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Practical Graining

WITH DESCRIPTION OF

COLORS EMPLOYED AND TOOLS USED

ILLUSTRATED BY

FORTY-SEVEN COLORED PLATES

REPRESENTING THE VARIOUS WOODS USED IN INTERIOR FINISHING

BY

WILLIAM E. WALL

GRAINER TO THE TRADE.

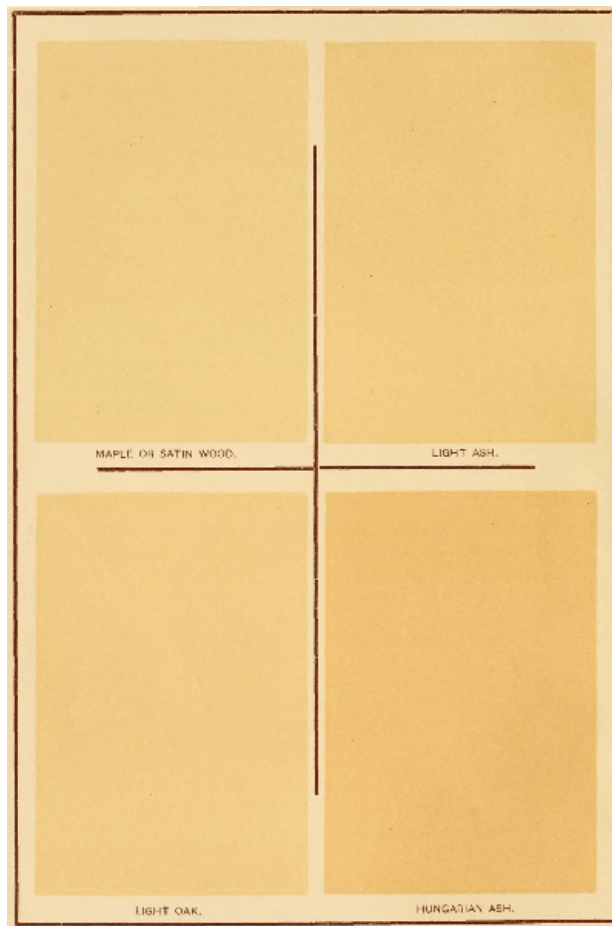
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CONTENTS.

	Page
CHAPTER I.	
Groundworks for graining; graining compared with plain painted work; removing old paint; mixing ground colors	5
CHAPTER II.	
The graining color; imitating simple woods; graining color for light oak; mixing graining color; applying the color; representing champs or lights of oak	9
CHAPTER III.	
Quartered oak; overgraining; heart of oak; use of the check roller	13
CHAPTER IV.	
Graining oak in distemper; the light veins in oak; graining ash; putting in heart work; overgraining ash; ash in distemper; matching white ash	16
CHAPTER V.	
Hungarian ash; burl ash in water color and in oil	19
CHAPTER VI.	
Chestnut; colors for graining chestnut; wiping the hearts and blending; chestnut in water color; bird's-eye maple; putting in lights and shades; putting in the curly or rock maple; silver maple	21
CHAPTER VII.	
Satinwood; groundwork for satinwood; putting in the mottling	26
CHAPTER VIII.	
Pollard oak; cherry; cherry in distemper; glue size for distemper binder	27
CHAPTER IX.	
Black walnut in oil; black walnut in distemper	31
CHAPTER X.	
French walnut burl in distemper	32
CHAPTER XI.	
Mahogany; Honduras feathered mahogany; stippling in mahogany; feathered mahogany	35
CHAPTER XII.	
Rosewood; the use of the bamboo brush; imitating rosewood in water color; cypress wood	37
CHAPTER XIII.	
Hard pine; white wood	40
CHAPTER XIV.	
Varnishing over grained work; cracking of varnish on inside work	42
CHAPTER XV.	
Graining considered as a fine art; graining sometimes condemned; the artistic merit of graining	46
CHAPTER XVI.	
The tools used by grainers; combs; overgrainers; badger blenders; castellated overgrainers; mottlers; cutters; stipplers; check roller; fresco bristle liners	48
CHAPTER XVII.	
Patent graining machines; patent roller process; the Mason pad; objections to machine graining; stencil plates; gransorbian transfer process; transfer paper	54
CHAPTER XVIII.	
The imitation of carved work, mouldings, etc.	59
INDEX	
	i
INDEX TO COLORED PLATES	
	ix

- [1.](#) Grounds for Graining Hungarian Ash, Maple, Light Ash and Light Oak.
 - [2.](#) Grounds for Graining Chestnut, Dark or Pollard Oak, Black or French Walnut, Stained Cherry, Mahogany and Rosewood.
 - [3.](#) Plain or Wainscot Oak, Light.
 - [4.](#) Flaked Oak, Light.
 - [5.](#) Flaked Oak, Light.
 - [6.](#) Heart Growth Oak, Light.
 - [7.](#) Heart Growth Oak, Pencilled.
 - [8.](#) Flaked Oak, Light, Shaded.
 - [9.](#) Heart of Oak, Checked and Shaded.
 - [10.](#) Flaked Oak, Light Shaded.
 - [11.](#) Flaked or Quartered Dark Oak, Shaded.
 - [12.](#) Heart of Light Ash, Wiped Out.
 - [13.](#) Heart of Light Ash Wiped Out and Shaded.
 - [14.](#) Heart of Ash, Dark, Pencilled.
 - [15.](#) Hungarian Ash, Wiped Out and Pencilled.
 - [16.](#) Burl Ash in Water Colors.
 - [17.](#) Dark Ash, Pencilled and Combed.
 - [18.](#) Hungarian Ash, Wiped Out.
 - [19.](#) Bird's-Eye Maple, Overgrained.
 - [20.](#) Chestnut.
 - [21.](#) Bird's-Eye Maple, Mottled Ready for the Eyes.
 - [22.](#) Bird's-Eye Maple with the Eyes.
 - [23.](#) Chestnut.
 - [24.](#) Satinwood Mottled.
 - [25.](#) Satinwood Mottled and Overgrained.
 - [26.](#) Curly Maple Mottled to Overgrain.
 - [27.](#) Curly Maple Overgrained.
 - [28.](#) Pollard Oak.
 - [29.](#) Pollard Oak.
 - [30.](#) Cherry Mottled in Oil before being Overgrained.
 - [31.](#) Cherry Mottled and Pencilled in Oil.
 - [32.](#) Cherry Mottled and Pencilled in Oil.
 - [33.](#) Cherry Mottled and Pencilled in Oil as Finished.
 - [34.](#) Cherry Wiped Out and Pencilled in Oil.
 - [35.](#) Walnut Stipple.
 - [36.](#) Black Walnut Pencilled.
 - [37.](#) Walnut Wiped Out and Pencilled.
 - [38.](#) Curly Walnut.
 - [39.](#) French Walnut Burl.
 - [40.](#) Mahogany Straight
 - [41.](#) Mahogany Mottled.
 - [42.](#) Mahogany Feathered.
 - [43.](#) Rosewood as Outlined to Overgrain.
 - [44.](#) Rosewood as Finished.
 - [45.](#) Cypress in Oil.
 - [46.](#) Hard Pine.
 - [47.](#) Whitewood in Oil.
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**MAPLE OR SATIN WOOD. LIGHT ASH.
LIGHT OAK. HUNGARIAN ASH.**

**GROUNDS FOR GRAINING.—IN
ILLUSTRATION OF ARTICLE BY WM. E.
WALL**

PRACTICAL GRAINING.

[Pg 5]

CHAPTER I.

GROUND-WORKS FOR GRAINING



THE following remarks, while not claiming to be anything new or startling, will perhaps be of interest to those who seek to improve themselves in the modern style of imitating the grain of wood. The ideas set forth in these pages are founded on the observation and every-day experience of a grainer to the trade who does not claim to be the best in the world, but who offers his suggestions for the good of the craft.

Graining is often overlooked in the rage for stained white wood or olive greens in interior work, but it will always find favor with those who have experienced its wearing qualities as compared with plain painted work; for should the varnish be of good quality and not crack, the work, if properly done, will stand for years and will not fade in the manner that paint does, and where the work is properly done on new wood it cannot be chipped off unless the wood is taken off with it. It can be scoured off, but will not come off otherwise. Where graining is done over old paint or over work that has been previously grained the case is different, as, if knocked or bruised, it will chip off to the coat beneath, and where the work has formerly been white the effect is very bad and is hard to remedy; but if care is taken when grounding the work, it may to a great extent be prevented.

In preparing old work for graining one of the first things requisite is to have the surface made as smooth as possible; this may be done with sand-paper or—what is better—lump pumice stone.

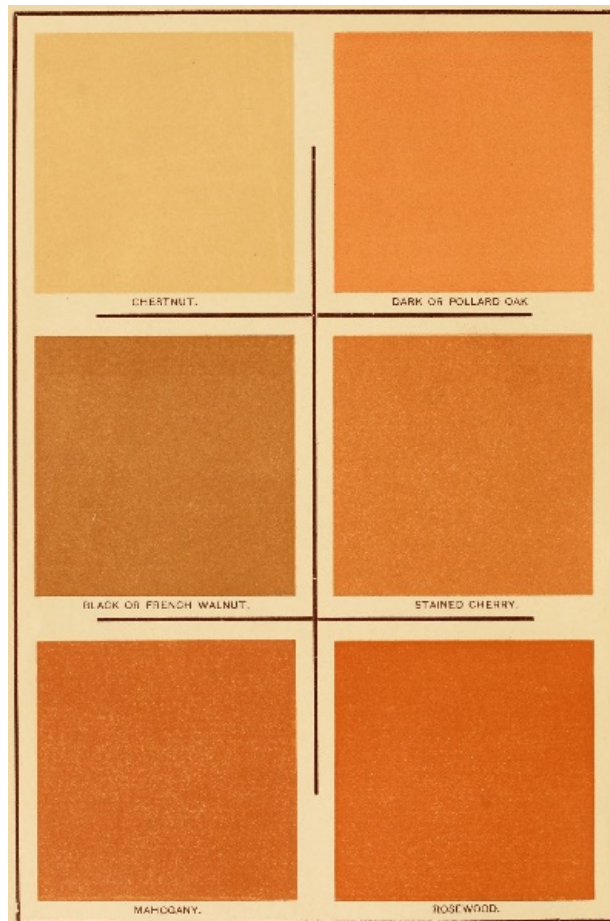
[Pg 6]

In case the graining is done over old paint that has cracked the best thing to do is to remove the old varnish or paint by the application of a strong solution of washing soda or a weak solution of potash. Some painters use spirits of ammonia or burn off with a burning-lamp. After thoroughly

softening or removing the old paint or varnish with either soda or potash, the work should be washed off with a weak solution of vinegar (about a pint of vinegar to a pailful of water), in order to remove all traces of the alkali and prevent its future action on the paint. Some painters think that this is too much trouble and assert that they cannot get paid for doing work in this way, but in the end it will prove to be the best way, as it will greatly add to the appearance and durability of any job so to prepare it. In any case the work should be thoroughly sand-papered and made as smooth as possible before receiving the first coat; this, of course, is for old work. The ground-color should be thinned with about half spirits of turpentine and half oil, with the addition of sufficient drier for old work, and oil, with an extra quantity of drier, for first coat on new work, using some spirits for the second and third coats.

The writer has found by experience that on the cheapest jobs (of two-coat work) where the wood is sappy and the work has been rendered rough by the painter using a large quantity of drier in his priming coat, a much better surface is made to grain over by this method. It will not spot or look cloudy when rubbed in to grain, as two-coat work often does on new wood.

A little "elbow-grease" and sand-paper between coats make a vast difference in the looks of a job when finished, and the ground-work should always be lightly sand-papered before it is rubbed in by the grainer.



**CHESTNUT. DARK OR POLLARD OAK.
BLACK OR FRENCH WALNUT. STAINED
CHERRY.
MAHOGANY. ROSEWOOD.**

**GROUNDS FOR GRAINING.—IN
ILLUSTRATION OF ARTICLE BY WM. E.
WALL**

In mixing the ground-color for graining never use dry colors where it can be avoided, as the work will be more or less gritty, and there is really no saving in their use. A pound of color ground in oil will go much further than one of dry color, is more easily applied and is much better to grain over. Of course much depends on the purity of the colors employed, and the painter will find that the best colors are none too good for his use, as they go further and work better than do the cheaper grades. It is a good plan always to strain the color before thinning, whether the colors used be dry or ground.

[Pg 7]

The foregoing may seem superfluous to the good workman, as he himself has probably found out more than this; but it may put some beginner on the right track, and none of us are expert enough to miss learning a point if we can.

MIXING OF THE GROUND COLORS.

The ground-work for oak is made by adding yellow ochre to lead till the color is deep enough. In

matching the real wood a *little* raw umber will help to bring it to the desired color, but is better without the umber for light work.

In matching very light oak chrome yellow may be substituted for ochre. For dark oak use the same colors as for light and add Venetian red and burnt umber; the same color will do for pollard oak. For green oak (*à la furniture*) do the same as for ordinary work, and when grained shade it over with a thin wash of chrome green or add a little black to the ground color. For ash use the same color as for light oak, but do not get it quite so yellow; a little raw umber will counteract this. A little chrome yellow may be added for Hungarian ash. For chestnut use a similar color to that for ash, but deeper and with a little red. For maple the ground-work should be very light. To an ordinary pot two-thirds full of lead well broken up add about a teaspoonful of chrome yellow and about half that amount of burnt sienna; some grainers prefer a *very little* Venetian red instead of the burnt sienna. In matching the wood get the ground-work as near the lightest color on the wood as possible, and you cannot go astray. For satin-wood the ground-work is similar to maple, but deeper in color. For burl ash use the same color as for ash, or slightly deeper.

[Pg 8]

The ground-work for cherry is probably mixed differently by every painter—at least, that is my experience—and it is hard work to make any workman believe that his is not the right way. In different parts of the country the popular idea of what "cherry color" is, varies greatly. In the majority of cases what has been called "the color of the fruit" is wanted, so we must make the ground-work to suit the demand. Cherry in its natural color is but little darker than ash, and the ground-work may be made in the same way or by adding raw sienna to the lead instead of yellow ochre and umber. The cherry that grainers have to match is often finished by furniture-makers, and is as dark as mahogany; in such cases the ground-work must be made with yellow ochre for the basis of the color and darkened by Venetian red. It will want little if any lead for the darker kinds of stained cherry, but will stand some for the lighter shades. In priming new work add considerable lead for first coat, as it gives more body. Three thin coats are none too many for new work, and they should be applied without leaving brush-marks. There is nothing more aggravating to the grainer than to find that a job is full of streaks of thick paint, as it is almost impossible to do a good job on such a ground-work.

The foregoing remarks apply to priming coats on new wood for graining any kind of wood.

