for in the formula. Add water if desired.

**A THOROUGH STIRRING
AND IN THE BOX WHITE
LEAD PAINT IS READY**



Figure 11

NOTE: Pour off into another container all the paint on top of the paste. STIR. Pour back the paint in back of the paste, stirring it in thoroughly.

CHAPTER III

Mixing and Tinting Paint

Lead paint is heavy, varying from heavy to heavy, and is a yellow, so make sure that the mixing is not too much. It should hold at least a fourth more than the quantity of paint you expect to make and it should be clean and free of grease. Never use a wooden tub that has held butter or lard because there is no way to remove all of the grease.

A good paddle is also needed. This can be made from three quarters inch wood of suitable width cut to a convenient length and well smoothed up.

Mixing White Lead Paint If you are making paint from white lead all you need to do is shown in Figure 10. Stir in the oil and then add the formula, a little at a time.

The procedure to follow is with this is the Pure White Lead Paint is illustrated in Figure 11. Use of this method will save time in thoroughly incorporating the ingredients.

Mixing Red Lead Paint Paint can be mixed from pure red lead in the same manner as that given for pure white lead.

Oil and lead can be mixed into paint by using the following procedure: Take one quart of linseed oil, one quart of dry red lead, a little at a time. When the paint is stirred for several hours, then add another quart of linseed oil and stir thoroughly.

A few hours before you are ready to apply the paint, stir in one quart of a mixture consisting of turpentine, kerosene and one third dry. The total yield using the above quantities is about one gallon.

Mixing Plaster Paint If the plaster paint is being made with white lead, first stir the white lead with all the linseed oil from Formula 224, page 24.

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MIXING AND TINTING PAINT

and mix thoroughly with the white lead. Then add the dyes and mix until color is uniform.

If brown paint is used, mix half the dye and one the white lead and mix the remainder to the whole. Then mix the two batches together thoroughly, adding the dye and color in oil.

Use Synthetic Colors Be sure to use enough paint to do the job, particularly if it is a tinted paint. Use one part white lead paint, regardless of the color or its formulation, to three parts of the color.

Tinted portions of paint white lead or red lead can be kept out and four from them if a new mix layer of water is poured on the surface of the lead and the top layer is scraped off. The lead should be scraped down from the sides of the tray. If necessary, the water should be removed before the lead is again mixed.

Straining Paint

Straining freshly mixed paint improves its brushing qualities and, in the case of tinted paint, it prevents the possibility of color streaking. With paint that has stood for some time it removes clots and hardened particles.



Figure 12

Straining paint through cheesecloth.

MIXING AND TINTING PAINT

A mixture of four parts white arsenic makes a handy paint drier. It is a piece of double cheesecloth will cover equally well. The white arsenic can be used alone and again if it is mixed in thinner immediately after use.

Tinting Paint

White lead paint can be colored in a wide range of shades and tones, through the use of colors in oil. A few of the possible colors are suggested in the formulas starting on the next page. These are based on the use of Dutch blue colors, which are particularly designed for the various and other colors of white lead paint.

While it is the best practice to test before all of the liquid has been added to the paint, Dutch blue colors are so manufactured that they can be added even when the paint has been completely thinned.

When you add small quantities of color at a time and then stir the color in completely. This not only prevents lumping, but also enables the addition of too much color. Put in a little color at a time, mix thoroughly, then check with the color that is being matched.

If you get a color too dark it can be lightened only by adding more white paint and this will usually result in exactly too much paint for the job. That is why it is so important to use color as directed above.

The simplest colors to mix are those made with only one color in oil. If two or more are called for, follow the relative proportions given in the formula as you mix in the colors, a little at a time.

Tinting Priming Coat Even when the finish is to be white, the addition of Dutch blue two colors to the priming paint improves the final appearance of the job. Use about enough paint (one tube) of color to every five gallons of paint.

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FORMULAS FOR EXTERIOR COLORS

'I have always', says Mr. J., 'of a hard head and

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Shuf and or Shover like 2 quarts of linseed oil and 1 quart of turpentine per 100 pounds of other feed or 1 1/2 quarts of linseed oil per gallon of paint.

FORMULAS FOR INTERIOR COLORS

11. **REMARKS:** [Blank space for handwritten notes]

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WORKING AND TESTING PLAN

Trim Colors

The following formulas produce complete power outages for our on street lights. Removal of these rods down the street causes an area that is not complete. It is not advised to pointing cameras.

These points should be word for the boundary rule and the regular other land processing procedure should be followed for the same except that the rule immediately preceding the same application should be treated as a condition of the boundary rule for using a such small quantity of the sprayed rule as well.

The spark is sent through drying, air about the surface of ground-burned leather into each gallon of tannin per foot before oxidation.

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48	48	48
49	49	49
50	50	50
51	51	51
52	52	52
53	53	53
54	54	54
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56	56	56
57	57	57
58	58	58
59	59	59
60	60	60
61	61	61
62	62	62
63	63	63
64	64	64
65	65	65
66	66	66
67	67	67
68	68	68
69	69	69
70	70	70
71	71	71
72	72	72
73	73	73
74	74	74
75	75	75
76	76	76
77	77	77
78	78	78
79	79	79
80	80	80
81	81	81
82	82	82
83	83	83
84	84	84
85	85	85
86	86	86
87	87	87
88	88	88
89	89	89
90	90	90
91	91	91
92	92	92
93	93	93
94	94	94
95	95	95
96	96	96
97	97	97
98	98	98
99	99	99
100	100	100

CHAPTER IV

Preparing the Surface and Applying the Paint

PREPARING the surface is a very important part of a painting job. The surface that material is being painted, it should be clean and smooth before a beneficial of paint is applied. Dirt, dust, sand, loose paint, grease or any other foreign matter should be removed from the surface. Rough and uneven places should be resurfaced with a finished surface such as the various surfaces will be found under the open surface headings.

Polio Eradication

When it is necessary to remove old paint from a surface before repainting, there are various ways of doing the job. The choice of method depends on the type of surface as well as the paint previously used. The most common practices are described in the following summary.

Blow Torch The blow torch can be used for warming all parts from metal on smooth wood surfaces. It should be carefully handled to avoid starting a fire or charring the wood. Keep the flame away from your joints, hand, hair, eyes and underneath clothing. There are a few shops where the flame might back flame.

Hold the beam at an angle about an inch from the painted surface and about two or three inches at the corner. As the paint builds up and returns, it can be scraped off.

Paint Remover Remover is a mixture of solvents that acts as a paint solvent. Most consumers on the market will work on any type of oil paint, varnish or lacquer.

The paper here is designed to present some facts in an understandable form so that it can be used for large outdoor letter board exhibits as an alternative to the film work which I or of the legend type is generally confined to smaller

PREPARING THE SURFACE

even or uneven surface. In all cases the preparation of the surface should be followed as far as possible of the surface. A surface should be prepared to allow either a non-adhesive paint surface is used.

Always wash the surface carefully with kerosene or a primer after using solvents to be certain that all trace is removed.

Scrapers and Wire Brush. The scraper, when used by hand, is frequently used to remove the previous finish on surfaces such as floors. It is also a method of removing rust and scale from metal surfaces, usually in conjunction with a chipping hammer. But, where, more or less, surfaces are usually not treated to remove old coatings. The use of the wire brush, when used by hand or power driven, is also one of the thorough ways to remove scale, old paint and accumulated rust from metal surfaces.

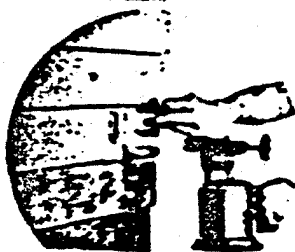


Figure 10

Correct method of holding wire brush.

AND APPLYING THE PAINT

Sand Blasting. This is an efficient method of surface preparation for metal surfaces. It takes all excess fat of foreign matter, even mill scale, and leaves the surface in ideal condition for painting. Of course, it requires special equipment and is sometimes difficult to use on certain types of structures.

Washing. Surfaces that have been electrolyzed should always be thoroughly washed to remove the old coating before repainting with an oil paint. The washing solution should be hot for best results.

Green paints can be adhered up with a hot washing powder solution for removal with a scraper or mill brush although it is a delicate job to get all the paint off. Testing with coarse paint then results in peeling inside later on.

Washing with a soap powder solution or with a prepared paint thinner is also a common method of cleaning a surface for painting. This is true of exterior as well as interior surfaces. In these cases if oil bases and heavy accumulations of the exterior of houses are well built up various methods accumulate a heavy deposit of grease and dirt. Likewise, exterior walls, particularly those in kitchens, accumulate dirt and grease.

