

Sometimes two or more Shell colours are worked one over the other with good effect. One specimen of this description is introduced here, but as in former instances the last colour requires to be mixed with both more gall and oil to make it expand over the colour preceding it. (No. 28 *a.*)

Having thus far explained the principles contained in the production of the Shell or French marbles, we will introduce another variety in which the French and Spanish are combined, and sometimes with good effects. In order to do this, you must first produce on the solution a small French pattern, but with a considerably less amount of colour than you would put on for French alone, and for this reason, because it would require an amazing strength of gall to make the Spanish colour flow out over a complete Shell pattern, and if it did so flow out it would so close up the Shell that it would have a most muddy and confused appearance; therefore you must not have your French or Shell mixture so strong as for Shell itself, and your top or Spanish colour will then flow pleasantly over it with good effect, and produce a very pretty variety, whatever colours you may fancy to make it with. It is sometimes called Spanish with Shell veins. (See example No. 29.)

EXAMPLE No. 30.

Stormont.

We will now introduce another ingredient to the notice of our students, and that will be spirits of turpentine; its effect, when properly mixed and incorpo-

rated with the colour, is to cause it to break into fine holes like a network when it falls on the solution in the trough. It is used principally in the production of one of the oldest patterns extant, bearing the name of Blue Stormont, and though apparently a very simple pattern, consisting of only two colours, it is nevertheless one of the most difficult to keep in working order, owing chiefly to the very speedy evaporation of the spirits of turpentine, and the chemical action which is always going on among the ingredients with which the colour is mixed up; and it requires acute observation and great quickness of manipulation on the part of the operator to keep it anything like uniform in appearance.

The same mixture or preparation of gum and flea-seed will do for this as for the Spanish or French. The colours to be used will be red and indigo; no other blue will answer the purpose. Good indigo alone, and well ground—without which you will not be able to produce the proper effect—must be employed, and mixed with gall water and spirits of turpentine, of which last ingredient a considerable proportion must be used. You must keep it constantly stirred, especially when your red vein is thrown on and you are ready for the other, taking the brush between both hands and twirling it backwards and forwards through the colour in the jar; and you may do this without fear of frothing it, as the spirits of turpentine will prevent that, and when you sprinkle it on the solution it will immediately fly out, and then as speedily contract or close up again, and appear to be in constant motion as it floats upon the surface, driving up the red, which of course is mixed with gall and water, as all the

vein colours should be, into a fine vein, which relieves what would otherwise be a monotonous appearance. As before remarked, it is a very extraordinary pattern to manage. Sometimes it will go well at the very first trial, or at other times you may waste hours and not succeed to your satisfaction, but after letting the colour stand for a day or so it will work well, and give you no further trouble.

Should the holes in the pattern come too large, it may be from either an excess of the spirits of turpentine or from too little—nothing but experience will enlighten you on this point. If, however, it should be from too much, add a little more gall with a little more indigo, with a few drops of alum-water, but you must be very careful of this, for if you put in too much it will make the colour thick and clotted, in which case you must have recourse to a little weak solution of pearlash; but it is best, if possible, to do without either of them, as the more ingredients you put in the more difficult you will find it to control their effects; but when you get it right, it is one of the quickest patterns ever made.

The Stormont, which name is applied to all colours which have turpentine in them, is also used in combination with French or Shell colours, sometimes being thrown on lastly over the Shell, at other times under the Shell, or the Shell colours last, both having a very good effect.

EXAMPLE NO. 31.

Gloster 31.

This pattern is produced in precisely the same manner as the Antique Spot, with this exception, that instead of the Spot being a flat colour, *i.e.*, a colour mixed with gall and water alone, a blue Stormont is thrown on in place of it, and no white is beaten on at the last. Medium, gum alone.

BOOK EDGES.

With regard to the preparations and manipulations of the colours, there is really no difference between book edges and paper; all the colours should, however, be ground with wax, otherwise you would find it difficult to burnish them without scratching, unless you sized them, which is objectionable for this reason, that the books would undergo being twice wetted where once would do, thereby softening the millboards and delaying the drying.