The ground-work for walnut is made by taking yellow ochre for the base of the color and adding a small quantity of Venetian red and a little burnt umber; for very light work a little lead may be added. The same ground will do for French walnut. For mahogany the ground-work is made of yellow ochre, Venetian red and red lead. For rosewood chrome yellow, red lead and a small quantity of Venetian red. The foregoing are about all the woods that a grainer in New England is called upon to imitate; and if I mistake not, it is so elsewhere. Of course all painters or grainers may not agree with me in using the colors named for preparing the ground-work, but good work can be done on such grounds. One thing I wish to say is, Never use Indian red in a ground-color, as it is not transparent and makes the work look muddy. In grounding work for cherry or walnut, where the old paint is not removed, it is well to add some red lead to the color, which should be frequently stirred, or the red lead will deposit on the bottom of the pot.

[Pg 9]

CHAPTER II.

THE GRAINING COLOR.



mixing the graining-color for any wood just as much difference of opinion exists among grainers as to the proper way of mixing the color as there is among painters as to the proper way of mixing the ground-color, and although different grainers have their own method of preparing and mixing their graining-color, and often use different materials and colors, still, good workmen will often obtain the same effects, but by a different process. Such being the case, it is impossible to lay down any cast-iron rule for the materials to be used in the representation of any wood or for the *proper* way to imitate any wood.

In imitating the color of certain woods the colors used are quite simple, while for other woods considerable pains must be taken and a number of colors used if the color of the wood is to be matched. I think the most common fault of graining is that the color is made darker than it should be; still, the grainer is not always to blame for this, as such a fault cannot be laid to his charge if the painters insist on keeping the ground-color itself as dark as or darker than the work should be when grained. Many a time in the experience of grainers is this the case, and I have on more than one occasion mixed a proper ground-color to match wood after being called upon by some alleged painter (who thought the ground-color he had put on was correct) to grain the job, but in most cases it is said, "Do the best you can with it and let it go, as the folks want to move in," or, "I want to get my money," etc., and so grainers do the job if the color is not too far off from what it should be.

[Pg 10]

Let us suppose that we are going to grain a job of light oak in oil. First lightly sand-paper the ground-work with a piece of fine or an old piece of sand-paper, and dust off. The ground-color

should be quite hard, and not tacky, before the graining-color is applied, and two or three days is none too long a time to stand before being grained. Where a good job is to be done and finished at one impression, as we might call it, the manner of working can be reversed—that is, the work can be shaded or over-grained, as it were, on the ground-color in distemper before being rubbed in oil. The check roller can be used to good advantage, and the panels and stiles of doors streaked or mottled. The distemper color must not be diluted with much water, or it will rub off when the oil-color is being applied over it. This way of working is an advantage in matching stained oak, as all that remains to be done after it is grained is to stain it to the desired depth or color. On ordinary work this shading is done on the graining-color when dry.

The colors necessary for graining oak will be raw sienna and burnt umber, with a *very little* black to be added in case it is needed. It is impossible to specify the exact amount of each color to be used, and the judgment of the workman must be exercised in all cases. The ordinary way is to mix about two-thirds raw sienna and one-third burnt umber, adding the black if necessity should require to match wood. Do not get the color too yellow, but rather on the gray shade, as that is most frequently the color of the wood.

[Pg 11]

The color should be thoroughly mixed in a clean pot, and, if in oil, thinned with the following mixture, or sufficient of it to bring the color to the desired shade: Half a gallon of spirits of turpentine; two and a half pints of linseed oil (boiled is to be preferred); half a pint japan drier. It is better not to use too much drier, and, as the drying qualities of each maker's japans, etc., vary greatly, the workman's judgment must guide him as to the exact amount to be used. It is a matter of doubt as to what is the best article with which to thicken the color without altering the shade; a little bolted whiting is very good. Some grainers prefer melted beeswax or soap dissolved in hot water and added to the color while hot, or even cold water stirred into the color. As a rule, the less of these added to the color, the better.

After thinning to the desired consistency, a good brush is the next requisite for applying the color. Do not use stubby brushes, as in so doing you lose more time than you gain by making them last longer. By general consent the flat brush has superseded the round brush in the eastern states of America for grainers' use, as it requires no binding and is a much better blender, when used as such, than any round brush, and it is more quickly broken in for use. It is better to use a medium size rather than one too large; one about three and a half inches across the butt will be found the most serviceable. An oval or a flat sash tool and a No. 2 flat fresco bristle liner, to be used as a fitch tool in putting in hearts, etc., will be all the brushes required. A set of steel combs, or even two, a coarse and a fine steel comb and one or two of good rubber, are all the tools that are required. The rubber combs should be coarse and fine—that is, the spaces between the teeth of the fine rubber comb should measure from one-sixteenth to one-eighth of an inch and the coarse one from one-eighth to one-quarter of an inch. Sometimes a rubber comb with the teeth cut graduated looks well introduced among the other work. Where the work is to be shaded or over-grained it is better to cover the teeth of the rubber combs with a thin cotton rag before using, taking a clean place on the rag for every time the comb is used, but on cheap work this may be omitted.

[Pg 12]

When a piece of work is rubbed in, if it is desired to represent "champs," or "lights of oak"—better known as quartered oak—the rubber combs are first used and carefully drawn through the color—not necessarily in a straight line—and the coarse or finer, or both the steel combs, are drawn lightly over the track of the rubber comb; the work is then blended lengthwise with the flat brush, which has previously been rubbed out clean, and the champs or veins are put in across the grains previously made by the rubber and steel combs. The other implements necessary are a piece of soft rag and the thumb-nail. Many substitutes have been invented for the thumb-nail, but it is as yet unsurpassed for this particular purpose, as it is more sensitive than are the bone or horn substitutes sometimes used.



Plate 3.
PLAIN OR WAINSCOT OAK,
LIGHT.



Plate 4.
FLAKED OAK, LIGHT.

CHAPTER III.

[Pg 13]

QUARTERED OAK.



imitating quartered oak, or any other wood, it should always be borne in mind that it is the *wood* that we wish to imitate, and not somebody's idea of what it should be—for if we copy others, we become, as Byron says, "degenerate copyists of copies"—and the best thing that any beginner can do is to procure pieces of the real wood, study the various changes of grain and get the general character of the grains of each wood impressed upon his mind, then endeavor to reproduce them in his work; for the work will be judged by its general appearance, and not by the looks of any particular piece of work. After the champs or

veins are wiped out with the rag, the spaces of combed work between the champs must be softened by a piece of rag folded three or four times and drawn over the combed spaces and toward the edges of the work previously wiped out with the rag. The edges of the champs may first be sharpened up by drawing the second joint of the forefinger against them. A fine comb is then waved over the spaces of open work and the whole panel blended lightly crosswise with the flat brush. Quartered oak can be imitated by combing the same as has been described, and letting the work dry before taking out the champs. When the work is dry, mix a weak solution of washing soda, and add a little dry umber to show where you touch the work, put on the champs with a fitch tool, let it stand a few minutes to soften the color, and then rub off with a soft rag, and it will be found that the graining-color is taken off to the ground-work, giving the same effect as if wiped out while the color was wet, only that the work looks cleaner. Work done in this way should be over-grained. The champs may also be put in in dark color over the dry combed work, and left so, as some veins of oak appear dark in certain lights. These dark veins may be imitated by combing the work the same as if going to use the rag to wipe out. Do not blend, but put in the veins with a small fitch tool or fresco liner dipped in some color from the bottom of your pot—not too dark—and immediately blend one way, lifting the edge of the color; after practice it will be found that a very good imitation of dark champs or veins is the result. Heart-work may be done in the same manner, but the combing should be done with a steel comb, the color for putting in the grains being but little darker than that with which the work is rubbed in. It is sometimes necessary to go over the whole with a fine steel comb. An occasional dark piece introduced among wiped work tends to relieve the sameness and looks more like the hardwoods; it also gives a better opportunity (where a job is not to be overgrained) to make distinct mitres and joints. This is very important and should never be forgotten. Be sure and have all joints cleanly cut, as nothing so much offends the eye as wavy or crooked joints. It is always better to make a distinction between the long stiles of a door and the adjoining cross rails. A common fault of the amateur grainer is his inability to make clean-cut divisions.

[Pg 14]



Plate 5.
FLAKED OAK, LIGHT.



Plate 6.
HEART GROWTH OAK, LIGHT.

The heart of oak—or, as it is sometimes called, "slash oak"—is usually done in the wet color, and is not combed previous to being wiped out with a rag. The outline of the work is first wiped out and the inner edges are softened with the rag. The edges of the work toward the side of the panel should be filled out either by hand or with a small rubber or leather comb covered with a thin piece of rag, being careful to follow close to the last line done by hand. This is an operation which if not carefully done will spoil the appearance of any job. When the panel or piece of work is grained, a coarse steel comb may judiciously be used, drawing it lightly over the heart-work and softening the whole lengthwise with the dry brush and toward all knotty places or turns in the wood. In case the work is to be overgrained, care must be taken not to soften the edges too much, as it will present too sunken an appearance. The plain grains are made with the comb; and if this part of the work is properly done, the effect is better than if it were full of strong grains.

[Pg 15]

When the work is to be overgrained (and good work cannot be done without), it may be overgrained when dry, in either oil or water color. If in oil (as we finish most outside doors, etc., in this vicinity instead of varnishing them), the same color may be used as for graining, or with the addition of a little more oil and drier, and darkened with umber if necessary. The check roller may first be used in water color, the work having previously been dampened, and, when the checks are dry, the whole gone over in oil. Or the checks may be put in in oil color after first overgraining in water color; this will necessitate oiling or varnishing when dry. The check roller is used to good advantage on hearts of oak, and the work should then be lightly blended lengthwise. In shading the champs the brush may be drawn through the shading-color, leaving the work streaked; then wipe off where the color covers the champs too deep. A similar effect is obtained by using a medium fine comb covered with a rag, the color being taken off in this way; this is for oil color. The blender drawn through water color, or a common oak overgrainer, gives the same effect for water color. It is better to go all over the work with a thin coat of color, as it looks raw without, and shading it in this way gives the depth that is otherwise unobtainable. Shadows are put in around knarly places, and touches added where needed, and the job is finished.

CHAPTER IV.

[Pg 16]

GRAINING OAK.



may be overgrained by using a very thin coating of asphaltum for the shading color; thin with oil and spirits.

Oak may be grained in distemper—that is, using beer or alcohol for a vehicle with the color, instead of oil. Good work can be done in this way, but not so quickly as in oil. A little sugar added to the beer makes it dry slower and work better than without it. If a tablespoonful of alcohol be added to a pint of beer, the work can be combed while wet almost as well as if in oil. First dampen the ground with a sponge wrung out in clean water, and then rub on the color the same as in oil; comb while wet (or use an overgrainer when dry) and blend lightly with a badger blender; then wipe out the veins or champs with a wet rag before the color dries, or afterward, as desired. A

similar effect for light veins is obtained by using the fitch tool to put on the veins or champs and lifting off the color with the blender, thus leaving the champs light. For dark veins the work is put on with a fitch and left as put on. The heart-work may be done in the same manner, both for light and for dark pieces, but it cannot be done so successfully as if done in oil.

Of all the woods we have to imitate, I think oak is the most difficult, hence I have tried to explain the different ways in ordinary use of imitating it; and in closing I would say, Do not overdo your work. Most grainers put in more work—that is, showy grains—than would appear in the natural wood unless it were all selected. And remember that a nice piece of combed work is just as good a representation of oak as the majority of the heart-work often seen.



Plate 7.
HEART GROWTH OAK,
PENCILLED.



Plate 8.
FLAKED OAK, LIGHT, SHADED.



Plate 9.
HEART OF OAK, CHECKED AND
SHADED.



Plate 10.
FLAKED OAK, LIGHT, SHADED.

ASH.

[Pg 17]

In graining ash in oil the colors necessary will be raw umber and raw sienna and a little Vandyke brown or black. Mix the color much the same as for oak, and the same tools can be used. After the color is rubbed in comb the places intended to be plain, and with the fitch tool or sash tool add lines, streaks, etc., if desired, using some color darkened with Vandyke brown or black, and blend lightly lengthwise with the dry brush. The heart-work or growth is represented by wiping out the color with a soft rag, the same way as for the heart of oak, but in ash the hearts are less complicated, and the points of the growth will be found to run more regular, and generally with a rounding edge instead of being serrated, as are the majority of oak-growths. The hearts of ash are also more narrow in proportion to the width of the board than are those of oak, and their imitation is much less difficult. Lightly stipple all wiped-out hearts with the dry brush. I think ash is one of the easiest of woods to imitate, as oak is one of the most difficult.

A very good imitation of a dark piece of heart-work may be done with a small fitch tool when the

color is partially set. Sometimes the work is outlined roughly by lightly wiping off some of the color with a folded rag and describing the general direction of the grain to be followed by the fitch. The work is then put in with the fitch tool, and the edge of the color so put in is lifted with the blender, showing one edge light, and if carefully done, it looks well. The fitch tool is also employed to brighten the effects of the wiped-out hearts and to blend slightly. Where both means are used—that is, the fitch tool and the rag—in doing hearts of ash, the work presents a very woody appearance, and looks much better, if carefully done, than either method of doing heart-work does without the other.

Ash is greatly improved by being overgrained, but a great many of the dark streaks can be put in while the color is wet. Allowance can be made when it is intended to overgrain the work, and the dark places can be done more successfully when the color is dry by overgraining. The same color used to grain the work will do for overgraining it, or by adding a little black and thinning with spirits of turpentine and japan for inside work, and japan and oil for outside work where it is not to be varnished.

[Pg 18]

Ash may be grained in distemper by using stale beer or vinegar for thinners and the colors dry or ground in distemper. The effect of combing may be obtained by using an overgrainer. Where hearts are to be introduced, the work should be lightly stippled with a badger blender; and when dry, the wet rag or sponge may be used to wipe out the color preparatory to putting in the hearts with the fitch tool; this makes a fair job, and is the way followed by many in representing ash. The work looks fully as well, and I think cleaner, if the hearts are put in on the stippling without using a rag or sponge; do not stipple the work too heavily.

In matching Western ash a little blue sometimes helps to counteract the redness of the umber, and will be found to match the dull-gray shade often seen better than black, but ash is of so many varieties and colors as to allow the use of a wide range of colors.

In matching ash the filling of wood has to be taken into consideration. The filling used by the average painter is often anything but what it should be, and the beauty of many an ash door has been destroyed by the miserable attempts at filling often perpetrated by some ignorant painter. This is applicable also to other woods; but particularly to ash.



Plate 11.
FLAKED OR QUARTERED DARK
OAK, SHADED.



Plate 12.
HEART OF LIGHT ASH, WIPED
OUT.



Plate 13.
HEART OF LIGHT ASH, WIPED
OUT, SHADED.



Plate 14.
HEART OF ASH, DARK,
PENCILLED.

CHAPTER V.