Paint Application

There are certain general facts about the application of paint that should be remembered no matter what is being painted. For example, no surface should be painted while it is wet or damp. The exterior of houses and garages painted several times a year, dry weather should provide application of the best paint to make sure all moisture is removed.

Painting should not be done under extremely cold, frosty or damp conditions. If outside painting is necessary in winter, choose grounds where the weather is clear.

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PREPARING THE SURFACE

and the surface is dry. There is no danger in painting during extremely hot weather unless the air is too humid.

Time between coats should be sufficient to allow complete drying and a firm film, the various kinds, such as epoxy, may vary between coats is required. A good test for adequate drying is to rub the surface with the back of the hand. If the surface does not stick up with paint, the surface is ready for the next coat.

Brushing the Paint Brushwork is an extremely important factor in every paint job. It influences not only the final appearance of the job but the durability and life of the paint coating as well.

All paint or other coating materials should be applied as to ensure uniform spread and the proper film thickness. What the proper thickness should be is determined both by the purpose of the paint and its brushing characteristics. Of course, the brushing technique to be used is influenced by all of these factors.

White lead paint for exterior use should be applied level with a full brush. If a three coat job is being done the paint should be brushed out well to form moderately thick coats, even brushed and then finished up with light strokes. In the two coat work, the priming coat should be applied more freely with medium brushing and allowed to level out.

A white lead flat paint should be applied with a minimum of brushwork. The usual method is to lay on the paint quickly with a fairly full brush over a square yard or less of surface. Then with light strokes, cross brush just enough to spread it uniformly. The paint should be practically forced on the surface, to ensure brushwork.

Enamel should be applied in a thin film over a well finished flat paint surface. Both enamel and varnish set quickly and therefore paint very little brushwork. Just enough brushing to spread the coating evenly and avoid excessive thick-

AND APPLYING THE PAINT

ness of the film will produce a good job. The enamel or varnish has a natural tendency to smooth out.

Shells and brushing lags are set up even more quickly than flat paints and enamels. Consequently they should be applied rapidly with a full brush.

Number of Coats The number of paint coats to be put on a surface can be generally stated as three coats on a previously unpainted surface and two coats on repainted work. However, there are exceptions to this recommendation.

For example, on unpainted exterior wood white lead jobs are being done today in two coats as well as in three coats. Of course, if good results are to be expected with two coats the paint has to be properly designed to give the necessary added sealing and baking. The combination of Duthy's Pure White Lead Exterior Primer and Duthy's Pure White Lead-Outside White is designed for this very purpose as are the pure white lead formulas, Ed and Md.

Two coat work is also done on unpainted interior woodwork, but for the best type of flat work or where an enamel finish is desired, three coats should always be used.

On unpainted interior plaster, a two coat job should always be primed with Duthy's Wall Primer which is a sealer and paint coat combined. However, experience has shown that three coats of paint on unpainted plaster are more satisfactory both for beauty and for durability.

In the case of iron and steel three coats are always recommended for permanently exposed surfaces. In fact, four coats are required if the metal is subject to underseal exposure.

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EXTERIOR WOOD

EXTERIOR WOOD

PREPARED SURFACES:

New wood should be sandpapered to remove all surface roughness, loose edges, splinters, and then treated with primer coat. Old painted surfaces should also be treated to remove dirt and dust.

Knots and sap stains should be given a thin coat of shellac after the first coat of paint is dry. The shellac should extend over the edges of knots or sap areas.

All loose paint should be removed. If paint is a stain, it should be removed down to the wood.

All cracks, nail holes and minor surface defects should be filled with white lead putty after the first coat of paint is dry.

PAINT APPLICATION:

Paints & White Lead

Repainting Woods: 1 or Formula 44 as first coat followed with Formula 44 as second coat.

Three Coat Work—Repainted Woods: Prime with Formula 44, follow with Formula 44 as second coat & Formula 44 as third coat.

Two Coat Work—Repainted Woods: Prime with Formula 44, follow with Formula 44 as second coat.

Dark Priming—Repainted Woods: If wood is to be dark primed, use one coat of Formula 44.

* In some instances when a surface is to be darkened, particularly where extensive staining is present, a solution of the brown oil is recommended. To treat 75 gallons of brown oil should be used. The quart of turpentine should be added if the oil is reduced below 2 gallons.

** If necessary to reduce the brown oil to 25 gallons, the formula should be modified by reducing the brown oil to 25 gallons and adding 2 pints of turpentine.

† The new construction, it is suggested, to prime the back of the siding before it is put in place.

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EXTERIOR WOOD

Ready Mixed White Lead Paint

Repainting Woods: As first coat, use Dutch Boy Pure White Lead Exterior Primer as it comes in the can. The slightly reduced with turpentine not exceeding one pint per gallon of paint. Use outside White reduced with one pint of turpentine per gallon of paint. Follow with Dutch Boy Pure White Lead Paint as outside White as second coat.

Two Coat Work—Repainted Woods: Prime with Dutch Boy Pure White Lead Exterior Primer, 1 or Dutch Boy Pure White Lead Paint—Outside White for a second coat.

Three Coat Work—Repainted Woods: Prime with Dutch Boy Pure White Lead Paint—Outside White, reduced with one pint of linseed oil and two pints of turpentine per gallon of paint. Follow with a second coat of Dutch Boy Pure White Lead Paint—Outside White, reduced with one pint of turpentine per gallon of paint. As third coat, use Dutch Boy Pure White Lead Paint—Outside White as it comes in the can.

Dark Priming—Repainted Woods: If wood is to be dark primed, use one coat of Dutch Boy Pure White Lead Paint—Outside White.

† In some instances, if paint is too thick to brush easily, add a small amount of turpentine, and provide one half pint to a gallon of paint.

** The new construction, it is suggested, to prime the back of the siding before it is put in place.

MATERIALS	FORMULAS				
	10	20	30	40	50
Dutch Boy White Lead	100	100	100	100	100
Dutch Boy Linseed Oil	0	0	2 1/2	5	7 1/2
Pure Turpentine	0	0	0	0	0
Dutch Boy Lead Base	0	0	0	0	0
Water	0	0	0	0	0
Gallons of Paint Produced	1 1/2	6 1/2	6 1/2	7 1/2	6 1/2
By 14 Gallons Per Gal. 1 Coat	100	100	100	100	100
Based on 10 lbs. per gal. for 1 coat					

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WOOD SHINGLES

WOOD SHINGLES

NEW MATERIAL PREPARATION:

New shingles should be treated with a stiff brush to a mossy surface and so on.

Shingles previously painted should be treated to remove old paint. All loose paint should be removed by scraping. If paint is cracking and peeling badly, all of the old paint should be removed.

If previously stained shingles are to be painted and stain is not known to be an oil stain, a few brushfuls of white lead paint should be applied to a portion of the unpainted surface as a test. If no color "bleeds" then this paint in two coats the entire surface can be safely painted. If there is "bleeding", the shingles should be well scraped or painted a color dark enough so that later discoloration will not show.

PAINT APPLICATION:

Paints & White Lead

Repainting Wood Shingles Use Formula 24 as first coat, follow with Formula 24 (1st coat) as first coat, follow with Formula 24 (1st coat) as second coat.

Three Coat Worked-up Painted Wood Shingles Prime with Formula 24, follow with Formula 24 as second coat, 1 or Formula 24 (1st coat) or Formula 24 (1st coat) as third coat.

Two Coat Worked-up Painted Wood Shingles Prime with Formula 24, 1 or Formula 24 (1st coat) as first coat or Formula 24 (1st coat) as second coat.

Ready Mixed White Lead Paint

Repainting Wood Shingles As first coat, use Dutch Bay Pure White Lead Extreme Primer as it comes to the can too slightly reduced with turpentine but not to

WOOD SHINGLES

cover one pint per gallon of paint or two thirds White reduced with one part of turpentine per gallon of paint. Follow with Dutch Bay Pure White Lead Paint (third coat) as second coat.

Two Coat Worked-up Painted Wood Shingles Prime with Dutch Bay Pure White Lead Extreme Primer, 1 or Dutch Bay Pure White Lead Paint (third coat) as second coat.

Three Coat Worked-up Painted Wood Shingles Prime with Dutch Bay Pure White Lead Paint (third coat) as second coat, follow with one part of turpentine per gallon of paint, follow with a second coat of Dutch Bay Pure White Lead Paint (third coat) as second coat, follow with one part of turpentine per gallon of paint. As third coat, use Dutch Bay Pure White Lead Paint (third coat) as it comes in the can.