As there is no need therefore to repeat what has been already described and explained in the former part of this work, I shall limit my observations to what I consider only necessary and useful.

In the first place, it is a much easier task to marble a book edge than a perfect sheet of paper, because when you have covered the entire surface with colour, although there may be some portions faulty and imperfect, some parts may be picked out sufficiently good to permit a book edge to be taken off it, while if the whole were transferred to paper the bad or faulty parts would condemn the whole.

When plates, which are generally printed on a very soft paper, are placed at the beginning of a book or interspersed through its pages of letterpress, you must be very careful to keep the book compressed as tightly as you possibly can, and when marbled lay the book down the beginning side upwards, as the liquid has a tendency

to settle round the edge of the book on the board, and if not attended to and shaken or wiped off will be apt to stain the outside leaves, as experience will prove.

For book edges you may do with a much smaller trough and also smaller quantities of colour than for paper. Should you have but few books, and those of various patterns, you had better use the solution of gum tragacanth alone to work upon, as you will be able to do any pattern upon that medium which you cannot do upon any other; besides, it will keep good longer than anything else. Your colours also for edges will look all the brighter and work the more readily by the addition of a little alcohol—gin, rum, or whisky will answer the purpose admirably, but they will be apt to evaporate or dry up more quickly. Your trough for general purposes should be about twelve inches in breadth and about twenty-four in length, the depth about two and a-half or three inches, and made according to the plan described at page 35. Supposing that you have your colours all in readiness on your solution ready for application, take the book, or books, as many as you can hold with safety, hold them tightly with the backs in your right hand and the fore-edges in your left, knock the ends on a solid block of wood, stone, or any other substance, so as to send the boards up and produce a level surface—otherwise the projection of the boards will prevent the colour from reaching the edges of the books—and let them touch the colours, the back part first, allowing the book to descend gently and gradually till it reaches the fore-edge, which you must not permit to descend below the surface at all, while the back of the book will have had a dip of about half or three-quarters of an inch, so as

to produce, when gently lifted out, the appearance of a slanting wet mark on the end of the board. If you were to dip it too flat, you would most likely have a white blotch somewhere about it, caused by the imprisoned air.

In doing the fore-edge the beginner had better place the book between a pair of boards, having first thrown back the boards of the book; a pair of cutting or backing boards will answer the purpose. If you feel any diffidence, you had better tie a piece of cord round them to make all safe, but be sure to get the fore-edge as flat as possible, or you will most likely get an air-bladder in the hollow, which will greatly disfigure the appearance of your work.

If the books are not too tightly drawn in, the boards may be put back over the ledges, so as to allow them to come up flush to the fore-edge; but as some paper swells very much when wetted, it makes the ends so thick that it makes it very difficult to obtain sufficient pressure in this way on the fore-edges to keep the wet from getting into the book. However, I leave this to your own judgment, experience alone must decide. When dipped, wipe off the superfluous moisture with a sponge; put the boards back in their places, and put them to dry, but not at the fire, as that injures the colours. Vellum or stationery work and books uncovered, or in the flat, do not, of course, require all this trouble; but still they cannot be done properly without boards, as the outside ones would be necessarily exposed to injury. We now come to

VELLUM OR STATIONERY WORK.

The Large Dutch, which makes so showy an appearance on the edges of the ledgers and account books in the shop windows of the stationers, is done in a very different manner to any of the processes hitherto described.