[Pg 19]

HUNGARIAN ASH.



wood may be imitated in oil or water color, but the imitation is commonly done in oil. The colors used are raw sienna and raw and burnt umber; a little burnt sienna may be added to the shading color. In oil color the outline of the work is wiped out with a soft cotton rag and softened lightly, or even stippled with the dry brush, and after the color is nearly dry the lines between those wiped out with the rag are gone over with the fitch tool, the color being darkened with umber. The idea is to bring the wiped work into sharper relief. When dry, the shadows may be put in by using either oil or water color and blending softly. A little Vandyke brown will deepen the color, or thin asphaltum may be used in shading or overgraining. Where circumstances require the work to be finished without overgraining, the work may be mottled or shaded in water color on the ground-work before the oil color is applied, and in that case the work must be put in to suit the shadows and the lights that appear through the oil color.

Hungarian ash varies from very bold to very fine grains, and the finer varieties may successfully be done in oil color, using the fitch tool to put in the grains and wiping out simply the lights and the shadows with the rag. The work looks better when lightly stippled in water color with the blender. In doing the work wholly in water colors, the lights and the shadows are first put in, and after these are dry the grains are introduced with the small fitch tool, lifting the edge of the color lightly with the blender. An ash door with the panels done in Hungarian ash make a very neat job if nicely performed.

[Pg 20]

BURL ASH.

Burl ash, or root of ash, is often used in panels, and can be imitated in either oil color or water color, but water color will be found the best. The colors used are raw sienna, burnt umber and Vandyke brown; a sponge with rather small holes is requisite for use in representing the minute clusters of knots. After the work is rubbed in, the sponge (which has previously been faced square on one side) is dipped in some of the darker color and lightly pressed against the work. It is better to use the color a little darker than that with which the work has been rubbed in, and to put it where you wish the darker portions of the wood to appear. After this is dry go over the whole panel with the sponge and some of the darkest color, lightly pressing the sponge against the work wherever you desire the knots to appear. A little growth is sometimes put in by the use of the fitch tool, and tends to relieve the sameness of the work; it must be done carefully and on a small scale. When the work is dry, carefully pass the hand over it and remove the superfluous color which adheres, and the job is then ready to be varnished. It is sometimes shaded after having one coat of varnish, in which case it is necessary to revarnish it; it will require little or no stippling.

In imitating this wood in oil color, the work is first rubbed in and but little color is put on—merely enough to cover the ground-work with a very thin coat; a sponge may then be used to apply the darker color. The sponge should first be thoroughly wet in clean water and wrung out dry before the oil color is applied by it. Have some of the dark color in a shallow vessel and use the sponge as directed in water color, dipping the faced side of the sponge in the color and representing the clusters of knots in this manner. When dry, it may be overgrained or not, according to the shade desired or to the wood to be matched.



Plate 15.
HUNGARIAN ASH, WIPED OUT
AND PENCILLED.

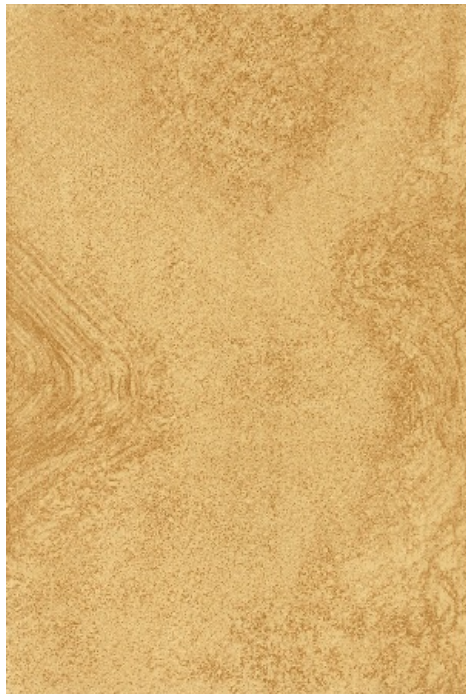


Plate 16.
BURL ASH, IN WATER COLOR.



Plate 17.
DARK ASH, PENCILLED AND
COMBED.



Plate 18.
HUNGARIAN ASH, WIPED OUT.

CHAPTER VI.

[Pg 21]

CHESTNUT.



wood is not frequently used as an interior finish, but sixteen years ago it was almost the only hardwood used for interior finish in the New England States; and any grainer who succeeded in matching it was considered very skilful. It is a highly-porous wood, and on that account is undesirable, as, if not entirely protected from the changes in temperature by being thoroughly filled, it will warp or swell; and I have seen doors concave or convex as much as three inches in a two foot eight inch door. It also turns very dark with age, and its hearts or prominent grains are very coarse. I have seen specimens which



measured eighteen inches from point to point at the heart. The colors used are raw sienna, burnt umber, Vandyke brown and a little burnt sienna. There is some resemblance to ash in the finer growth of chestnut, but its general characteristics are more angular—that is, the hearts run more to points than those of ash—and in most of the hearts a

faint outline appears between the points. The combing also is much coarser than that meant for ash. Chestnut can be done in either oil or water color. I think it can be done best in oil, using the rag to wipe out the color and combing in the edges of the hearts with a rubber comb covered with a thin piece of rag. This comb should not be over two inches in width, and the teeth should be about five to the inch. When the hearts are wiped out and lightly-blended, the fine outline may be put in between the points in the hearts by using a sharp-pointed stick or the round corner of a steel comb. The work, when dry, may be lightly stippled in distemper, or a thin glaze of color without stippling may be applied to bring the work to the desired depth of color; this shading-color may be mixed in oil or water color.

[Pg 22]

In imitating this wood in water color the work should first be stippled in very fine and allowed to dry; then put in the growths with the small fitch tool, and use the overgrainer for the same purpose as that for which the comb is used in oil color to follow the edges of the hearts, and to produce the "combed" work; a piped bristle over-grainer will be found useful for this purpose.

BIRD'S-EYE MAPLE.

To my mind, this is the most beautiful of our native woods, and it is a shame that it is often cut down for firewood; however, it seems to be growing in favor among the furniture-makers, and is far more generally used in the interior of horse-cars and railway-cars than it was ten years ago. The colors used in representing maple are raw sienna, raw umber, a little Vandyke brown or ivory black and a little burnt sienna, to be added to the color when over-graining or putting in the pencil-work and the eyes.



Plate 19.
BIRD'S-EYE MAPLE,
OVERGRAINED.



Plate 20.
CHESTNUT.



Plate 21.
BIRD'S-EYE MAPLE, MOTTLED,
READY FOR THE EYES.

This wood is almost invariably imitated in water color, as oil is too slow in drying to be used with any success. Stale beer is the best vehicle with which to apply the color. The implements needed are a good sponge, a piece of soft cotton rag or chamois leather, a brush to apply the color, a large and a small mottler or cut tool, a badger blender, an overgrainer and fitch tool, and a camel's-hair pencil. First dampen the ground-work over with the sponge, which has been wrung out of clean water, or of beer and water; then rub in the color, doing a panel or a small piece at a time, and while wet wipe out the high lights and put in the shadows with the sponge or the mottler or the backs of the fingers, or draw the color up into small bunches or clusters with the blender or mottler and blend lightly crosswise. When the lights and the shadows are dry, the eyes are put in. By observing the real wood it will be found that the eyes invariably appear in the darker portions of the grain, and that the shadows seem to slope away from them. Very often the shadows all slant one way and the eyes in the same way; this must be taken into consideration in imitating maple. Do not have all the eyes and all the shadows slanting the same way in different panels, as is often seen in the interior of cars, but reverse the style, bringing the opposite panels to balance with each other.

[Pg 23]

The best manner of imitating the eyes is a matter of doubt among practical workmen. The amateur grainer will tell you that he can put them in by striking the ends of his fingers against

the color while wet; this is the way the wood is most frequently misrepresented, and such work looks feeble compared with that done by either of the following methods: After the lights and shadows are dry take some of the dark color from the bottom of your pot and add to it a little burnt sienna; the color should be put in a shallow vessel, such as a saucer. Thin the color, so that it works freely; then take a medium sized camel's-hair pencil which has been "docked" by cutting off the hair about one-quarter of an inch from the quill with a sharp knife, leaving the ends of the hair perfectly square. Then burn out the centre of the brush with a red-hot wire, leaving the hair round the circumference with which to represent the "eyes." The pencil is then dipped in the darker color, and the eyes are put in where desired.

Another way is to cut a piece from a block of soft rubber, make a hole through it and with a sharp knife trim the edges of the rubber till it can be used to take up the dark color. Make the eyes in the same manner as with the pencil brush. The eyes can be put in with a small pencil by describing circles, but care must be taken to have them of uniform size, or nearly so. Another—and probably the best—way is to take a thin piece of chamois leather or a soft piece of cotton rag and wet it in the graining-color; then take a piece of wood four or five inches long and not over half an inch thick; whittle it round and taper it to a point at one end; then wrap the rag or the leather around the stick, keeping a folded edge at the sharp end of the stick; and when the cloth or leather has made one circuit around the stick at the sharp end, wind it farther up the stick, so that only one circle of the folded rag or leather is at the sharp end of the stick. Some of the thick color may then be placed in about the middle of the rag, and by keeping the rag or the leather well wet above the thick color and squeezing the rag as often as necessary, so that the color descends toward the point of the stick, the eyes may be rapidly and accurately put in by striking the end of the folded rag or leather against the work; and a pair of panels may easily be done by once filling the rag with color. This method has the advantage of making any sized "eye," from the largest to the smallest, by simply altering the thickness of the folds; or the eyes may be made in any shape desired, from a circle to an oval. After the eyes are put in the work is over-grained, the color mostly being burnt sienna. The heart grains are put in with a camel's-hair pencil. Some grainers use a crayon pencil for this purpose, which should be soaked in beer or vinegar and used moist; the various over-grainers are also used in putting in the heart grains. The "eyes" should always be noticed—that is, the over-grainer should describe some part of a circle in passing the "eyes," so as to have them in harmony with the general features of the wood. All water-color work should be lightly gone over when dry with the hand, to remove any roughness in the graining-color. Some grainers prefer to touch up the high lights around the "eyes" with some of the ground color after the graining is dry, but it must be done very carefully or it shows badly.

[Pg 24]



Plate 22.
BIRD'S-EYE MAPLE WITH THE
EYES.



Plate 23.
CHESTNUT.

CURLY OR ROCK MAPLE.

[Pg 25]

This wood somewhat resembles bird's-eye maple, and is often used in the same piece of furniture. It differs from bird's-eye in having but few, if any, "eyes" in it, and is mostly mottled and over-grained. A five-inch mottler that will cover the stiles of an ordinary door is a very necessary tool, as one that is not wide enough necessitates going over the work twice, and then it will not look so well as if done with a brush of sufficient width to cover the whole stile. The colors used for bird's-eye maple will answer for this wood, but the general tone is darker.

SILVER MAPLE.

This wood is represented by using ivory black for the graining-color; the groundwork should be almost white. The work is mostly mottled and very lightly over-grained. Eyes are sometimes put in, and the effect of the work is very showy when carefully done.

CHAPTER VII.

[Pg 26]

SATINWOOD.



is a very delicate wood, of the maple family; it probably derives its name from its resemblance to folds of satin. It is seldom represented in America, but is frequently imitated in England, being used in connection with maple in some of the principal rooms, such as drawing-rooms, parlors, etc. The panels of the room are done as satinwood, the stiles as maple, and sometimes the mouldings as a darker wood, such as dark oak, walnut or rosewood.



Plate 24.
SATINWOOD MOTTLED.



Plate 25.
SATINWOOD MOTTLED AND
OVERGRAINED.



Plate 26.
CURLY MAPLE MOTTLED TO
OVERGRAIN.



Plate 27.
CURLY MAPLE OVERGRAINED.



Plate 28.
POLLARD OAK.



Plate 29.
POLLARD OAK.

The same groundwork and the same graining-colors may be used as in representing maple, but a little ivory black may be added. The tools are similar, but a piece of buckskin or chamois leather is substituted for the bristle mottlers used for maple. A roll of oil-putty is sometimes used to take off the color in making the high lights; the putty should be rolled along the panel lengthwise of the grain, and then the panel blended crosswise. Care should be taken to have the graining-color light, as the effect is lost if the color be too dark. The lights are quite prominent, and it requires no little skill successfully to imitate them. When the mottling or lights and shadows are dry, they may be very lightly over-grained with a fine bristle overgrainer, the bristles being separated by a comb and the color used very thin. The over-graining should not be blended, as it will look too prominent and spoil the effect of the lights and the shadows. A piece of soft cotton rag will answer the same purpose as the buckskin or chamois leather. When using either of them with the intention of making the mottled effect of the wood, first wet them in clean water or in beer and wring them out nearly dry; then, after the color is rubbed on the work, roll them over them over the surface as directed. The result will be that the leather or the rag will take off the patches of the wet graining-color. Then blend softly, and when dry overgrain.

CHAPTER VIII.

POLLARD OAK.



HIS wood is a great favorite with British grainers, and is often splendidly imitated by them. The wood itself is from old gnarled trees or stumps and has a variety of grain almost equal to French walnut. It may be represented in either oil or water color, or may be done partially in both distemper and oil, which I think is the better way; the best job I have ever seen was executed in this manner. It is first done in oil; the colors necessary are raw and burnt sienna, burnt umber, Vandyke brown, and sometimes a little ivory black or ultramarine blue. The wood varies from pieces comparatively free from knots to others almost filled with them, like the root of walnut, etc. The grains are first done in oil, the knots, etc., being somewhat subdued; and when this is dry, the whole is gone over in water color and left in the color it is intended to have it remain. The knots and shadows are touched up, etc. After the water color is dry

[Pg 28]

the fine champs may be put in by using a slice of raw potato in the same manner as that in which the thumb-nail is used on larger work. A camel's-hair pencil is needed properly to finish the work. A great deal of time may be spent in representing this wood, and yet but few may succeed in faithfully imitating it. Since the fashion has changed in Boston and its vicinity from walnut and cherry front-doors to oak doors, we begin to see panels of pollard oak; sometimes whole doors are veneered with it, and the effect is superb.

CHERRY.

This wood is naturally but little darker than ash, yet the popular idea of what its hue should be is of a color nearly as dark as that of mahogany. Cherry is frequently misrepresented by staining whitewood or pine with burnt sienna, etc., but, it being impossible to conceal the *grain* of the whitewood or the pine, the deception is easily discoverable by any one at all familiar with the grains of different woods. For this reason a much better imitation can be obtained by graining to imitate cherry (or any other wood), rather than by staining, as the grainer, if competent, can represent both the color and the grain of the desired wood.

Cherry may be imitated in either oil color or water color, and an excellent job can be done either way. My preference is for oil color. The natural wood may be matched by employing raw and burnt sienna and raw umber, but the stained cherry requires the use of burnt sienna, burnt umber and Vandyke brown for the very dark veins, also, in some cases, crimson lake, to be used as a glazing or shading-color. The tools needed for oil color are the flat brush, combs, fitch tool or fresco-liner, sash tool and a piped bristle overgrainer. When a piece of work is rubbed in, it may lightly be stippled with the dry brush (or the stippling may first be done in distemper before the oil color is applied). It may be mottled by wiping off the color with a rag, or by applying a little color with the sash tool and lifting the color with the flat brush. The growth may then be put in with the fitch tool, the flat brush being used as a blender. The growths are put in across the mottled work previously done. The growths or hearts can also be wiped out with the rag in the same manner as in imitating ash, and the fitch used to interline the points of the hearts; but the growth of cherry is seldom as bold as that of ash, and, to my mind, it can best be imitated by the use of the fitch tool. Where the hearts have been wiped out with the rag they should always be gone over with the fitch tool and blended, as the effect is decidedly better than if they are left without pencilling.