*In cold weather, if paint is too thick to brush easily, add a small amount of turpentine, not exceeding one half pint to a gallon of paint.
†The above is given for the best results in general use.

SHINGLES		FORMULAS					
		10	20	30	40	50	75
Dutch Bay White Lead	Gal.	100	100	100	100	100	100
Dutch Bay Lead Oxide	Gal.	4	7 1/2	1	1	1	1
Pure Turpentine	Gal.	2	1	1	1	1	1
Dutch Bay Lead Oxide	Gal.	1	1	1	1	1	1
Dutch Bay Lead Oxide	Gal.			100			
Galons of Paint Required		1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
50, 75, 100, 125, 150, 175, 200		100	100	100	100	100	100

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NOTICE: If the film image is less clear than this notice, it is due to the quality of the document being filmed

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ASBESTOS CEMENT SHINGLES

ASBESTOS CEMENT SHINGLES

GENERAL PREPARATION:

Surface should be brushed with a stiff brush to remove all loose dirt and dust.

Surface should be completely dry. Painting should be done on previously unpainted shingles only after and during a spell of clear, dry weather.

All loose paint should be removed. If the paint is cracking and scaling all of the paint should be removed.

PAINT APPLICATION:

Repainting Asbestos Cement Shingles: For Formula 134 as first coat. Follow with Formula 134 (1st coat) or Formula 134 (2nd coat) as second coat.

Unpainted Asbestos Cement Shingles: Prime with Formula 134. Follow with Formula 134 as second coat. For Formula 134 (1st coat) or Formula 134 (2nd coat) as third coat.

* If desired, Dutch Boy Pure White Lead Paint should also be used instead of Formula 134.

DUTCH BOY	COVERAGE		
	30	100	150
Dutch Boy White Lead	100	100	100
Dutch Boy Enamel Oil	100	100	100
Dutch Boy Liquid Shell	100	100	100
Dutch Boy Lead Heavy Oil	100	100	100
Galvanneal Paint (Enamel)	100	100	100
By 10 Enamel (Enamel)	100	100	100

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BRICK, STUCCO, CONCRETE & STONE

BRICK, STUCCO, CONCRETE AND STONE

GENERAL PREPARATION:

Surfaces not previously painted should be brushed to remove all dirt and loose mortar.

If surface has not been exposed to air at least six months it should be washed with a solution made in the proportion of 2 pounds of iron sulphate to a gallon of water and then allowed to dry thoroughly before painting.

Surfaces previously painted with an oil paint should be brushed to remove all loose paint. All cracks or holes should be repaired with Portland cement or caulking material.

* If desired, Surfaces of masonry construction should never be painted with oil paint. A coating of iron rust will occur between the oil and cement when the masonry is wetting in nature of the paint.

PAINT APPLICATION:

Repainting Brick, Stucco, Concrete and Stone: When an oil paint has been previously used, all unpainted surfaces should first be spot primed with Formula 134 and allowed to dry. Then use Formula 134 as first coat for entire surface. Follow with Formula 134 (1st coat) or Formula 134 (2nd coat) as second coat.

NEW SURF. If Dutch Boy Lead Heavy Oil is not available, spot prime all unpainted surfaces with Formula 134 and allow to dry. Then use Formula 134 as first coat for entire surface. Follow with Formula 134 (1st coat) or Formula 134 (2nd coat) as second coat.

* If the previous paint was a water paint, clean off all the old coating and start on an unpainted surface.

* If desired, Dutch Boy Pure White Lead Paint should also be used instead of Formula 134.

SEE OTHERS TALKS ON PAGE 22.

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BRICK, STUCCO, CONCRETE & STONE

Insulated Common Bricks: Prime with Formula 24. Follow with Formula 14d as second coat. 1- Formula 11d (Flat Finish) or Formula 1d (Gloss Finish)* as third coat.

ALTERNATE FLAT FINISH COAT: If Dutch Br. Lead Missing (d) is not available: Use Formula 21d.

Insulated Face or Headed Bricks: Prime with Formula 12d. Follow with Formula 7d as second coat. Use Formula 11d (Flat Finish) or Formula 1d (Gloss Finish)* as third coat.

ALTERNATE FLAT FINISH COAT: If Dutch Br. Lead Missing (d) is not available: Use Formula 21d.

Insulated Stucco, Concrete and Stone: Prime with Formula 11d. Follow with Formula 5d as second coat. Use Formula 11d (Flat Finish) or Formula 1d (Gloss Finish)* as third coat.

ALTERNATE: If Dutch Br. Lead Missing (d) is not available: Prime with Formula 21d. Follow with Formula 1d as second coat. Use Formula 21d (Flat Finish) or Formula 1d (Gloss Finish)* as third coat.

* If desired, Dutch Br. Pure White Lead Paste-Flake may be used instead of Formula 1d.

BRICK, STUCCO, CONCRETE & STONE

MATERIALS	FORMULAS				
	24	4d	5d	7d	11d
Dutch Bay White Lead	100	125	150	175	200
Dutch Bay Lead Oxide	25	31	38	44	50
Pure Turpentine	10	12	15	17	20
Dutch Bay Lead Oxide	1	1	1	1	1
Dutch Bay Lead Missing (d)	1	1	1	1	1
Colors of Paint Produced	10%	12%	15%	17%	20%
Sq. Ft. Covered Per Gal. of Coat	100	80	67	56	45

MATERIALS	FORMULAS				
	11d	12d	15d	21d	24d
Dutch Bay White Lead	100	125	150	175	200
Dutch Bay Lead Oxide	25	31	38	44	50
Pure Turpentine	10	12	15	17	20
Dutch Bay Lead Oxide	1	1	1	1	1
Dutch Bay Lead Missing (d)	1	1	1	1	1
Colors of Paint Produced	10%	12%	15%	17%	20%
Sq. Ft. Covered Per Gal. of Coat	100	80	67	56	45

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INTERIOR WOODWORK

INTERIOR WOODWORK

GENERAL PREPARATION

New woodwork should be completely smooth and clean before painting.

Painted or varnished woodwork, if the old finish is poor or cracked, should be removed. All paint or varnish should be washed off with soap suds or paint cleaner, and a new primer coat applied. The woodwork should then be rubbed down with 20 or 40 sandpaper. If the surface is cracked, checked or warped, remove the old coating down to the wood with paint remover.

If woodwork is not previously stained, rub down with sandpaper it will be necessary to apply two thin coats of primer before painting to avoid the possibility of the dye in the stain from bleeding through the paint.

PAINT APPLICATION

Repainting: Use Formula 14 on the first coat, 14A on the second coat, 14B on the third coat, or Formula 12A on the fourth coat, or prepared enamel as second coat.

STAINING: (1) Dark Red Lead Stain (14) or any other stain, 14 or Formula 24 on the first coat, 14B on the second coat, 14C on the third coat, or Formula 24A on the fourth coat, or prepared enamel as second coat.

Three-Coat Dark-Red Lead Stain: Prime with Formula 14A or 14B, 14C on the first coat, 14D on the second coat, 14E on the third coat, or Formula 12A on the fourth coat, or prepared enamel as third coat.

STAINING: (2) Dark Red Lead Stain (14) or any other stain, 14 or Formula 24 on the first coat, 14B on the second coat, 14C on the third coat, or Formula 24A on the fourth coat, or prepared enamel as second coat.

INTERIOR WOODWORK

Three-Coat Dark-Red Lead Stain: Prime with Formula 14A or 14B, 14C on the first coat, 14D on the second coat, 14E on the third coat, or Formula 12A on the fourth coat, or prepared enamel as third coat.

MATERIALS		14	14A	14B	14C	14D	14E	14F	14G	14H	14I	14J	14K	14L	14M	14N	14O	14P	14Q	14R	14S	14T	14U	14V	14W	14X	14Y	14Z
Dark Red Lead Stain	lb.	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
Dark Red Lead Stain	oz.																											
Dark Red Lead Stain	qt.																											
Dark Red Lead Stain	gal.																											
Dark Red Lead Stain	barrel																											
Dark Red Lead Stain	ton																											
Dark Red Lead Stain	truckload																											
Dark Red Lead Stain	carload																											
Dark Red Lead Stain	trainload																											
Dark Red Lead Stain	shipload																											
Dark Red Lead Stain	aircraftload																											
Dark Red Lead Stain	spacecraftload																											
Dark Red Lead Stain	universeload																											

Special Finishes for Interior Woodwork

Antique: First paint the woodwork according to the previous instructions. The final coat should be tinted to the ground color desired. It usually is preferred although other colors such as green may also be obtained. After the final coat of paint is completely dry, brush on a place made by mixing a quart of Dark Red Lead Stain with one quart of clear liquid varnish of Dark Red Lead Stain color. Keep the place well stirred in the container as the color will settle out. Before the place sets up wipe it all the round parts of the trim with cheesecloth.

EXTERIOR WOODWORK

Alkyd Enamel This is only suitable for open grained woods such as oak and chestnut that have not previously been painted. Use a filler made as follows: Mix three parts by weight of thick flax white lead and two parts by weight of fine silica. Reduce to a thin paste with equal parts turpentine and kerosene. Apply this paste and before it sets, rub the woodwork, press the grain with wet felt to force the filler into the pores of the wood. Remove all excess filler. When the filler has hardened, finish with oil, wax, shellac or varnish as desired.

Staining Open grained woods, such as oak and chestnut should be filled with a good wood filler before staining. Then proceed as on other woods by first applying a coat of thick flax flattening oil or a liquid made of equal parts of raw linseed oil and turpentine. Then while the surface is still wet apply the stain, which may be either straight thick flax flattening oil or a mixture of linseed oil, turpentine and driers (See page 12) mixed in one of the colors below. Allow it to remain for one or two minutes and wipe off the surplus with a dry cloth. After the stain is thoroughly dry, apply shellac and finish by waxing or varnishing.

QUANTITIES OF DYE FOR EXTERIOR WOODWORK
(Quantities of thick flax colors in oil per gallon of liquid)

Malachite	Cherry
1 pt. malachite brown	1/2 pt. burnt orange
1/2 pt. raw linseed	
Light Blue	Old Maple
1/2 pt. raw linseed	1/2 pt. raw linseed
1/2 pt. raw linseed	1/2 pt. raw linseed
Black Blue	Black
1/2 pt. raw linseed	1/2 pt. raw linseed
1/2 pt. raw linseed	1/2 pt. raw linseed
1/2 pt. raw linseed	1/2 pt. raw linseed

INTERIOR WOODWORK

Staining This is a method of staining various woods by simulating their grain and color. First, paint the woodwork in the usual manner. The paint should be allowed to dry and then apply the proper graining color. When the paint is dry apply the proper graining color, thinned with thick flax flattening oil or a mixture of two parts thick flax raw linseed oil, three parts turpentine and one part thick flax flattening oil. While still wet, the graining color should be spread with graining tools to imitate the grain of the wood being reproduced. The work may be finished by waxing or varnishing.

QUANTITIES OF DYE FOR INTERIOR WOODWORK

(Quantities of thick flax colors in oil per 100 pounds of white lead)

Cherry	Light Blue
1 pt. raw linseed oil	1/2 pt. raw linseed oil
1 pt. raw linseed oil	1/2 pt. raw linseed oil
Malachite	Old Maple
1 pt. raw linseed oil	1/2 pt. raw linseed oil
1 pt. raw linseed oil	1/2 pt. raw linseed oil
Black Blue	Black
1/2 pt. raw linseed oil	1/2 pt. raw linseed oil

*The color formulae are approximate only.

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Volume Mixing Directions DUTCH BOY SOFT PASTE WHITE LEAD

REPAINT WORK

OUTSIDE WOOD (INCLUDING WOOD SHINGLES)		BRICK, STUCCO, CONCRETE AND STONE		INTERIOR PLASTER, WALL BOARD AND WOODWORK	
PRIME COAT	FINISH COAT	PRIME COAT	FINISH COAT	PRIME AND FINISH COATS (FLAT FINISH)	PRIME AND FINISH COATS (FLAT FINISH)
					
MIXED - Add 1/2 pint to each gallon of paint. If you brushed off a coat, brush toward an edge and then lay the brush on straight and draw it along the edge of brush up to the end. The other coat.		NO. 1 IS REQUIRED		NO DRIES REQUIRED	

NEW WORK

USE PROPER PRIMEING COAT BELOW FOLLOW		TWO COATS MIXED AS PER DIAGRAM ABOVE	
OUTSIDE WOOD	INTERIOR WOOD	STUCCO, CONCRETE AND STONE	INTERIOR PLASTER AND WALLBOARD
1. Prime White Lead 2. Prime White Lead 3. Prime White Lead	1. Prime White Lead 2. Prime White Lead 3. Prime White Lead	1. Prime White Lead 2. Prime White Lead 3. Prime White Lead	1. Prime White Lead 2. Prime White Lead 3. Prime White Lead
* Add 1/2 pint to each gallon of paint. If you brushed off a coat, brush toward an edge and then lay the brush on straight and draw it along the edge of brush up to the end. The other coat.		* Add 1/2 pint to each gallon of paint. If you brushed off a coat, brush toward an edge and then lay the brush on straight and draw it along the edge of brush up to the end. The other coat.	

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EXTERIOR PLASTER

INTERIOR PLASTER (ALSO WALLBOARD AND FABRIC)

PREPARE PREPARATION:

Be sure surface is clean and smooth, that there is no existing rot, loose plaster, peeling or surface irregularities. Care should be taken never to break or scratch the plaster.

Fill all cracks and holes with patching plaster. Loosely should be spread up to the last two layers (5), sealed with water and properly filled.

If surface has been previously painted, it should be washed with warm water until all the paint is removed. Walls previously papered should have all paper taken off and then be thoroughly washed to remove all traces of paste.

NOTE: Painting over wallpaper is not good practice. Should the painted paper later require removal it would be a difficult job to do so without damage to the plaster.

If necessary to paint over wallpaper, be sure there is only one layer on the wall and that this layer is in good condition. Paint will not hold better on surface irregularities. Follow suggested plaster pointing directions.

PAINT APPLICATION:

Regulations: 1 or Formula 5d for the first coat. Follow with a second coat according to the finish desired.

First	Second	Third or Fourth
Formula 5d	Formula 5d	Formula 5d
Seal Coat	Finish	Finish
Formula 17d	Formula 25d	Prepared Finish

ALTERNATE: 1) Thick Red Lead Using 5d is not available: Use Formula 25d as the first coat. Follow with Formula 25d (1st Layer) or Formula 25d (Second Coat) or prepared finish as second coat.

INTERIOR PLASTER

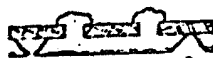


Figure 30

Good method of cutting out plaster cracks with the sides part of 1/2" and to the left. See footnote method.

Three Coat Method: 1) Thick Red Lead Using 5d is not available: Use Formula 25d as the first coat. Follow with Formula 25d (1st Layer) or Formula 25d (Second Coat) or prepared finish as second coat.

First	Second	Third or Fourth
Formula 5d	Formula 5d	Formula 5d
Seal Coat	Finish	Finish
Formula 17d	Formula 25d	Prepared Finish

ALTERNATE: 1) Thick Red Lead Using 5d is not available: Use Formula 25d as the first coat. Follow with Formula 25d (1st Layer) or Formula 25d (Second Coat) or prepared finish as second coat.

Two Coat Method: 1) Thick Red Lead Using 5d is not available: Use Formula 25d as the first coat. Follow with Formula 25d (1st Layer) or Formula 25d (Second Coat) or prepared finish as second coat.

First	Second	Third or Fourth
Formula 5d	Formula 5d	Formula 5d
Seal Coat	Finish	Finish
Formula 17d	Formula 25d	Prepared Finish

SEE FINISHES TABLE ON NEXT PAGE.

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INTERIOR PLASTER

MATERIALS	FORMULAS				
	54	56	58	59	60
Batch Dry White Lead	100	100	100	100	100
Batch Dry Lead Whiting 21	100	100	100	100	100
Batch Dry Filling Oil	100	100	100	100	100
Batch Dry Shell Powder	100	100	100	100	100
Colors of Paint Produced	P ₁	P ₂	P ₃	P ₄	P ₅
Sq. Ft. Covered Per Gal. of Coat	100	100	100	100	100

MATERIALS	FORMULAS				
	220	225	230	235	240
Batch Dry White Lead	100	100	100	100	100
Batch Dry Lead Whiting 21	100	100	100	100	100
Pure Turpentine	100	100	100	100	100
Batch Dry Lead Oxide	100	100	100	100	100
Batch Dry Filling Oil	100	100	100	100	100
Colors of Paint Produced	P ₁	P ₂	P ₃	P ₄	P ₅
Sq. Ft. Covered Per Gal. of Coat	100	100	100	100	100

WOOD FLOORS

WOOD FLOORS (EXTERIOR AND INTERIOR)

GENERAL PREPARATION:

New floors should be sandpapered and dented to remove all dirt and grit.