Plate 30.
CHERRY MOTTLED IN OIL
BEFORE BEING OVERGRAINED.



Plate 31.
CHERRY MOTTLED AND
PENCILLED IN OIL.



Plate 32.
CHERRY MOTTLED AND
PENCILLED IN OIL.



Plate 33.
CHERRY MOTTLED AND
PENCILLED IN OIL AS
FINISHED.

Some grainers prefer to imitate cherry wholly in distemper, in which case the tools used are much the same as those for oil, substituting the badger blender for the flat brush in finishing the work. First dampen the work with a sponge and rub in the color with a flat brush; the mottled parts may be done light, with the sponge, or dark by using the mottler or the sash tool. The hearts are put in with the fitch after the mottling is dry, the overgrainer being used in same manner as that in which the combs are used in oil color. The best vehicle for the distemper color is stale beer; it may be diluted with one-half water, and in cold weather a little alcohol may be added. The work may be shaded or overgrained when dry, whether the graining has been done in oil or in distemper. If done in oil, the shading color may be applied in either oil or distemper; but if the work has been grained in distemper, the shading color (if applied immediately to the work before varnishing) must be in oil. In some cases the distemper color is varnished before being overgrained; this, of course, necessitates revarnishing.

[Pg 29]

The grains of cherry are apparently simple, but they will stand a large amount of study, and good work is seldom done without taking pains to represent the various characteristics of this at present fashionable wood.

Sometimes glue size is used in the color for a distemper binder, but, being of animal matter, it is seldom used by grainers. With the addition of alcohol enough to make it smell strong, it passes for white shellac among some cheap painters, and is used for first coats or stain work. It will be found that the mottlings of cherry invariably run across the grain, and this is the chief reason that stained whitewood makes such a poor imitation, the reverse being the rule for whitewood.

One thing I wish to impress upon beginners: that is to keep the color as nearly as possible like that of the natural wood, and to cater as little as possible to the prevailing fashion of making the color of cherry as dark as that of mahogany. If people want a mahogany color, try and induce them to have also a mahogany grain. I know that frequently some article of furniture made of stained cherry has to be matched in color in graining a room, and in such cases there is no resource but to imitate it. I once went to grain a chamber in imitation of cherry, and the lady of the house requested me to observe the color of her mahogany chamber-set, which color she desired to have on the woodwork of the room. I found the "mahogany" to be cherry and whitewood stained very deep, and so informed her. It was a perfectly new set, and had been sold to her for mahogany by a respectable firm. I should judge it to be worth one hundred dollars, so there is evidently "cheating in all trades but ours."

The piped overgrainer for use in oil color will be found an excellent help, both for continuing the lines of the pencilled work, and for doing the straight or mottled combing so often observed in the natural wood.



Plate 34.
CHERRY WIPED OUT AND
PENCILLED IN OIL.

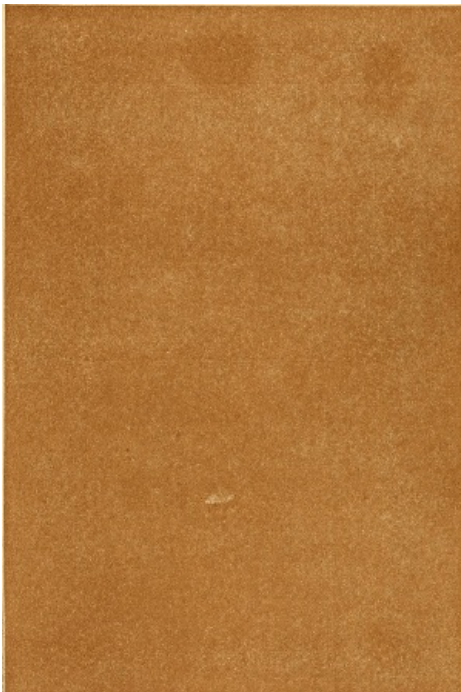


Plate 35.
WALNUT STIPPLE.



Plate 36.
BLACK WALNUT PENCILLED.



Plate 37.
WALNUT WIPED OUT AND
PENCILLED.

CHAPTER IX.

[Pg 31]

BLACK WALNUT.



wood was very fashionable as an interior finish not very long ago, but its place is now largely occupied by cherry, mahogany and oak, and I think the change is for the better; for unless a room is well lighted, the effect of the deep color of walnut is rather sombre and the grains have less light and shade and less variety than those of oak or cherry. It can be imitated in either oil or distemper. The same tools are used as for ash. The piped bristle overgrainer is an excellent help for both oil and water color. The graining color is composed mostly of burnt umber, Vandyke brown being added for the darker portions of the work.

In my opinion, the best way to imitate walnut is first to stipple it with a thin mixture of Vandyke brown in distemper, using nothing but beer for thinner. When this is dry, rub in the oil color and wipe out the hearts with the rag in the same way as for oak and ash. Care must be taken not to add much water to the stippling color, or the stippling will be wiped off when the rag is used over it. When the hearts have been wiped out, the fitch tool may be used to sharpen up the edges of the growths and the whole lightly blended with the dry flat brush. The hearts can also be put in by using the fitch tool, or by mottling or wiping off the color slightly with the rag and then using the fitch tool as directed, the edges of the color being slightly lifted with the dry flat brush.

Some grainers prefer to use water color rather than oil, and do their work wholly in distemper. The same kit of tools is used as for cherry in distemper—viz., sponge, flat brush, sash tool, fitch tool, blender and overgrainer, either piped or plain. First stipple in the work slightly darker than if it were to be gone over in oil, and then put in the grains with a fitch tool and the overgrainer. Care must be taken in blending the hearts after pencilling, or the graining-color will lift off and show the ground-color. Oil color is sometimes used to pencil in the hearts, as it will not lift the stippling, no matter how much it is blended. A camel's-hair pencil is sometimes used to finish the points of the hearts. Care should be taken to have all the mitres and joints cleanly cut, and slightly to vary the color of the different portions of the work, so as to avoid sameness. The work may be shaded or overgrained after it is dry, but it is generally finished at once. For a quick job, done wholly in oil, rub in the work rather dry and stipple with the flat brush; then put in the hearts with the fitch tool and blend. Use the bristle piped overgrainer for portions of the work. By using the finer steel combs covered with cotton rag and stippling the work, when combed, with the dry brush, a very fair imitation is obtained.

[Pg 32]

CHAPTER X.

FRENCH WALNUT BURL.



variety of walnut comes from France, although fair burls come from Spain and Italy. A large portion of the alleged French walnut is merely the root of the American walnut, but the best specimens of burl come from France and have not as yet been grown in this country. The finest burl is cut from the excrescences or bunches which appear on the trunk of the tree, and is quite expensive. It is most frequently used for small panels on furniture, and is not generally used for house-work. Gunstocks are sometimes made from it, and such are very beautiful.



Plate 38.
CURLY WALNUT.

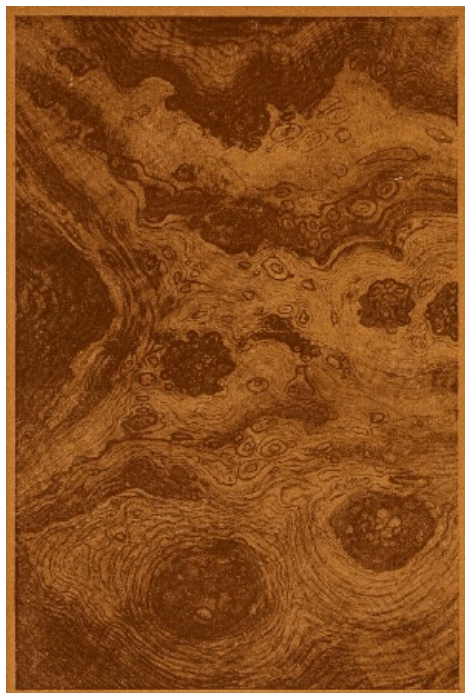


Plate 39.
FRENCH WALNUT BURL.

French walnut is probably imitated in a different manner in every State in the Union; hence the manner herein described may appear wholly wrong to some grainers. But if we succeed in

matching the wood, the manner of doing the work is seldom called in question. There are several "patent" processes for imitating this wood, exclusive of the transfer roller.

I was informed some years ago by an agent who possessed the secret of the *best* way in which to grain French walnut that after two lessons in his process anybody could perfectly match the wood; he did not succeed in selling me the great (?) secret. Yet there are processes other than the ones here given which for certain kinds of work are excellent, but they are seldom used by grainers to the trade. In England the burl is seldom imitated, English imitations being mostly confined to the curly or wavy portions of the grain.

French walnut may be represented in either oil or distemper by being partially done in oil and finished in distemper, or *vice versâ*. The tools are the same as those used for black walnut, as are also the colors—burnt umber and Vandyke brown. For the very light portions a little burnt sienna may be added to the color. When the work is to be done in oil, rub in the color rather dry, and with the sash tool dipped in some dark color cover such portions of the work as you wish to appear dark; then take a piece of soft cotton rag and remove the color where the light places are to appear, and work up the dark places with the rag until the desired effect is obtained; then blend lightly with the dry brush, and with the fitch tool add lines and curves, or knots if desired, constantly keeping the grain of the wood in mind and striving to represent it. Blend lightly with the dry brush and stipple the light places with the flat brush (or the stippling may be done in distemper on the ground-work before the oil color is applied). When the oil color is dry, the work may be shaded or overgrained in either oil or water color.

[Pg 34]

The other method in ordinary use among grainers is to do the work wholly in distemper, and for work that is not too complicated this method is undoubtedly the best. The mode of procedure is much the same as for oil color, using the sponge to make the lighter parts, and darkening the work with the sash tool, making the settled places preparatory to overgraining. If done in this manner, the work will be gone over two or three times in an hour, which is quite an advantage, as, if the work is first done in oil, it must be allowed time to dry before being shaded; but for intricate work the grain may be done equally well in oil color if it is overgrained when dry.

This wood is not of sufficient size to be used on large surfaces without being jointed; hence it is not in good taste to imitate it on a very large scale. Its use is more properly confined to small panels and to interior rather than to exterior work. It is a very rare occurrence to find a specimen of the real wood exposed to the weather as, being but a thin veneer, it would be quickly affected by the extreme changes of temperature to which it would be subjected.

In conclusion, the only way to become expert in imitating French walnut is to strive to copy the grains of the real wood; and no wood is more often misrepresented than is French walnut.

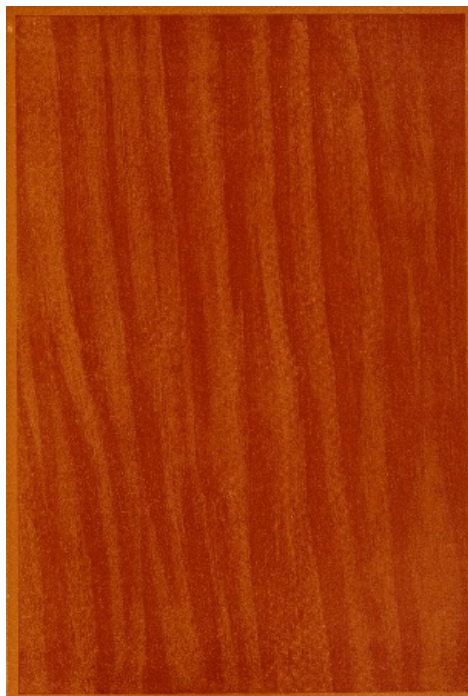


Plate 40.
MAHOGANY STRAIGHT.



Plate 41.
MAHOGANY MOTTLED.

CHAPTER XI.

[Pg 35]

MAHOGANY.



wood was a great favorite with the grainers of the last generation, and it is at present coming back to old-time popularity. The old Honduras "feathered" mahogany is rarely seen except in old furniture, and this kind of graining is seldom called for nowadays. The modern mahogany is more straight-grained, and is generally much lighter in color, but the furniture manufacturers do not hesitate to stain the wood to any depth of color, and thus they set the pattern which the grainer must follow as regards the color. It is represented in both oil and water color, or by being partly done both ways, as in the case of walnut. The colors used are burnt sienna, burnt umber and Vandyke brown, with crimson lake for overgraining on particularly bright work. The tools used are the same as those for walnut. No better way to imitate it will be found than first to stipple it with a thin wash of Vandyke brown in beer, much the same as for walnut, but using the flat side of the stippler or blender

more than the tip, as the pores of the wood are generally longer than those of walnut. After the stippling is dry rub in the oil color, which is composed of about three-fourths burnt sienna to one-fourth burnt umber, or a little Vandyke brown may be added to the color. The dark veins are put in with the sash tool dipped in a little clear Vandyke brown, which should be mixed in a separate vessel and thinned mostly with driers, as Vandyke brown is a very slow drier. The work is then gone over with a soft cotton rag, and the color is removed where the lighter grains are to appear; the rag is also used to soften the edges of the darker streaks and to blend them into the lighter grains. The lights and shadows are made, and the whole is then lightly blended crosswise. The bristle overgrainer of the fitch tool is used to put in the finer grains, or this may be done when the oil color is dry. This is the manner in which the modern straight mahogany is most frequently imitated, but it can wholly be done in water color, using the sponge for the same purpose as the rag is used in oil.

[Pg 36]

The "feather" mahogany is best represented in water color. The centre of the feather is darkened with Vandyke brown, and the mottler or sponge is used to make the darker curves which radiate from the centre of the "feather;" then with a thin piece of stick or a piece of cardboard make the bright blaze marks that are usually seen through the centre of the feather. A small mottler or cut tool may be used for this purpose. The markings radiate from the centre outward in a curved line and across the darker veins; allow this to dry, and then lightly overgrain to bring out the effect, touching up the parts that are to appear very dark. After this is dry the hand should lightly be passed over the work to remove any surplus color, as one coat of varnish sometimes fails to lay out on water-color work where the graining-color has freely been used. This applies to walnut and rosewood in distemper as well as to mahogany. The wood is sometimes represented in oil without first stippling, but it never looks so well. Of course the stippling may be done after the work is dry, but it makes a better appearance if done before the rubbing with oil. If it is desired to overgrain, the work, if done in oil, should be shaded in distemper, and *vice versa*. For depth

and brightness, add crimson lake with a little Vandyke brown.

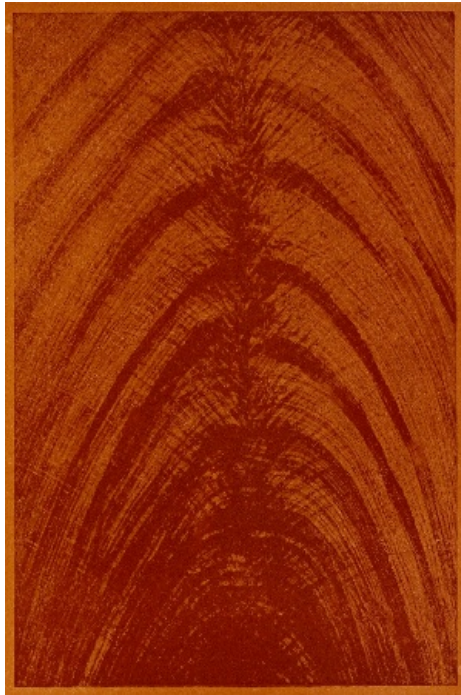


Plate 42.
MAHOGANY FEATHERED.



Plate 43.
**ROSEWOOD AS OUTLINED TO
OVERGRAIN.**

CHAPTER XII.

[Pg 37]

ROSEWOOD.



wood is seldom imitated in this country except on piano-legs and caskets or coffins, and then it is done in stain on the wood without first being painted. Whitewood is given two coats of logwood stain, and after that is dry the grains are put in with a bamboo brush, which is made by beating the pulp out of the ends of short strips of bamboo, leaving the harder portions of the wood, which act as bristles for applying the graining-color. Four or five strips of bamboo an inch or



more wide are fastened together with wire, so that their edges interlock at the point of the brush; the brush is then dipped in the graining color, which consists of iron-filings dissolved in vinegar. The surplus color is shaken out of the brush, and the grains are put in in the same manner as that in which an overgrainer is used in water-color. The darker veins are added with a sponge after the finer grains are put in, and the work after being grained is generally filled with

rose-pink. This process can be used only on new surfaces, and is of little value to the grainer to the trade.

The ordinary way of imitating rosewood is to do it in water color, although it may be done in oil. I prefer to do it in distemper, as the work can more quickly be finished in this way. The colors used are Vandyke brown, ivory black and rose pink. The basis of the color is Vandyke brown and a little black added to it. The ivory black and the rose pink are mixed separately, and applied to the work as desired while the color is wet, carefully blending where necessary. The rose-pink is first streaked through the color and blended; then the sponge is used to remove the color and make the lighter shades. The black veins are then put in, and after the whole is dry the overgrainer and the fitch tool are used to put in the fine grains. Last of all, the edges of the dark veins are sharpened with the fitch tool, using thin black for this purpose; this final application of black may be done in oil. Care must be taken not to take too much black, or the effect will be too sombre. The natural wood is almost invariably darkened by being stained as we see it on pianos, and its beauties are obscured by so doing. When the water color is finished and dry, the hand should be lightly passed across the work to remove any surplus color that may not thoroughly adhere, as, if not removed, it works up into the varnish, or the varnish strikes in where the graining-color is thick; and for this reason two coats of varnish are better than one coat on any dark wood that has been done wholly in water color.

[Pg 38]

In operating entirely with oil the tools are much the same as those used for water color; the bristle piped overgrainer is best for oil color. The work is done in much the same manner as with water color, using the rag where the color is to be lightened, with a little more spirits of turpentine and japan in the color than ordinarily.

The grains of rosewood are not easily copied. The wood exhibits a variety of grain second only to oak, and I think that, after oak, it is the most difficult wood to imitate, as to do it justice requires the free treatment which can be given only by a trained hand and a correct eye. The average veins are free and graceful without being set or constrained, and the grains are constantly interlocking and branching off from the main hearts.

CYPRESS-WOOD

has but recently appeared in this country as an interior finish. It is a very soft and porous wood, and is a good kind to keep out of a house, owing to its liability to shrink and swell, but occasionally we find rooms finished with it, with the exception of the doors, which the grainer is called upon to match. I am informed that cypress trees have to be girdled in the spring and killed, so that they contain but little sap when cut in the fall, as, if cut green, they would sink in the water before they could be floated to the mill. This shows how ill suited this wood is for an interior finish.



Plate 44.
ROSEWOOD AS FINISHED.



Plate 45.
CYPRESS IN OIL.

The grain of cypress somewhat resembles that of hard pine, but is broader in the heart and finer-grained; it also presents more contrast between the light and dark portions of the growth. The ground is slightly darker and more yellow than that used for oak. The graining-color is made of raw and burnt sienna and burnt umber, and is mixed in oil. When the color is rubbed in, the hearts are wiped out in the usual manner. A rubber comb can be used to make portions of the heart by occasionally using it in the finer portions of the wiped-out hearts, taking care that the lines made by the comb closely follow those made by hand, and that they are equally distinct, or the places where the comb has been used can readily be distinguished from the rest of the work, and they look very bad. There is but little use for the fitch tool in matching cypress; the combing is mostly fine and rather straight. The steel combs should never be used over the lines made by the rubber comb. The work may be shaded with some of the graining-color to which some black has been added, and the whole thinned with spirits. It needs but a very thin glaze, and is ordinarily finished without shading.

[Pg 39]

CHAPTER XIII.

[Pg 40]

HARD PINE.



wood is seldom imitated, and, although its grains are simple, they cannot be matched without taking pains. The grain of hard pine is in some respects different from that of any other wood; the growths are generally quite narrow, and are not complicated, without having many knots, and are decidedly straight, as is also the combed work. The groundwork is much the same as that for oak, being slightly more yellow. The graining-color—which is mixed in oil—is composed of raw and burnt sienna, and a little burnt umber is added. The grains are put in by first using the rag to wipe out the hearts and then pencilling in the grain, or for the lighter parts of the grain the pencilling may be omitted. The combing is done with moderately fine combs. Never go over the same place twice, as the grains of pine are always straight and never interlock, like those of oak. The work should lightly be blended lengthwise. The color used to pencil in the growths should be darker

than that with which the work is rubbed in, and the blending should always be done toward the outside edge of the grain. When the work is dry it may lightly be shaded to give it depth, or slightly mottled. Some pieces of hard pine are profusely mottled, and I have seen specimens that had the appearance of fine Hungarian ash.



Plate 46.
HARD PINE.

WHITEWOOD.

It is seldom necessary to imitate whitewood, as the original is so cheap, and because there is as much difficulty in matching the color of the wood as that of the grains. The ground-color is about the same as that for light ash, and the graining-color can be mixed with raw sienna and raw umber, adding black or blue; or yellow ochre can be used for the basis of the color, adding raw umber and a little black for the dark streaks. The work is then put in with a fitch tool and blended softly, or a piece of pointed wood like a pencil may be used, the point being covered with a thin cotton rag, and the heart grains put in with this, taking care to have the grains subdued and not appearing prominent. The grains of whitewood generally appear sunken; they are simply outlined, and not softened with the rag.



Plate 47.
WHITEWOOD IN OIL.

Whitewood sometimes assumes a blistered appearance peculiar to itself and somewhat like the grain of Hungarian ash. This kind of whitewood is very difficult to imitate, as the high lights are so strong and brilliant as to require touching up with the ground-color after the work is dry. This kind is seldom imitated.

VARNISHING OVER GRAINED WORK.



a job of graining is finished; if it is deemed necessary to varnish it, the question arises, "What kind of varnish shall be used?" and this is a subject on which widely different opinions prevail. Almost every master painter has his favorite kind of varnish and is slow to accept anything contrary to his own idea of what should be used; and right here I will say that if you have something that, like the joke of the clown in the circus, has withstood the test of time, do not look farther, but "hold fast to that which is good."

There are many kinds of varnishes and finishes made especially for application to exposed work, outside doors, etc., but my experience with many of them has been anything but satisfactory. There may be some particular kind of varnish that will stand exposure in this climate without cracking or turning white, but I have never seen any such. I

would like to find some article that will withstand the changes of temperature to which it would be subjected in the New England climate—say one hundred and twenty to one hundred and thirty degrees annually—and I do not expect ever to find any such, as, when the varnish has been applied to exposed work and the gum has become thoroughly hardened, cracking will of necessity ensue, for the reason that heat causes the expansion of the material to which the varnish is applied, and, the varnish being thoroughly hardened, so that it cannot expand, it must crack in obedience to the law of nature that heat expands. Cracking may result from inability to contract after having expanded from heat. This is allowing for no internal complications in the varnish, and what is written above wholly applies to varnish that is exposed to the weather, and is based on what seems to be practical experience.

[Pg 43]

I am living in a house that is grained in oil on the outside; the clapboards and trimmings on the southwest side were chosen for testing the varnish. To prevent any misunderstanding, I will state the manner in which the work was done. The clapboards are No. 1 spruce, the trimmings are pine and cypress. The carpentry work was done in July, 1886, and stood three days before being primed. The priming color was mixed as follows:—One hundred pounds of white lead, to which were added about twenty-five pounds of yellow ochre, a small quantity of japan drier, and thinned with best raw linseed oil. After being primed for two weeks, the work was grounded, using the priming color that was left, with enough lead added to make a groundwork for oak. The trimmings are done in cherry. The work was not grained until October, 1886, and neither wax nor anything else was used for megilp. The varnishes were nearly all applied on the tenth day after the work was grained; the day was warm and bright, and each varnish was put on just as it came from the factory, without thinners of any kind. Each was poured into a clean vessel and a new brush was used, so as to give each kind of varnish an even chance; and the result is below stated.

Seventeen kinds of varnishes, hardwood finishes, spar composition, etc., were applied as stated, and the result was highly disastrous, as, with two exceptions, they all cracked in less than twelve months. The two exceptions were, first, a mixture of linseed oil two parts to japan drier one part; second, a preparation said to contain ninety per cent. of linseed oil. This is the only thing on the side of the house to-day (February 29, 1888) that has any gloss; all the others except the oil and the drier are in various stages of imitation of alligator skin, or they have cracked so minutely as wholly to destroy the gloss. Some of the hardwood finishes cracked in twenty-eight days after being applied, and their makers claimed that they could be used on outside work without danger of cracking. The longest time that any varnish stood without cracking was slightly over eleven months, and that kind cost five dollars per gallon, and was sold for wearing body varnish.^[A] I have some of these varnishes and finishes applied to inside work, and at present they show no signs of cracking, but I am afraid that it will be only a question of time when they too will crack. For interior work I am in favor of using shellac over grained work in preference to varnish, and I have shellac applied to the doors of my rooms, the casings, etc., being finished with first-quality varnish; so that I will have an opportunity of observing their respective merits and durability. Shellac finish is less glaring than varnish, and has the advantage of drying quickly; so that it escapes the dust which is invariably present in new buildings. It can be rubbed down, if necessary, in the same manner as hardwood, and where graining is done to match wood finished in shellac it makes the work look uniform. I have yet to see a job of new work that has cracked after being shellacked if properly grounded. There are some of the old-fashioned varnishes that stand without cracking on inside work. One case I remember where an office had been grained and varnished when the factory was built, and, so far as known, had been revarnished but once for thirty-two years afterward. There was no sign of cracks in the varnish, and those people who profess that the cause of cracking is due to wax in the graining color would be surprised to see that the graining color in this case appeared to contain plenty of wax.

[Pg 44]

[Pg 45]

Varnish may stand for a long time on inside work without cracking; but the reverse is the rule in my experience; for varnish that has been bought from the factory expressly for inside work, and for which a good price has been paid, has cracked in less than six months after being applied, and this was on new wood; so that there was apparently nothing to hasten its early decay.

Some seven years ago I varnished a table-top which had been grained. I chose what a master carriage painter called one of the best makes of rubbing varnish, and applied three coats to the table, rubbing it on the third day after each coat. It looked nicely when finished, but in less than four months it had cracked. The cracks finally became so deep that they were faced up with putty; and this was a solid walnut table-top which had been thoroughly planed off and shellacked before being painted and grained. This is but one of many instances which have led me altogether to discard varnish for any work I wish to preserve; and where interior work is not too much exposed to wear I prefer to leave it as grained in oil or to shellac it, and for exterior work to give it an occasional coat of oil and drier rather than to varnish it.

I have not mentioned the names of the makers of the varnishes, but they were some of the representative makers of the country, and most of the labels expressly stated that the contents of the packages would not crack, blister or turn white.

I hope that the experience of others has been more favorable than has mine, but we must speak of things as we find them.

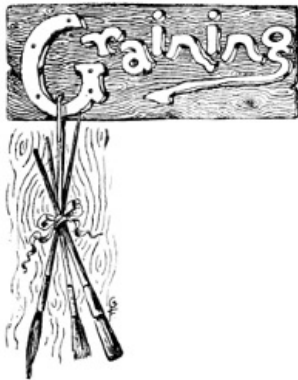
FOOTNOTES:

- [A] October, 1890.—The preparation containing 90 per cent. linseed oil cracked badly in fourteen months: the oil and dryer cracked soon after, due, I presume, to gum in the japan.

CHAPTER XV.

[Pg 46]

GRAINING CONSIDERED AS A FINE ART.



—that is painting in imitation of wood or of marble—is generally looked upon as a business branch of the house-painting which any competent painter is, or should be, able to do, but in reality we find that only about four or five men in each large city do all the best work in this line, and make a business of it, doing nothing else—"graining for the trade," as it is called. One grainer will do the work of twenty or more paint-shops, and if he is a first-class workman, he will earn more than double the wages of an ordinary painter, and will find employment all the year round.

Now, any large city can boast of twenty to thirty artists—landscape, marine, portrait, etc.—whose work is praised and is accepted at art-galleries, and in some cases brings enormous prices at sales; but why is it that their work is lauded to the skies; when at best it is but an imitation of nature, and when an equally good imitation in another

form is (as a rule) condemned by architects and critics as unworthy a place in artistic residences or in the more prominent rooms of such houses? Any person of ordinary intelligence can at a glance discover that an oil painting is a mere copy or representation of nature, but the grain of wood or of marble can be so closely imitated that it is impossible even for an expert to detect at a glance that it is counterfeit, and a close examination sometimes fails to reveal whether it is genuine or not.

Some people think that successfully to imitate the color and the grain of any wood or any marble is as much of an art as is the representation of a landscape, for, while there are dozens of artists who can faithfully reproduce a landscape on canvas, there are few who can make a pine door look like the oak or cherry jamb and casing that surround it, as first-class grainers often have to do, and do so well that not one person in a thousand could tell the real wood from the imitation. And not only is the wood imitated by such men, but mouldings, cornices, panels, etc., are so faithfully represented as to pass for such except on close inspection.

[Pg 47]

It is said that in order to become an artist one must be born with certain qualifications or he will fail to be successful: this is equally true in the case of the grainer; and some people think that in order to become a first-class grainer more gifts are required at birth than if the person were destined to become an artist, as the artist generally has before him models or the original of his picture, while the grainer is supposed to imitate whatever kind of wood or marble is called for—in most cases, without any of the original before him and doing the work from recollection of the grain of the particular wood or marble he is imitating. While it is very true that the average imitation of wood or marble is poorly done, still the whole business should not be condemned, and any large city can furnish illustrations of the fact that graining is so well done as to deceive workers in wood; and they ought to be competent judges.

The idea of representing wood by painting is as old as any branch of the business, and, though excellent work has been done in days gone by, the efforts of the foremost grainers of the present time will favorably compare with those of any age, as, with new inventions to aid them, they have

CHAPTER XVI.