Floors previously painted should be sandpapered and dented, if paint is in good condition. Otherwise, remove all the old paint before painting.

PAINT APPLICATION:

Repainting 11 and Floors: Touch up bare spots with Formula 14d. Follow with Formula 14d as first coat, 1 or Formula 24d as second coat.

Repainting 11 and Floors: Prime with Formula 14d. Follow with Formula 14d as second coat, 1 or Formula 24d as third coat.

Underlaid Floor: Prime tongue and groove edges of boards and underside of new porch floors with Formula 14d or Batch Dry Pure White Lead Paint without Exterior Primer or Shellac White.

MATERIALS	FORMULAS			
	55	56	57	58
Batch Dry White Lead	100	100	100	100
Batch Dry Lead Whiting 21	100	100	100	100
Pure Turpentine	100	100	100	100
Batch Dry Lead Oxide	100	100	100	100
Colors of Paint Produced	P ₁	P ₂	P ₃	P ₄
Sq. Ft. Covered Per Gal. of Coat	100	100	100	100

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CONCRETE FLOORS

CONCRETE FLOORS (EXTERIOR AND INTERIOR)

NEEDLE PREPARATION:

Unpainted concrete that has not aged for at least six months should be treated with a solution made in the proportion of two pounds of pure sulphuric to a gallon of water and then allowed to dry thoroughly before painting.

All cracks and surface defects should be filled with a hot lead putty.

Surfaces previously painted with an oil paint should be sanded to remove all loose paint. If old paint is in good condition, the surface should be thoroughly cleaned. All grease or dirt should be washed off with soap powder or paint cleaner and any wax removed with benzene.

PAINT APPLICATION:

Regulating Concrete Floors: Touch up worn spots with Formula 194. Follow with Formula 194 as first coat. Use a high grade fine enamel as second coat.

Unpainted Concrete Floors: Prime with Formula 194. Follow with Formula 194 as second coat. Use a high grade fine enamel as third coat.

FORMULAS	100	200
Dark Grey White Lead ...	100	100
Dark Grey Lead Oxide ...	27 1/2	16
Pure Saponified ...	...	2 1/2
Dark Grey Lead Oxide ...	...	16
Dark Grey Lead Oxide ...	27 1/2	...
Quantity of Paint Produced by 10 Grams Per Gallon, 1 Pint	10 1/2	6
	200	100

EXTERIOR METAL

EXTERIOR METAL

NEEDLE PREPARATION:

All metal should be thoroughly cleaned before painting to remove rust, grease or dirt.

Surfaces where solder has been used should be cleaned with benzene.

Galvanized surfaces, never before painted, should be weather exposed for at least six months before painting.

The surface with all rusted spots or areas where paint is loose should be thoroughly workshipped.

PAINT APPLICATION:

Paints Red Lead

Regulating Metals: Spot prime all bare metal with Formula 4-1. Follow with Formula 214 as first coat. Use Formula 4-5 (Mark) as a white lead paint of the desired color as second coat.

Unpainted Metals: Prime with Formula 4-1. Follow with Formula 214 as second coat. Use Formula 4-5 (Mark) as a white lead paint of the desired color as third coat.

Ready-Mixed Red Lead Paints

Regulating Metals: Spot prime all bare metal with Dark Grey Liquid Red Lead No. 1 or Dark Grey Quick-Drying Red Lead or Dark Grey Semi-Quick-Drying Red Lead. Follow with Dark Grey Liquid Red Lead No. 1 or Dark Grey Quick-Drying Red Lead or Dark Grey Semi-Quick-Drying Red Lead as first coat. Use Dark Grey Liquid Red Lead No. 5 (Mark) as a white lead paint of the desired color as second coat.

* Formula Dark Grey Quick-Drying may be added to the paint a light brown. The addition of this will be making any desired shade.

SEE FORMULA TABLE ON NEXT PAGE.

EXTENSION METAL

Insulating Metals: Prime with Dutch Boy Liquid Red Lead No. 1 or Dutch Boy Quick Drying Red Lead or Dutch Boy Semi Quick Drying Red Lead. Follow with Dutch Boy Liquid Red Lead No. 1* or Dutch Boy Quick Drying Red Lead* or Dutch Boy Semi Quick Drying Red Lead* as second coat and Dutch Boy Liquid Red Lead No. 1 (black) as a third coat part of the desired color as third coat.

WHITE OR VERY LIGHT TINTS:
Repainting Metals: Spot prime all bare metal with Formula A-1 or Dutch Boy Liquid Red Lead No. 1 or Dutch Boy Quick Drying Red Lead or Dutch Boy Semi Quick Drying Red Lead. Follow with Formula 24 as first coat. 1 or Formula 14 or Dutch Boy Pure White Lead Paste. Outside White as second coat.

Insulating Metals: Prime with Formula A-1 or Dutch Boy Liquid Red Lead No. 1 or Dutch Boy Quick Drying Red Lead or Dutch Boy Semi Quick Drying Red Lead. Follow with Formula 24 as second coat and Formula 14 or Dutch Boy Pure White Lead Paste. Outside White as third coat.

*If enough Dutch Boy liquid lead can be added to the paint to light brown. The color difference will be evening dropped plans.

MATERIALS	FORMULAS				
	24	14	A-1	24	A-1
Dutch Boy Liquid Lead	100	100			
Dutch Boy Red Lead			100	100	100
Dutch Boy Liquid Oil	10	10	10	10	10
Pure Turpentine	10	10	10	10	10
Dutch Boy Liquid Lead	10	10	10	10	10
Dutch Boy Liquid Oil	10	10	10	10	10
Dutch Boy C. P. Premium Blue	10	10	10	10	10
Colors of Paint Produced by P. General For Col. 1 Coat	75	75	75	75	75

Note: If it is necessary to use the above formulas, the following are suggested:

METAL - UNDERWATER EXPOSURE

METAL SUBJECT TO UNDERWATER EXPOSURE

NEED FOR PREPARATION

All metal should be allowed to dry thoroughly and then be covered to prevent rust, grease, dirt or loose paint. The area with the surface should be sandblasted, if possible.

PAINT APPLICATION

Repainting Metal Subject to Underwater Exposure: Spot prime all bare metal with Dutch Boy Quick Drying Red Lead. Follow with three coats* of Dutch Boy Quick Drying Red Lead.

Insulating Metal Subject to Underwater Exposure: 1 or two coats of Dutch Boy Quick Drying Red Lead.

*If a special color is desired for the third coat, replace the lead and lead with a third coat, properly mixed for underwater use. Through Dutch Boy liquid lead can be added to the above paint to get the same color brown. The difference in color will be evening dropped plans.

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REFERENCE VECTOR

INTERIOR METAL

NEED FOR PREPARATION,

42) nail should be thoroughly cleaned before painting to remove dirt, grease, dust or loose paint.

PAGE 4PRIN:4TNOV:

Repeating Interior Woods: One prime all over
covered with Varnish 4-1 on North Bay Lyard Rd. Road
on 1 on North Bay (North Bay Rd. Road on North
Bay) (North Bay Rd. Road on North Bay) (North Bay
Rd. Road on North Bay) (North Bay Rd. Road on North Bay)
covered with Varnish 4-1 on both ends. 1 on a wood road
connecting to the main road.

<u>FIRST</u> Formula 1a	<u>SECOND</u> Formula 1b	<u>THIRD STAGE</u> Formula 1c
<u>NEW FORM</u> Formula 1d	<u>PI 1000</u> Formula 22d	<u>FORMUL</u> Prepared Laminar

NOTE: The above is a list of the items which are available for the use of the public. The items are listed in the order in which they are available. The items are listed in the order in which they are available.

Capitated Interior Walls: Prime with Formica
2.5 on North Side (apud Red Lead 1/2). 3 on North Side
Quartz (Strong Red Lead on North Side) (Quartz-
Strong Red Lead on Formica 1d. Follow with Formica
2d on second coat. 3 or a third coat according to the
finish desired.

<u>Franz</u> Formula 14	<u>Storvick</u> Formula 12d	<u>Simon Simon</u> Formula 14d
<u>De la Cruz</u> Formula 17d	<u>Peterson</u> Formula 22d	<u>Franzen</u> Proposed 14mnd

ATTEND THE FOLLOWING UNITS: See above.

EXTENSION METAL

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CHAPTER V

Interior Decorative Effects

THESE are many decorative treatments possible with paint, other than plain walls, and in this chapter some of the more popular ones are described and illustrated. All are produced over a ground of white lead flat paint with equipment that is both inexpensive and easy to obtain.

Equipment Required. A stippling brush is useful for making a plain painted wall or for a stippled effect. This is a rectangular brush with long bristles which when tapped against the wall pick up the wet paint or lay down paint giving the surface a uniform texture without brush marks or other irregularities.

Masking tape is very useful for establishing a straight line where more than one color is employed. The surface should be completely dry and hard before the tape is applied as the paint may be picked up when the tape is removed. Masking tape can be obtained in various widths.

Stencils are another handy device for the decorator. These can be cut from stencil paper or purchased ready to use from the paint store or stencil manufacturer. For these use a stencil brush is required. This is a round brush with



Figure 15

Using masking tape to produce leading lines. To insure straight lines, press on the surface about eight inches apart and then tape down one going to the other.

INTERIOR DECORATIVE EFFECTS



Figure 16

Hold stencil brush upright as shown. Work to point by pressing a hole in a flat surface. Use one of masking tape to hold one corner of stencil.

Use thick bristles and as used in the manner shown. A small brush is about right for the average size stencil. (These effects involve only the use of such inexpensive stencils as newspaper, brownish ink or a sponge.

Stencil Effects

The simplest stencil effect is one where a different colored paint is brushed through the stencil openings onto the dry and finished surface. Removing the stencil leaves the design in the contrasting color as shown in Figure 17. Of course this is only one of an unlimited number of designs.



Figure 17

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INTERIOR DECORATIVE EFFECTS

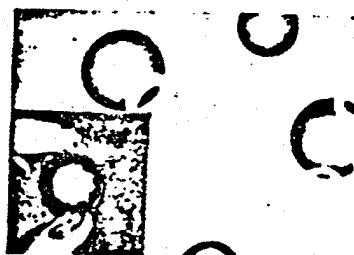


Figure 18



Figure 19

INTERIOR DECORATIVE EFFECTS



Figure 20

Another way to use a stencil is shown in Figure 18. Here the stencil is just a circular opening and instead of passing over the stencil across the paint is applied only around the edge and then blended off toward the center by tapping it with the stencil brush.

Two further adaptations are shown in which the design is cut on the edge of the stencil. A simple border is shown in Figure 19 and a more elaborate border in Figure 20. A line paint of contrasting color is applied and the stencil is removed the design is outlined as shown.

Crumpled Roll Effect

This finish is done over a dry ground but while the top coat of paint is still wet. A wad of crumpled newspaper about a foot long is rolled down over the wet paint. As this is done the paper picks up some of the wet color and exposes irregular areas of the dry paint beneath, giving a textured effect as an interesting design. Only about a third

INTERIOR DECORATIVE EFFECTS



Figure 21

of the undercoat shows through, as the dominant color is always determined by the top coat. The colors used should be different enough to show some contrast.

The technique is easy. Press the paper firmly against the wall as you roll it over and over. Use a fresh piece for each time down the wall and overlap slightly as the strips do not show. Also run the strips at a slight angle down the wall to avoid irregularities. Any clipped places can be painted with the crumpled paper before the paint has set.

Sponge Mottle Finish

This effect is put on with wet paint over a wall that has been painted and allowed to dry. An ordinary kitchen washing sponge is the best used. Dip the sponge in paint on a flat surface in a cup and use this side for applying the paint. A hole of the colored paint is to be applied with the sponge should be spread out on a board or other flat surface

INTERIOR DECORATIVE EFFECTS



Figure 22

and the sponge tamped into it. Tamp the sponge with water first, so that it will not become clogged with paint.

For the wall finish with the paint covered surface of the sponge changing the position of the hand from side to side to avoid repeating the same design or put the same pattern. Go over the entire surface this way.

Glossed and Blended Finishes

Stitch the setting out, mixed with color in oil, makes a good glazing liquid for colors of oil or watercolor.

In creating an antique effect, the colors in oil are mixed with setting out before application. Use just enough color to get the depth desired. Apply this over the surface and then wipe lightly with a ball of cheesecloth. Some of the glaze will remain on depressed spots to give the antique appearance. This practice may be followed either on a wall surface or on woodwork.

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INTERIOR DECORATIVE EFFECTS

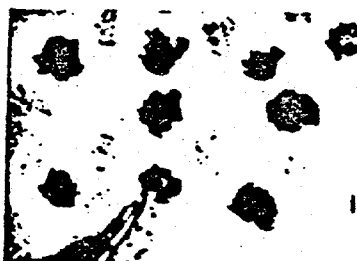


Figure 20

To produce a stucco blend the painted wall, after it is dry, is brushed with a coat of a low flash dry flaking oil in strips of about twenty five square feet. While the oil is still wet the rollers are for blended are applied as shown in Figure 21. The rollers are used to spread with enough flaking oil to make a thin paste.

For a wall of charcoal in a circular or square pattern to blend the rollers on the wet wall. Then a sprayer with light blue and then brush by passing the roller surface lightly with charcoal to get a smoothly blended effect.

The stripes and angles, rather than or even, are the most frequently used planning rollers. Two or three rollers are also used sometimes to vary the effect. The ground coat of paint should be a light gray or cream color for best results.

Paint Blend A blended effect similar to gravel appearance in the rollers can be done without the use of glass. Instead, replace white lead flat paint, tinted to the various colors desired, is spread on the wall while the

INTERIOR DECORATIVE EFFECTS

brush coat of paint is still wet. Then the rollers again are blended together with a stippling brush. In this way the blending can be done without waiting for the ground to dry.

Plastic Finishes

A plaster paint is a heavy bodied paint that will produce a coat with a flatness and a consistency that can be stained in various designs. When this plaster paint has a proportion of a binder added to produce the required stiffness, also formula 224 page 10.

After this paint is on the wall it can be treated with a great variety of tools. For example, a sponger, a woodblock, a flat board and a stiff brush are only a few of the objects that can be used. Figure 21 shows a typical design.

A textured wall can frequently be improved in appearance by glazing which adds color and gives more the design.

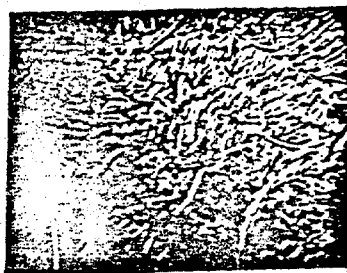


Figure 21

A texture produced by lifting the wet plaster paint with the flat side of a paint brush.

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INTERIOR DECORATIVE EFFECTS

Starching

This is not a decorative effect, strictly speaking, but it is a method used by some decorators to create a completely flat and even surface free from "drips" or gloss spots.

The starch mixture is made as follows: Dissolve one pound of plain laundry starch and one quart in a little lukewarm water, add one quart of powdered alum and then pour boiling water on the whole - add it in the form of pills and become clear. Rubbed in brushing containers with cold water. Apply with a clean fine tooth wall brush and immediately wipe. If the wall has been stained add about two ounces of white soap flakes to the above starch mixture.

Cleaning Painted Walls

One of the important advantages of pure white lead flat paint is its durability. Surfaces painted with it can be washed up, without apparent injury to the finish, by washing with a good prepared paint cleaner or a soap solution. This is true not only of plain white walls, but also those treated with one of the decorative effects.

Washing a dirty surface should always proceed from the bottom up. If the operation is started at the top, the cleaning solution runs down the wall and leaves streaks on the unbrushed portion that are difficult to remove. Brush or sponge off a suitable amount with the cleaning solution, then rinse with clear water. In the case with the adjoining area and so on across the bottom of the section. Then repeat the process on the upper sections.

CHAPTER VI

Tricking Painting Troubles

GOOD paint doesn't fail for naturally unless it is employed with mixed materials applied or mixed in the way possible.