THE TOOLS USED BY GRAINERS.

Steel combs (Fig. 1) are four or five inches wide, with teeth of three regular sizes—course, medium and fine. They may be used for all woods where the grain is strongly marked, whether the work is done in oil or in distemper; there is also a four-inch steel comb with teeth graduated from coarse to fine (Fig. 2) that is often useful; a few one- or two-inch steel combs are handy for use on mouldings or on odd corners.

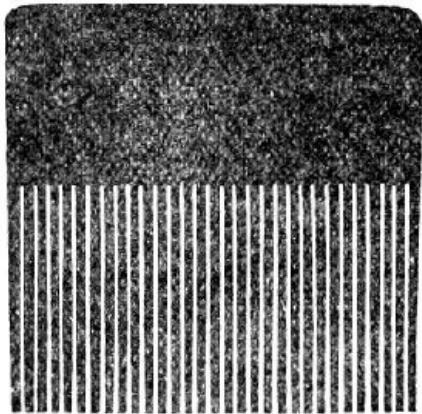


FIG. 1.

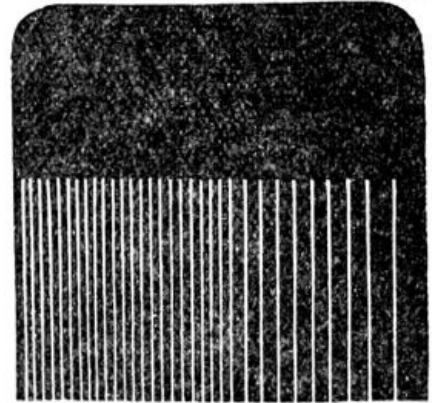


FIG. 2.

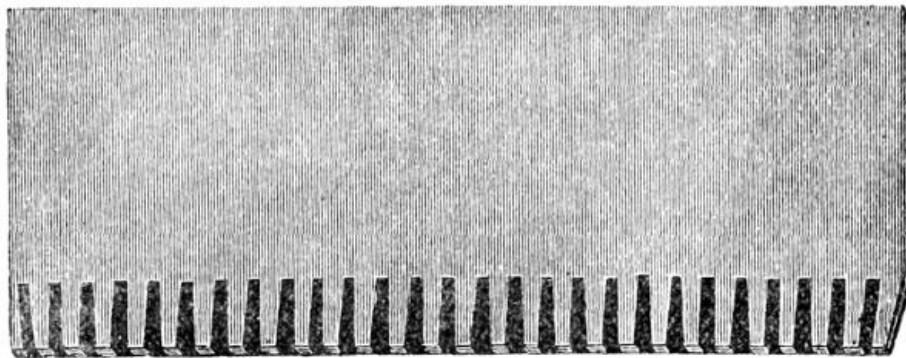


FIG. 3.

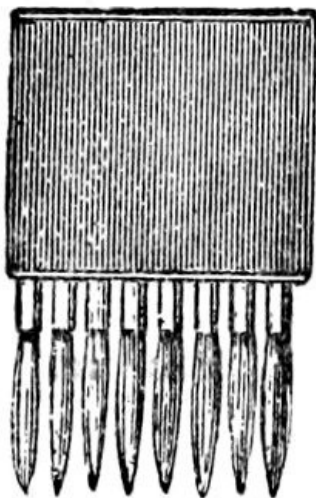


FIG. 4.

Leather combs (Fig. 3) can be purchased from most of the large dealers in painters' materials, but they are inferior to combs cut from the best sheet rubber. In making the latter choose a piece of rubber measuring about two by four inches and not over a quarter of an inch. Cut the teeth on each of the four inch sides, making those on one side coarse and those on the other side fine, thus you have two combs in one, and by turning over the comb different lines can be made; do not cut the notches of the comb too deep, and leave considerable space for the face of the teeth. A rubber comb can be often used, especially on rough work, without covering the teeth with a rag, as being soft it conforms to the inequalities of the surface, and leaves

a more distinct pattern than does a leather comb.

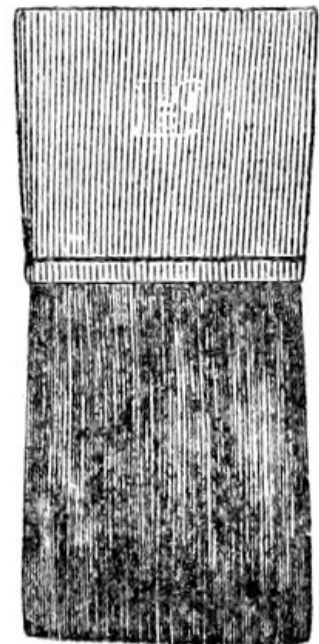


FIG. 5.

In representing the grain of oak, the tracks of the steel comb should cross or interlock so as to make a series of disconnected lines similar to the pores of the wood; for ash and other straight-grained woods, the grains should never interlock but appear clean and

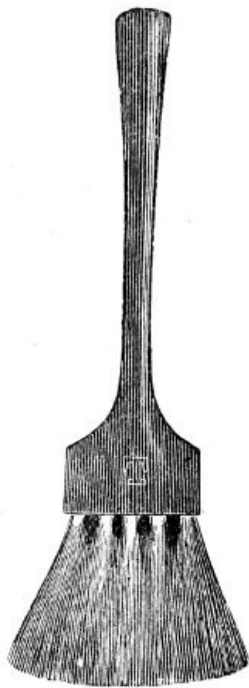


FIG. 6.

sharp in regular order from the side of the hearts to the edges of the board.

The piped bristle or fitch hair overgrainer (Fig. 4) may be used in oil or in distemper for representing ash, walnut, cherry, mahogany, etc.; for maple it may be used as an overgrainer. For overgraining any wood in distemper there is no better tool than the plain bristle overgrainer (Fig. 5) the bristles being separated into clusters with a bone comb after charging the brush with color.

The badger blender (Fig. 6) is used for all graining done in distemper and is sometimes used for oil work, a similar brush made of bristles is sometimes used for marbling. The flat bristle brush used for applying the graining color is the only blender necessary for oil work.

The castellated or knotted overgrainer (Figs. 7, 8 and 9) is used for graining in distemper work, which has previously been grained in oil.

The plain overgrainer (Figs. 10, 11 and 12) may be used for shading in distemper or for graining maple. [Pg 53]

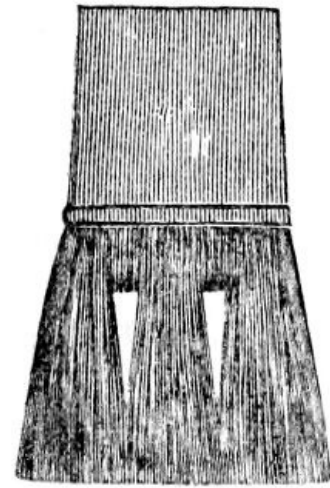


FIG. 7.

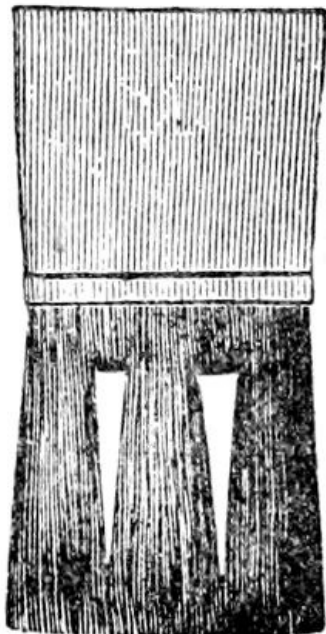


FIG. 8.

Mottlers or cutters made of bristles (Figs. 13, 14, 15, 16, 17) are for use for distemper color in graining maple, mahogany, etc.

The angular cutter (Fig. 17) is used for taking out the high lights in mahogany.

The waved mottler (Fig. 18) is used for representing maple, mahogany or satinwood in distemper.

Camel's-hair mottlers or cutters (Figs. 19 and 20) are used for very fine work on maple, etc., but the bristle brushes answer all practical purposes.

The serrated mottler or marbler (Fig. 21) is used for maple or satinwood in distemper or for marbling.

For applying distemper color a tin bound bristle graining brush (Fig. 22) is excellent, it should be about 1/2 an inch thick.

The bristle stippler (Fig. 23) is used for walnut or for mahogany in distemper.

The fitch or sable piped overgrainer (Fig. 24) is used in distemper for maple, satinwood or other delicate work.

The check roller is used for putting in the pores of oak and the dark streaks or lines in the hearts, and is used to best advantage in distemper. A well charged mottler supplies the color. The mottler is laid against the edges of the wheels, and by revolving the roller the color is transferred to the work. A guard of tin may be soldered to the mottler so that it fits the handle of the roller, being held in place by the thumb.

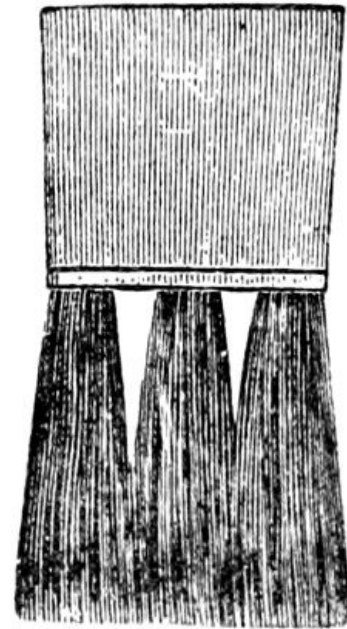


FIG. 9.

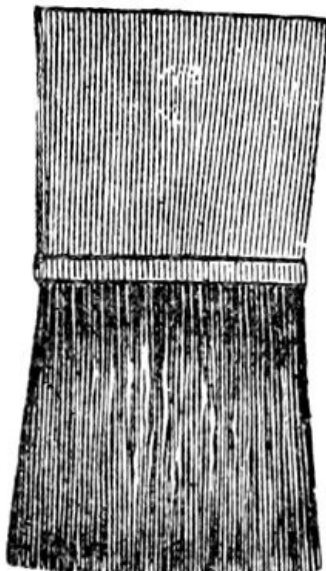


FIG. 10.

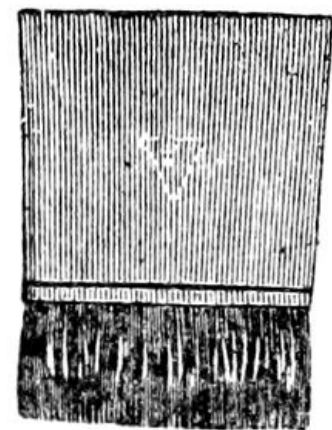


FIG. 11.

One or two flat fresco bristle liners (Figs. 25 and 26) No. 1 and 2 for putting in hearts, veins, etc., and one or two tin bound sash tools complete the list of all tools necessary for use, and any wood that grows may be represented by using

the tools mentioned.



FIG. 12.

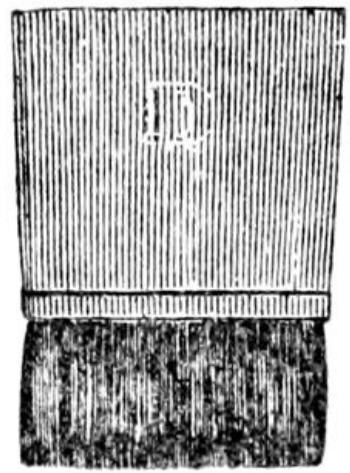


FIG. 13.

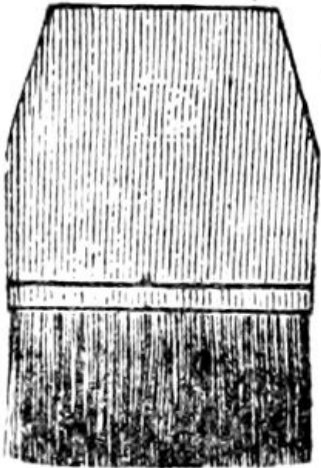


FIG. 14.

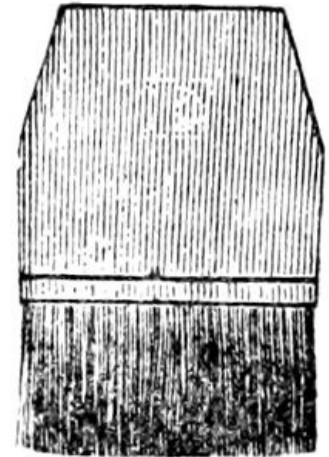


FIG. 15.

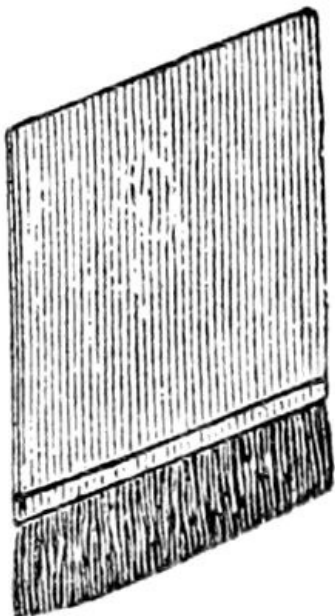


FIG. 16.

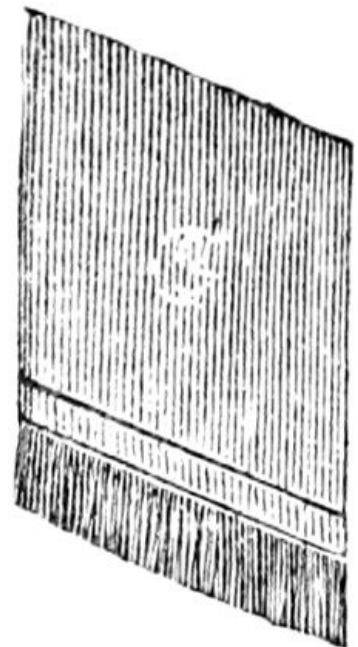


FIG. 17.

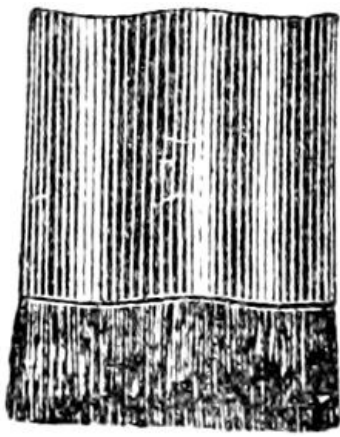


FIG. 18.

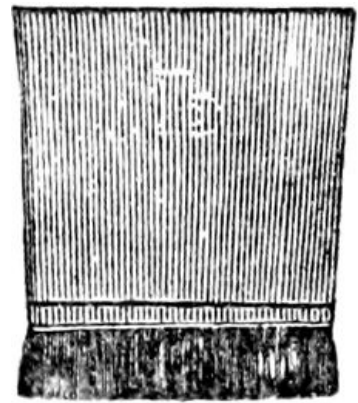


FIG. 19.