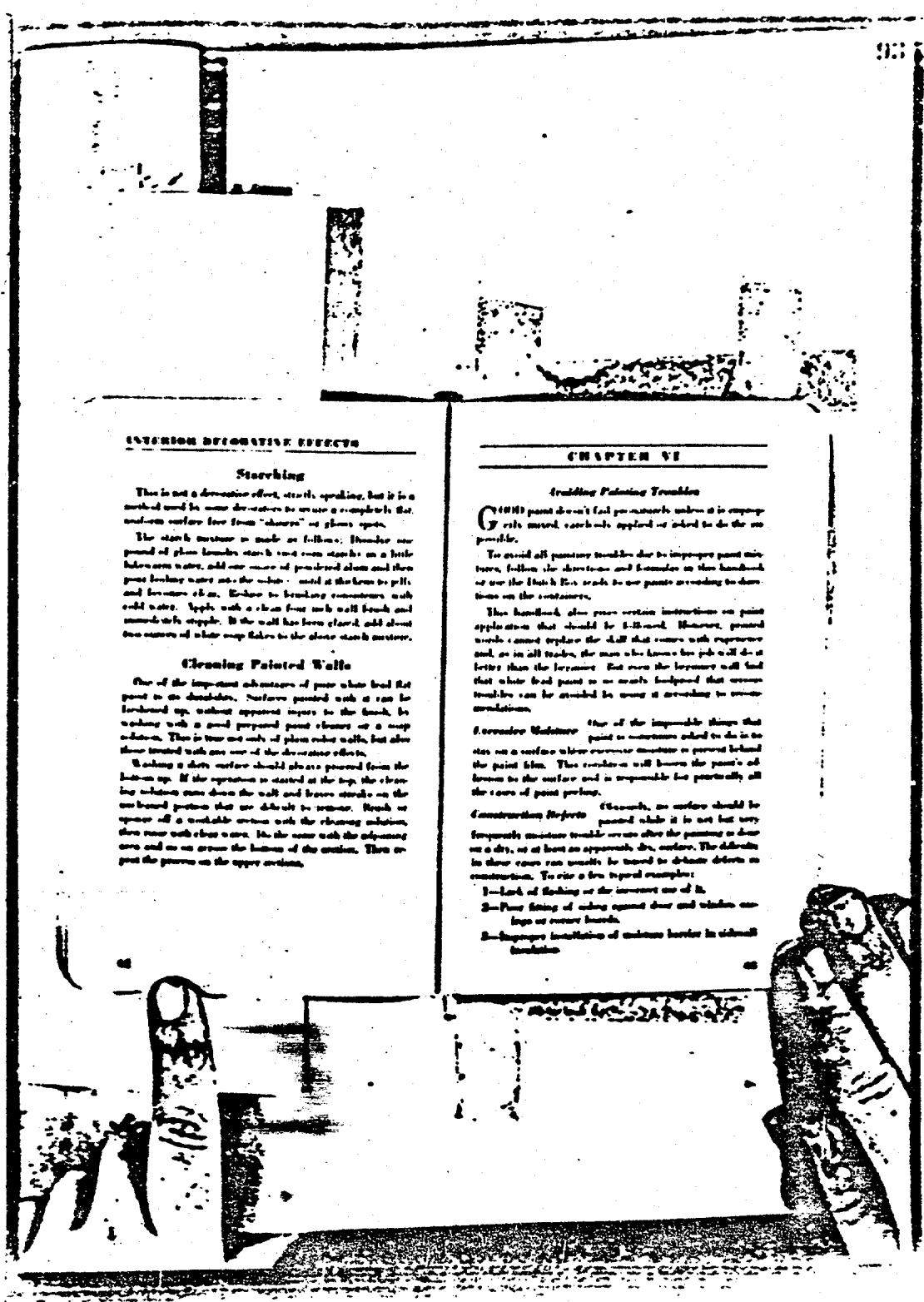
To avoid all painting troubles due to improper paint mixture, follow the directions and formulas in this handbook or use the finish line made to our paints according to directions on the containers.

This handbook also gives certain instructions on paint application that should be followed. However, painted work cannot replace the skill that comes with experience and, as in all trades, the man who knows his job will do it better than the formula. But even the layman will find that white lead paint is so nearly foolproof that serious troubles can be avoided by using it according to general instructions.

Corrosive Materials One of the impossible things that paint is sometimes asked to do is to stay on a surface where corrosive materials are present behind the paint film. This condition will remove the paint's adhesion to the surface and is responsible for practically all the cause of paint peeling.

Construction Defects Usually, no surface should be painted while it is not but very frequently mistakes trouble arises after the painting is done on a dry, or at least an apparently dry, surface. The defects in these cases can usually be traced to definite defects in construction. To cite a few typical examples:

- 1—Lack of flashing at the junctions of roofs.
- 2—Poor fitting of siding against door and window casings or corner boards.
- 3—Improper installation of moisture barrier in sidewalk foundation.



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AVOIDING PAINTING TROUBLES

1. Taking or patch during touching the soil.
2. I overlaid on space between soil and floor.
3. Hallow patch without ventilating holes at top and bottom.

All cases, if one of these or other similar faults in construction are present, they must be removed to prevent paint failure.

Another way of expressing the impossible is to paint a surface that has previously cracked and is still without first removing all of the old paint. The odds are high that one of the old paint will crumple with exterior to crack and under and take the new paint off with it.

AVOIDING PAINTING TROUBLES



Figure 25

CRACKING

Cracks in the top coat only which form a small irregular pattern. Night locking does not detract from the durability and protective color of the paint.

CAUSE

Usually too soft an undercoat.

HOW TO REMEDY

Allow plenty of drying time between coats make sure the paint being applied is formulated to produce a film that is no harder than that of the undercoat.

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AVOIDING PAINTING TROUBLES

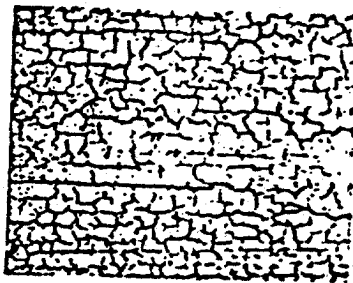


Figure 26

CRACKING

Wide and deep cracks in the painted surface.

CAUSE

The application of a hard type of paint film over a film that is much softer. The soft undercoat may be the result of improper formulation, the use of a soft drying pigment like yellow ochre, or the use of large amounts of straight rubber pigments.

HOW TO AVOID

Do not apply a paint that will form a hard film over a paint film that is much softer. Allow ample time between coats for drying and hardening. Before applying a surface that has elongated reticulation, remove all of the old paint, down to the wood.

AVOIDING PAINTING TROUBLES

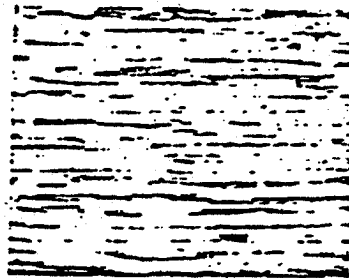


Figure 27

CRACKING AND WRINKLING

Two defects closely related since wrinkling is a later state of cracking. Cracking is a fissure in the paint film extending clear down to the wood. The paint curls up at the edges of the cracks, pulls away from the surface and scales off.

CAUSE

Paint that has become hard and brittle due to its age or composition so that it can no longer follow the movement of the wood surface underneath.

HOW TO AVOID

Use properly formulated white lead paint. It remains elastic and retains its adhesion.

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AVOIDING PAINTING TROUBLES

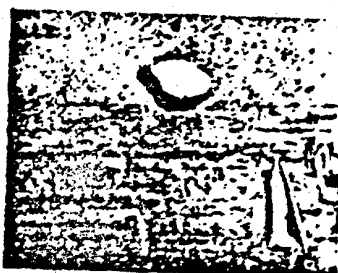


Figure 20

BRUSHING

Shows in the dry paint film that may eventually break.

(See 45.)

A really serious mistake, either passing in the road at the time of painting, or passing across to it at some later time. Most of the time, or best from under the house, across the structure through the road to the underside of the paint film and leaves the paint's adhesion. If vapor pressure is then built up, blisters are formed.

HOW TO REMEDY

Make sure that there are no construction loads two years old and that the material is to be painted is dry. Before repainting a blighted surface, remove all the old paint.

AVOIDING PAINTING TROUBLES

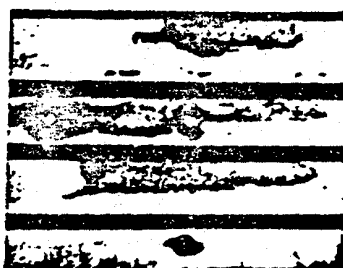


Figure 21

PUTTING

Paint coming off the surface in strips or large areas.

(See 45.)

It may be the use of the wrong type of paint or poor application on an improperly prepared surface. If necessary, it is necessary to remove the material that is painted that moves through to the underside of the paint film so that the paint's adhesion is broken and the paint peels off.

HOW TO REMEDY

Make sure that the material to be painted is clean and in proper condition to accept paint, that it is thoroughly dry, not only on the surface but throughout. If there are any construction loads two years old, the prep or repair should be made.

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AVOIDING PAINTING TROUBLES

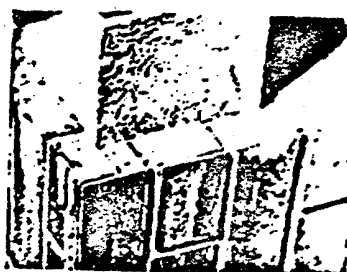


Figure 30

BRUSHING

Prevent removal of the paint or paint primer by run and moisture, usually caused by streaks near the lower edge of a ledge or door at the foot of a column.

CAUSE

The use of improper ingredients in the paint, such as water soluble materials or materials that become water soluble through change of season.

HOW TO AVOID

Use properly formulated white lead paint which does not contain or form water soluble materials.

AVOIDING PAINTING TROUBLES



Figure 31

BRUSHING

Loss of gloss taking on earthy chalkiness in small areas over the painted surface. It results from use of paint primarily with dark bases and colors.

CAUSE

Excess absorption of oil from the finishing coat by the surface underneath.

HOW TO AVOID

The defect will not occur when the finish coat is applied over a properly sealed surface.

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AVOIDING PAINTING TROUBLES

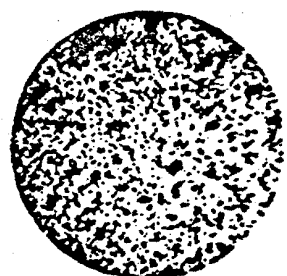


Figure 22

DUST DECONTAMINATION

Every painted surface collects dust as it ages. However, there is such a thing as excessive deterioration while the paint job is still fairly new. Its end surface with visible dust page 26.

CAUSE

The use of a building coat that contains too much lead and/or oil of poor quality.

SOLUTION

Be sure the lead coat is properly done. In locations where the atmosphere is particularly dirty one has found oil in the lead coat.

* Figure 22 should be changed to section 7, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100.

AVOIDING PAINTING TROUBLES



Figure 23

DUST DECONTAMINATION FROM METAL

Standard practice running down over the painted surface from suspended metal parts of the house.

CAUSE

Formation of metal scale washed down over the surface of the paint film by rain. When the paint contains certain water particles, the scale actually runs the film so that it is impossible to remove the deterioration.

SOLUTION

Free white lead paint is not permanently stained by these scale and one normal deterioration that is dependent on the surface of a white lead film from the water can be washed away.

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AVOIDING PAINTING TROUBLES

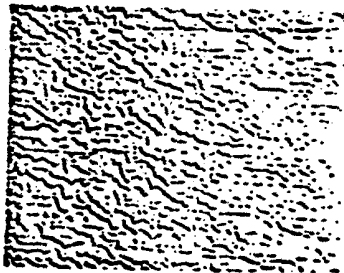


Figure 24

IRREGULAR

Irregular edges in the top film of paint. Sometimes so small they give the effect of flaking.

CAUSE:

A paint film that dries so slowly under such conditions that it covers the already dry surface in trouble. It builds up excessively thick and the paint will do then, particularly if there is too much dirt.

HOW TO AVOID:

Working results can be avoided if the paint is correctly formulated and properly handled. When bad conditions have occurred, the correct way to get a trouble-free repeat job may be to remove the old paint. If there is only slight cracking, rub down the surface with sandpaper and repeat.

AVOIDING PAINTING TROUBLES



Figure 25

IRREGULAR, OVERLAPPING AND RAFTY OVERLIES

Irregularities on the surface of the paint appearing over time as rags or streaks.

CAUSE:

Even in the wind that reaches through the paint film.

HOW TO AVOID:

Fast work with thin coats of good sheller show the best coat of paint has been applied. Be sure to overlap the coats as you stroke with the sheller.

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AVOIDING PAINTING TROUBLES

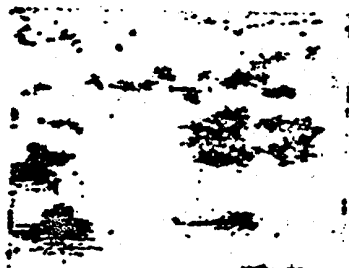


Figure 20

DISPERSED PARTICLES OVER THE SURFACE
Dark spots appearing through the paint film.

CAUSE:

Subtle colored substances in the wood that come to the surface of the paint.

HOW TO AVOID:

This trouble, usually confined to exterior, can be avoided by making sure that the lumber is of good grade and well seasoned and also that there is no moisture trouble due to construction defects (see page 44).

AVOIDING PAINTING TROUBLES



Figure 21

IN VAPOR AND SEALING

CAUSE:

The application of too much paint. If the paint is kept in oil content, the tendency is to apply it too thickly, and consequently the paint will not set.

HOW TO AVOID:

A coat of correct formulation, brushed on a suitable surface in a workmanlike manner, never will show either of these defects.

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STANDARD PAINTING TECHNIQUES



Figure 20

A dark film is usually found on the shaded area.

NOTE:

A dark-colored finish that gives an oil paint film under the combined conditions of moisture, warmth and shade.

NOTE: See also:

When addressing has previously occurred, traces of fungus growth by washing surface thoroughly. Use a solution of paint thinner composed of a mixture of turpentine and paint thinner in a ratio of 1 to 1. Wash with a brush and paint according to instructions on page 20.

*The finish of the Figure 20 should be added to the finish of the paint of the surface.

STANDARD PAINTING TECHNIQUES

Brand 11. The addition of moisture soluble treatment substitutes in the paint their water solubility. It is about as much as water soluble of white lead paint. It may be added to the paint in either of two ways. First method: Transfer the moisture soluble to alcohol by placing a container with a small amount of alcohol in a hot water bath that will not over-heat. Second method: Make a wet thin paste of the moisture soluble and a small amount of kerosene oil and turpentine. Add gradually to the paint, stirring it in thoroughly.

NOTE:

Moisture soluble is a double process. Use with great care.

ST. STEPHEN (1920-1921) (1922-1923)

Removable flaking of the surface within a week or two of completing the job. Not necessarily uniform over the entire surface. May affect one side of the house in summer only, may be heard in an entire room. It is purely a defect in appearance and does not impair the life or protective value of the paint.

NOTE:

Usually, however, formation of the paint is in the presence of moisture in water from steam, fog, rain, etc. during the drying of the paint. I observe that one may not find conditions here for drying may also destroy the place of the finish coat.

NOTE: See also:

Be sure of the foundation of the paint and its application under proper conditions.

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AVOIDING PAINTING TROUBLES

CRACKING

Factor of the paint to wet the surface which causes to gather up shrinkage instead of covering the surface

CAUSE:

The application of paint over an uncoated surface such as one with a hard glaze. The tendency of a paint to crack is great increased by low temperature.

HOW TO AVOID:

If necessary to apply paint over a hard glaze surface, first sandpaper or otherwise prepare the surface with "key".

FLAKING

Uniform lightening of color over an area of a painted surface.

CAUSE:

Improper formulation that causes the paint to shrink rapidly and give the effect of flaking on the use of color pigments that are not stable.

HOW TO AVOID:

White lead paint has the best time retention of any paint and, if properly formulated and correctly applied, will not be subject to this condition.

APPENDIX

APPENDIX

Approximate Volumes of Dutch Boy White-Lead

(Approximate)

ounces	pounds	quarts	gallons
160	10	1	1/8
320	20	2	1/4
480	30	3	3/8
640	40	4	1/2
800	50	5	5/8
960	60	6	3/4

Composition of White-Lead Paint

The most composition, by weight and by volume, of the white lead paint used in various tests.

Test No.	Ingredient	By Weight	By Volume
No. 14	White lead	48.0	27.7
	Linseed oil	32.0	42.2
	Stearine	10.0	10.0
	Other	1.0	1.0
Per cent pigment in insoluble portion		20.0	20.0
No. 22	White lead	70.0	70.0
	Linseed oil	20.0	20.0
	Stearine	5.0	5.0
	Other	5.0	5.0
Per cent pigment in insoluble portion		32.0	32.0
No. 32	White lead	80.0	80.0
	Linseed oil	10.0	10.0
	Stearine	5.0	5.0
	Other	5.0	5.0
Per cent pigment in insoluble portion		40.0	40.0
No. 42	White lead	90.0	90.0
	Linseed oil	5.0	5.0
	Stearine	5.0	5.0
	Other	5.0	5.0
Per cent pigment in insoluble portion		50.0	50.0

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APPENDIX

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