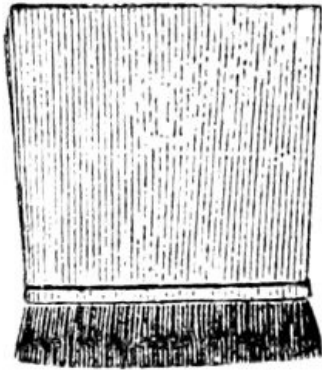


FIG. 20.

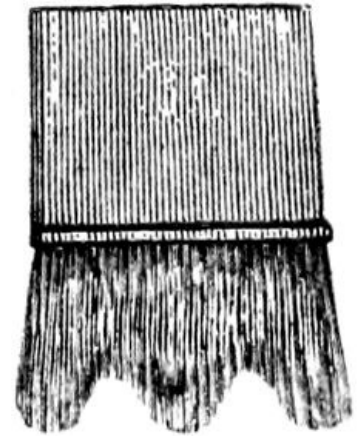


FIG. 21.

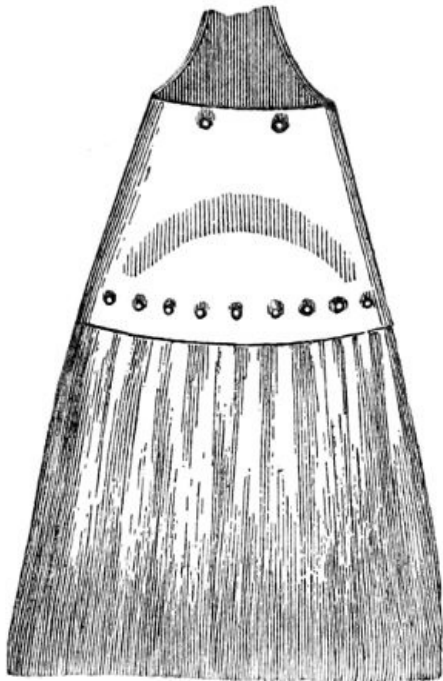


FIG. 22.

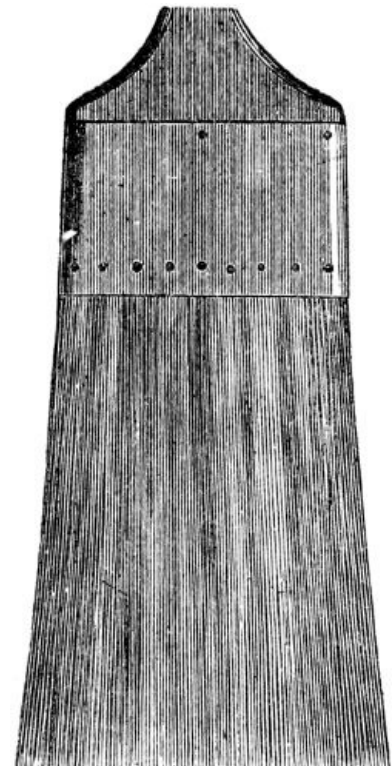


FIG. 23.

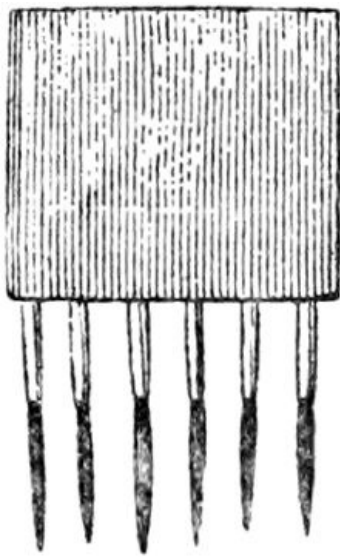


FIG. 24.

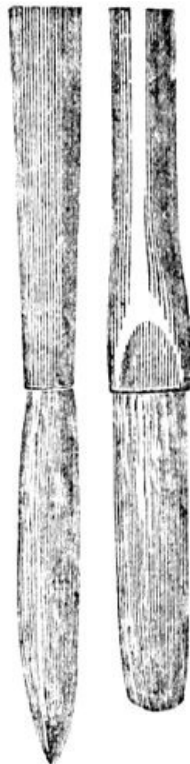


FIG. 25.

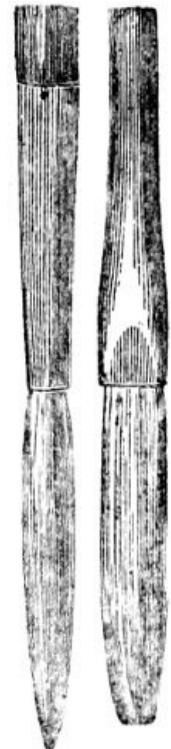


FIG. 26.

CHAPTER XVII.

[Pg 54]

PATENT GRAINING MACHINES.



VARIOUS devices other than those usually employed—brushes, combs, etc.—have been invented for representing the grains of wood, and some of these machines are excellent, and are so constructed that by properly using them a very good imitation of wood may be obtained. The majority of them, however, seem to have been invented for the express purpose of being sold to gullible painters. The work done by such machines bears but little resemblance to the grain of any wood, and the only merit they possess is their boasted "ease of manipulation." It would seem that the majority of the patent pads, rollers, etc., now in use were designed by persons totally unfamiliar with the various woods which they claim their machines can represent; they bear the same relation to good handwork as the schoolboy's drawing of a house bears to that of an architect. The quality of the work seems to be immaterial if it can rapidly be executed; and if there are plenty of knots in the pattern, so much the better. It is of no consequence what wood it is supposed to represent, so long as it pleases the eye of the painter, and he will often purchase at an exorbitant price that which is practically useless for ordinary housework.

I have before me a circular containing some photographic illustrations of the work done by a patent roller process; and if any wood ever grew that bears a resemblance to the illustrations, I am ignorant of its name. Aniline colors are the means employed to represent the grains, and the process is designed to obviate the necessity of first painting the work, as the color is directly applied by the roller, without the wood being prepared in any way. It is claimed that any shadows or grains existing in the wood will only add to the beauty of the finished work. This will be news to the intelligent workman. The circular says nothing about how to use the rollers on painted work, so I presume it is worthless except for new work, and nearly so for that; for the painter who attempts to represent wood in the manner described will find that in the end it costs as much as though he had employed a skilful workman; and when the job is finished, he will have but a poor imitation of wood.

[Pg 55]

So far as I am aware, the oldest machine for representing the graining of wood is the Mason pad, which consists of a convex pad with handles at either end. The face of the pad is made of a rubber composition, on which are engraved the grains, the pad being about two feet in length. The graining-color is applied to the work, and while wet the pad is pressed against it, thus removing sufficient color to show the grain. This process is now seldom used; the composition of which the face of the pad is made hardens in cold weather and in hot weather it is inclined to run together, and great care must be taken to avoid defacing the pad.

The objection common to all roller processes or machines is that they do the same work over and over again, which is contrary to what we find in nature, as the grains are always different from one another, so that it would require an endless variety of patterns to do such work as is done by any first-class grainer.

Another method for the rapid imitation of wood is found in stencil-plates, which consist of thin sheets of brass so constructed that when laid against the panel to be grained they leave no mark until a cloth is passed over the plate, when the graining-color exposed by the stencil is rubbed off, thus making the grains. This sort of work looks much better than that done by any of the pads or rollers, but is open to the same objection—viz., repetition.

[Pg 56]

Another process is operated by having rolls with leather or composition surface, with the grains cut thereon; after the graining-color has been applied to the work, the rollers are passed over it, thus removing the color wherever the roller touches. As a rule, the work done by this process is not very distinct, nor is it particularly clean. Very large rollers have to be used in order to grain a panel four feet long, as the work will seldom join without showing the joints; and while a door was being grained in this manner (with joints in the panels), a skilful workman could do one by hand and in a much better manner.

The best work that I have ever seen, not done by hand, was by means of a composition roller with a smooth surface; it can be used only for the imitation of porous woods, as chestnut, ash and walnut, and is useless for oak, cherry or any of the close-grained woods. The work can first be stippled in distemper, and when dry rubbed in lightly in oil; or the roller can be applied directly to the stippled work or to the groundwork, and afterwards stippled if necessary. It is requisite to procure several pieces of the wood to be imitated, smoothed carefully with the pores open; then directly apply the graining-color and with the composition roller go over the wood, taking the color from the pores and applying it directly to the work by transfer. If carefully done, you have an exact duplicate of the grain of the real wood, and no man can do better work than this; but, in order to grain a room or a house in this manner, it is necessary to have a great variety of pieces of porous wood, and to use each piece only for imitating the wood of which it is composed.

The gransorbian is another transfer process, by which the grains are produced as follows: The graining-color is applied in the usual manner, and heavy absorptive paper on which the grain of the wood to be imitated is impressed is laid against the wet color; a roller with a smooth surface is passed over the paper, using considerable force, so that the color is absorbed into the paper wherever it is pressed against the work by the roller. The paper can be used several times before it becomes useless through becoming saturated with color, but, being cheap, it is an inexpensive manner of doing fair to good work. All depends on the man who makes the patterns, as, if they are not true to nature, the effect is very bad, and some of the samples that I have seen are very poor imitations of the grain of any wood. I should judge that the paper is produced by applying the pulp to a block of wood on which the pattern to be produced is engraved, using considerable pressure to force the pulp into the carved work. The plain work is done with combs in the usual manner.

[Pg 57]

Another transfer process is the transfer paper. The grain is printed on paper similar to the best wall-paper, and is transferred to the groundwork by pressure after first wetting the back of the paper and allowing time for the water thoroughly to soften the printed color. The surface of the groundwork must first be damped in order to receive the moist color from the paper. Two or three impressions may be obtained from each wetting of the paper. Some of the work done by this process is excellent, and approaches very near the work done by the smooth transfer roller, but the majority of the paper is printed from blocks or cylinders, designed not by nature, but by man, and are unworthy of comparison with those printed from nature.

There are various processes other than handwork, but the above are the principal methods employed.

The first-class grainer has nothing to fear from any of the foregoing processes, for while some were being used the work could be done in the old way, and equally well, provided the workmen

were at all skilful. I have never seen any work that can excel fine handwork, as there is more grace and variety in such work than there is in any done by any other methods. When the services of a grainer cannot be obtained, machine processes may answer for ordinary work or for small work, such as ice-chests, pails, etc., but the chief objection I have to them is that they claim too much, and the average painter who buys the process is deceived, because he is told that any wood can be imitated by this or that machine, when such is not the case.

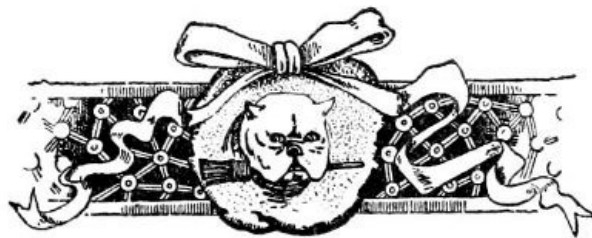
CHAPTER XVIII.

IMITATIONS OF CARVED WORK, MOULDINGS, ETC., BY GRAINING.



imitating carved work, mouldings, etc. in graining color, more than ordinary ability is required in order to succeed in deceiving people; and this kind of work should not be attempted unless there is ample time for its proper execution, nor should its use be contemplated for too exposed positions, as if not thoroughly done it is an eyesore to the intelligent beholder, but if done in a recessed doorway or other suitable place, inside or outside, it enhances the value of the work if it agrees with the general style of the architecture or of the surroundings. Mouldings or raised panels are often imitated on front doors where the real article would never be placed by an intelligent carpenter, owing to the shape of the door; hence it would be displaying poor judgment to place the imitation where the real article ought to find no place. It is wonderful how a thorough grainer can transform a

plastered wall into one apparently sheathed or wainscoted, and I have seen doors so perfectly imitated that persons would grasp at the knob in attempting to open a door that was grained on a plastered wall. Imitations of carved figures, scrolls and game-birds are favored by some workmen, and are very effective if well done; as a rule such work should be seen in a subdued light to render the deception more complete.



INDEX.

A.

- Alcohol, use of, in distemper, [30](#).
- Ammonia, spirits of, for removing old paint, [6](#).
- Angular cutter, [50](#), [53](#).
- Aniline colors used in graining, [54](#).
- Ash, burl, [20](#).
 - burl, ground colors for, [8](#).
 - graining, [17](#).
 - ground colors for, [7](#).
 - Hungarian, [19](#).
 - Hungarian, ground colors for, [7](#).
 - Western, to match, [18](#).
- Asphaltum for shading color of oak, [16](#).

B.

- Badger blender, [49](#), [52](#).
- Bamboo brush, use of, in graining rosewood, [37](#).

Best colors should be used for graining, [7](#).
Bird's-eye maple, [22](#).
maple in water color, [22](#).
Black walnut, [31](#).
Blending groundwork, [12](#).
quartered oak, [13](#).
Blistered appearance of whitewood, [41](#).
Bristle graining brush, [51](#), [53](#).
liners, fresco, [52](#), [53](#).
mottlers or cutters, [50](#), [53](#).
stippler, [53](#).
Brush, bamboo, use of, in graining rosewood, [37](#).
should not be stubby, [11](#).
Burl ash, [20](#).
ash, ground colors for, [8](#).
ash in oil color, [20](#).
Burning off paint, [6](#).

[Pg ii]

C.

Camel's-hair mottler or cutter, [50](#), [53](#).
Castellated or knotted overgrainer, [49](#), [50](#), [52](#).
Champs, to put in, [12](#).
Champs, shading, [15](#).
Cheap jobs, [6](#).
Check roller, [15](#), [53](#).
Cherry, [28](#).
ground work for, [8](#).
in oil color, preference for, [28](#).
natural wood, to match, [8](#).
Chestnut, [21](#).
clean cut divisions in graining, [14](#).
clearly cut joints in graining, [14](#).
graining in water colors, [22](#).
ground colors for, [7](#).
resemblance to ash, [21](#).
Coats, which to be avoided, [8](#).
thin preferable, [8](#).
Color for graining, [9](#).
for graining burl ash, [20](#).
of wood, to imitate, [9](#).
preparation of in graining oak, [10](#).
straining before thinning, [7](#).
to mix, [11](#).
usually dark, [10](#).
Combs, leather, [48](#), [49](#).
rubber, [12](#).
steel, [48](#).
Composition roller, graining by, [56](#).
Copyists of copies, [13](#).
Covering teeth of graining combs, [12](#).
Cracking of varnish, [42](#).
Curly, or rock maple, [25](#).
Cutter, angular, [50](#), [53](#).
Cutters or mottlers [50](#), [53](#).
Cypress wood, [38](#).

[Pg iii]

D.

Dark oak, [7](#).

ground color for, [7](#).
veins in rosewood, [37](#).
veins in mahogany, [35](#).
veins in quartered oak, [12](#).
Degenerate copyists of copies, [13](#).
Distemper, graining ash in, [18](#).
graining oak in, [16](#).
Divisions should be clean cut in graining, [14](#).
"Docked" pencil in bird's eye maple, [23](#).
Driers in graining color, [11](#).
Dry colors should never be used for grounds, [7](#).

E.

Edges of panel, how finished, [14](#).
Experience in varnish cracking, [43](#).
Eyes and shadows in bird's eye maple, [23](#).
in bird's eye maple, how to accentuate, [24](#).

F.

Feathered mahogany, [36](#).
Fine art, graining considered as a, [46](#).
champs in pollard oak, to put in, [28](#).
Fitch hair overgrainer, [49](#), [51](#).
or piped overgrainer, [51](#), [53](#).
tool, use of in graining ash, [17](#).
tool, use of in graining cypress, [39](#).
Flat brush used in graining in preference to round, [11](#).
fresco bristle liners, [52](#), [53](#).
French walnut, burl, [32](#).
walnut burl, graining in distemper, [33](#), [34](#).
walnut burl, pieces should be small, [34](#).
French walnut, ground work for, [8](#).
Fresco bristle liners, [52](#), [53](#).

G.

Glue size for distemper binder, [30](#).
Graduated teeth in graining combs, [12](#).
Grainers' combs, [11](#).
tools, [48](#).
Graining ash, [17](#).
ash in distemper, [18](#).
by patent roller, [54](#).
by stencil plates, [55](#).
by transfer paper, [57](#).
can be scoured off, [5](#).
cannot be chipped, [5](#).
chestnut, [21](#).
color, [9](#).
color, to mix, [9](#).
considered as a fine art, [46](#).
cypress, [39](#).
for the trade, [46](#).
light oak in oil, [10](#).
oak, [7](#), [16](#).
over old paint, [5](#).
over old work, preparation for, [6](#).
will not fade, [5](#).
Gransorbian transfer graining process, [56](#).
Grained work, varnishing over, [42](#).

Ground color, [6](#).
color, Indian red should never be used, for [9](#).
for burl ash, [8](#).
for chestnut, [7](#).
for cypress graining, [39](#).
for satin wood, [8](#).
colors of ash, [7](#).

Growth of ash, heart, [17](#).
of cherry, [29](#).

Growth for white wood, [41](#).

Ground work for cherry, [8](#).
for French walnut, [8](#).
for graining, [5](#).
for mahogany, [8](#).
for oak, [7](#).
for rosewood, [9](#).
for satin wood, [26](#).
for walnut, [8](#).
when old paint is not removed, [9](#).

H.

Heart grains in bird's eye maple, [24](#).
growth of ash, [17](#).
of oak, [14](#).
work in quartered oak, [14](#).

Hearts, imitating in black walnut, [32](#).

Hard pine, [40](#).

Hard wood varnishes, [43](#).

High lights in whitewood, [41](#).

Honduras feathered mahogany, [35](#).

Hungarian ash, [19](#).
ground colors for, [7](#).

I.

Imitation of carved work, mouldings, etc., [58](#).

M.

Mahogany, [35](#).

ground work for, [8](#).

Maple bird's eye, [22](#).

ground colors for, [7](#).

Marbler or mottler, the serrated, [50](#), [53](#).

Mason pad, [55](#).

Matching stained oak, [18](#).

Mitres and joints in graining, [14](#).

Mixing color, [11](#).

graining color, [9](#).

ground colors, [7](#).

Modern panels and styles of doors, [58](#).

Mottler, the waved, [50](#), [53](#).

Mottlers or cutters, [50](#), [53](#).

camel's hair, [50](#), [53](#).

O.

Oak, dark, [7](#).

graining, [16](#).

graining, all colors for, [7](#).

graining in distemper, [16](#).

groundwork for, [7](#).
heart of, [14](#).
light, [7](#).
light in oil, to grain, [10](#).
pollard, [27](#).
quartered, [13](#).
slashed, [14](#).
to grain, [10](#).

Objection to roller process of graining, [55](#).

Old paint, graining over, [5](#).

Old varnish, to remove, [6](#).

Overgrainer, castellated or knotted, [49](#), [50](#), [52](#).
for satinwood, [26](#).

Overgraining oak, [15](#).

Overgrainer, plain, [51](#), [53](#).
plain bristle, [49](#), [50](#), [52](#).
piped bristle, [49](#), [51](#).

P.

Paint, to remove, [6](#).

Panel edges, how finished, [14](#).

Panels and styles of doors, [58](#).

Panels in satinwood, [26](#).

Plain bristle overgrainer, [49](#), [52](#).
overgrainer, [50](#), [53](#).

Patent roller process of graining, [54](#).

Preparing old work for graining, [6](#).

Piped bristle overgrainer, [49](#), [51](#).
bristle overgrainer, use of, in graining black walnut, [31](#).

Piped overgrainer, [53](#).
overgrainer, use of, [30](#).

Pollard oak, [27](#).

Priming coats, [8](#).
partly in distemper and oil, [27](#).

Proportions of colors in graining color, [10](#).

R.

Removing old paint, [6](#).
old varnish, [6](#).

Rock or curly maple, [25](#).

Roller, the check, [53](#).

Root of ash, [20](#).

Rosewood, [37](#).
groundwork for, [9](#).
in water color, [37](#).

Round brush not used in graining, [11](#).

Rubber combs, [12](#).
combs with graduated teeth, [12](#).

Rubbing in graining, [12](#).
varnish, experiments with, [45](#).

S.

Sable piped overgrainer, [53](#).

Sandpapering, [6](#).

Satin wood, [26](#).

Second coat work, [6](#).

Serrated mottler or marbler, [51](#), [53](#).
Shadows around knarled places, [15](#).
Shades in burl ash, [20](#).
Shading champs, [15](#).
color of oak, [16](#).
Silver maple, [25](#).
Slashed oak, [14](#).
Smooth surface for graining, [6](#).
Solution for touching quartered oak work, [13](#).
Solution to remove varnish or paint, [6](#).
Spar composition, etc., [43](#).
Spirits of ammonia for removing old paint, [6](#).
Stained cherry, to match, [8](#).
oak, to match, [10](#).
white oak in preference to graining, [5](#).
wood, ground colors for, [8](#).
Steel combs, [11](#).
combs, (Illustrated) [48](#).
comb, use of, in quartered oak, [14](#).
Stencil plates, graining by, [55](#).
Stippling for graining in mahogany, [36](#).
for Hungarian ash, [19](#).
in distemper for black walnut, [31](#).
Straining colors before thinning, [7](#).
Stubby brush should not be used, [11](#).
Substitutes for thumb nail in graining, [12](#).

T.

The angular cutter, [50](#), [53](#).
check roller, [53](#).
fitch or sable piped overgrainer, [51](#), [53](#).
graining color, [9](#).
mason pad, [55](#).
patent graining machines, [54](#).
serrated mottler or marbler, [51](#), [53](#).
stubborn bristle, [51](#), [53](#).
waved mottler, [50](#), [53](#).
Thick coats should be avoided, [8](#).
Thinning graining color, [11](#).
Tools for putting bird's eyes in maple, [24](#).
for use in graining cherry, [29](#).
used by grainers, [48](#).
Tools, use in graining mahogany, [36](#).
use in graining rosewood, [38](#).
Touching quartered oak with solution, [13](#).
Transfer graining, [56](#).
paper, graining by, [57](#).
Thumb nail, substitutes for, in graining, [12](#).

V.

Varnish for exposed work, [42](#).
in graining, [5](#).
Varnishing over grained work, [42](#).
Veins, dark, in quartered oak, [13](#).
in oak, [16](#).
Vinegar, use in removing old paint, [6](#).

W.

- Walnut, black, [31](#).
French, burl, [32](#).
French, groundwork for, [8](#).
groundwork for, [8](#).
Water colors, use of, in graining black walnut, [31](#).
Waved mottler, the, [50](#), [53](#).
Western ash, matching, [18](#).
White wood, [40](#).
wood, blistered appearance, [41](#).
Woods, color of, to imitate, [9](#).
-

INDEX TO COLORED PLATES.

A.

- Ash, burl, in water color, [16](#).
dark, penciled and combed, [17](#).
Hungarian, ground for, [1](#).
Hungarian, wiped out, [18](#).
light, ground for, [13](#).
light, heart of, wiped out and shaded, [13](#).
light, wiped out, [12](#).

[Pg x]

B.

- Bird's eye maple overgrained, [19](#).
ready for the eyes, [21](#).
with the eyes, [22](#).
Black or French walnut, ground for, [2](#).
walnut penciled, [36](#).
Burl ash in water color, [16](#).
walnut, French, [39](#).

C.

- Cherry mottled in oil, [30](#).
mottled and penciled in oil, [31](#).
mottled and penciled in oil as finished, [33](#).
stained, ground for, [2](#).
wiped out and penciled in oil, [34](#).
Chestnut, [20](#).
ground for, [2](#).
Curly maple overgrained, [27](#).
mottled to overgrain, [26](#).
Curly walnut, [38](#).
Cypress in oil, [45](#).

D.

- Dark ash penciled and combed, [17](#).
heart of ash penciled, [14](#).
or pollard oak, ground for, [2](#).

F.

- Feathered mahogany, [42](#).
Finished cherry, mottled and penciled, [33](#).
rosewood, [44](#).
Flaked oak, light, [4](#).

oak light, shaded, [8](#), [10](#).
oak light, ground for, [3](#).
or quartered dark oak, shaded, [11](#).
French walnut burl, [39](#).

[Pg xi]

G.

Grounds for graining, [1](#), [2](#).

H.

Hard pine, [46](#).

Heart growth oak, light, [6](#).
growth oak penciled, [7](#).
of ash, dark, penciled, [14](#).
of oak checked and shaded, [9](#).
of light ash wiped out, [12](#).
wiped out and shaded, [13](#).

Hungarian ash, ground for, [1](#).
wiped out, [18](#).
wiped out and penciled, [15](#).

L.

Light ash, ground for, [1](#).
ash heart of, wiped out, [12](#).
ash heart of, wiped out and shaded, [13](#).
flaked oak, [5](#).
grained or wainscoted oak, [4](#).
heart growth oak, [6](#).
oak, ground for, [11](#).
shaded flaked oak, [8](#), [10](#).

M.

Mahogany, feathered, [42](#).
ground for, [2](#).
mottled, [41](#).
straight, [40](#).
Maple, bird's-eye, mottled ready for the eyes, [21](#).
bird's-eye, overgrained, [19](#).
bird's-eye, with the eyes, [22](#).
Mottled and penciled cherry in oil, [31](#), [32](#).
and penciled cherry in oil as finished, [33](#).
bird's-eye maple ready for the eyes, [21](#).
Mottled cherry, [30](#).
curly maple to overgrain, [26](#).
mahogany, [41](#).
Mouldings, imitation of satinwood, [24](#).

[Pg xii]

O.

Oak, dark or pollard, ground for, [2](#).
flaked or quartered, [11](#).
heart growth, pencilled, [7](#).
heart of, checked and shaded, [9](#).
light, flaked, [4](#), [5](#).
light, flaked, shaded, [10](#).
light, ground for, [1](#).
light, heart growth, [6](#).
flaked, light, shaded, [8](#).
Overgrained and mottled satinwood, [25](#).
bird's-eye maple, [19](#).
curly maple, [27](#).

P.

Penciled and combed dark ash, [17](#).
and wiped out Hungarian ash, [15](#).
and wiped out walnut, [37](#).
black walnut, [36](#).
dark heart of ash, [14](#).

Penciled heart growth, [7](#).

Pine, hard, [46](#).

Plain or wainscoted oak, light, [3](#).

Pollard oak, [28](#), [29](#).
oak, ground for, [2](#).

Q.

Quartered dark oak shaded, [11](#).

R.

Rosewood as finished, [44](#).

[Pg xiii]

Rosewood as outlined to overgrain, [43](#).
ground for, [2](#).

S.

Satinwood, mottled, [24](#).
mottled and overgrained, [25](#).

Stained cherry, ground for, [2](#).

Stippled walnut, [35](#).

Straight mahogany, [41](#).

W.

Wainscoted or plain oak, light, [3](#).

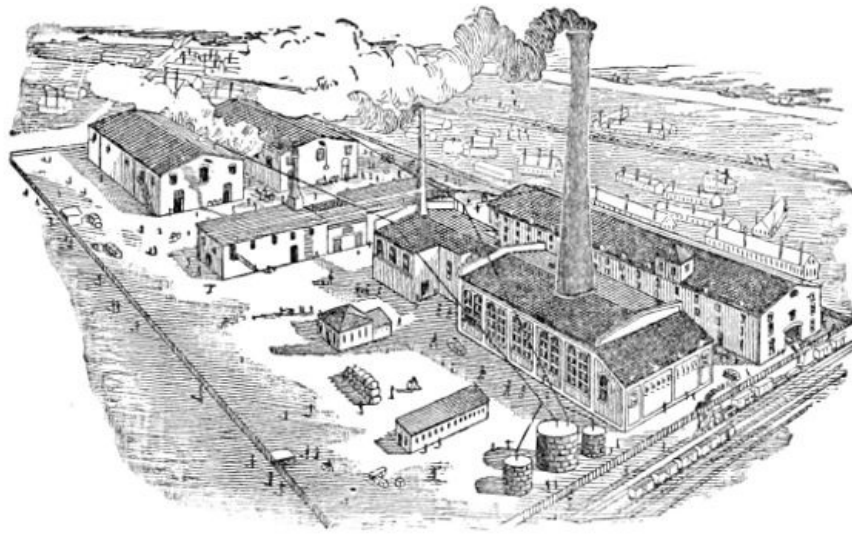
Walnut, black or French, ground for, [2](#).
curly, [38](#).
French, burl, [39](#).
stippled, [35](#).
wiped out and pencilled, [37](#).

Water colors, burl ash in, [16](#).

White wood in oil, [47](#).

Wiped out and pencilled Hungarian ash, [15](#).
out and pencilled walnut, [37](#).
out and shaded heart of light ash, [13](#).
out cherry pencilled in oil, [34](#).
out heart of light ash, [12](#).
out Hungarian ash, [18](#).

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Transcriber's Note

Illustrations were moved to paragraph breaks.

Minor corrections were made in punctuation.

The following changes were made:

Page [20](#): Changed represently to representing.

Orig: for use in represently the minute clusters of knots.

Page [22](#): Changed overgainer to overgrainer.

Orig: fitch tool, and use the overgainer

Page [34](#): Changed stipping to stippling.

Orig: the stipping may be done in distemper on the ground-work

Index page [iii](#): Changed Cypress wood to Cypress wood.

Index pages [x](#) and [xiii](#): Changed Curley walnut to Curly walnut.

Index page [xi](#): Changed Mapel to Maple.

Corrected numbers on [List of Colored Illustrations](#):

Switched 3 and 4, 5 and 6, 40 and 41, 42 and 43. Also corrected these numbers in [Index to Colored Plates](#) to reference the correct plates.

All other inconsistencies in spelling and hyphenation have been retained from the original publication.

*** END OF THE PROJECT GUTENBERG EBOOK PRACTICAL GRAINING, WITH DESCRIPTION
OF COLORS EMPLOYED AND TOOLS USED ***

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