The colours used for this description of work must be of the best quality, and must be ground with alcohol, and also mixed up with the same, combined with gall, just sufficient to make them float and spread to the required proportions. You will require no brushes, but, instead, you must provide yourself with tapering pieces of wood about the thickness of a little finger; but as this is rather a vague idea, I had better say about half an inch in thickness, tapering, but not to a point, and about four inches in length, one for each colour. Small pots will be required for these colours, capable of holding about as much as a small tea-cup. The colours required are red, orange, blue, and green. The red must be the best scarlet, drop lake, or carmine; the orange, orange lead; the blue, indigo and ultramarine; and the green, indigo and Dutch pink. These, as I before stated, should all be ground and mixed up with alcohol, adding as much gall as you find necessary to produce the required effect. The colours will be all the better for being ground a day or two before using, and kept moist. Your gum may also be a little thicker for this Large Dutch than for the other kinds of work. Having tempered your colours, and proved them by trying them on the gum, take up in your

left hand the pot of colour, while, with your right, you take the stick, holding it by the thumb and two fore-fingers, somewhat in the way you would take up a pen, but slanting it (not, as the schoolmasters would say, over the shoulder), but quite the other way; and while you keep stirring the colour every time you dip the stick into it, taking up as much as the stick will hold, draw it steadily across the surface in sloping stripes, similar to those you would make on a smaller scale if learning to write, taking care that you do not bury the point of the stick beneath the surface; but as you pass it over, let it just touch, so as to permit the colour to flow off as you draw it along. And instead of, as in writing, drawing the stroke commencing at the top, here you do the reverse—you commence at the bottom, and pass the stroke away from you.

The first colour you lay on should be the red. Lay on two strokes of this, almost close together; then leave a small open space; then make two more, and so on, till you have gone over as large an extent as will suffice for the book you have to marble. Next take the orange, and put on one stripe of that between each two stripes of red that are close together, filling up the intermediate spaces with alternate stripes of green and blue side by side—that is to say, there must be a stripe of green and a stripe of blue also between each pair of red stripes. Then draw the large-sized comb through the colours from left to right; or, if you prefer it, form a sort of feather pattern by drawing up and down a piece of wire or pointed stick at intervals of two or three inches. Perhaps the following may explain more clearly the order for

laying on the colours; the letters are the initials of the various colours:—

R O R G B R O R G B R O R G B R O R G B R O R.

For the Small Dutch the colours are drawn by a tapering stick up and down through them to the shape required, and of course a smaller comb is used.

Another method of doing the Large Dutch is by having a pot of white in addition to the other colours, laying them on as follows:—First, lay on stripes of red at regular distances; next, lay on orange between every alternate stripe of red; then lay on, between the stripes of red left, the green; again, right through the centre of the stripe of green make a stripe of blue; and lastly, take the pot of white and make a clean sharp stroke through the centre of the blue, draw the comb through, and you will have a very nice clean edge when washed, as all this class of work should be,—the difference between this method and the former being that, instead of laying on the green and blue side by side, the one is taken through the other, and the white through both. When well done, it looks more lively and is easier to accomplish than the other. I have seen a good deal of work of this kind done on a trough only six inches in width.

ANTIQUÉ (COMPLEX).

This pattern is of rather a complicated nature, and requires a little skill in its manipulation, which is very tedious; and unless the colours are in first-rate order, and your paper well adapted for the purpose, you will find the colours crack before you complete the process

of laying them on the solution. The first three or four colours are sprinkled on as usual, they are then drawn with a piece of pointed stick diagonally up and down across the trough, and then crosswise again at proper distances; the green or dominant colour is then sprinkled all over, or in pods at certain distances; then with a smaller brush the lighter colour is knocked on in small quantities at measured distances; and lastly, white is beaten on over the whole, in the same manner as for ordinary antique. Some have given it the undignified name of Kidney Pattern: it looks very well when properly made, but is little used at present.

ON THE ADAPTATION OF THIS ART FOR THE MANUFACTURE OF PAPER-HANGINGS.

That this process might be adapted for the purposes of house decoration, with regard to its suitability for halls, plinths, and staircases, has been proved by experiments made some years ago, and which met with general approbation from all to whose notice the patterns were submitted in that department of useful ornamentation, one house of business alone being of opinion that they could find a ready market for it; but unless it could be supplied to them by waggon-loads, it would be of no use to introduce it. As it was not possible at that time to do this, from the impossibility of obtaining competent hands, it fell to the ground. Whether it may at some future time be revived, it is not possible to say; but if it ever should be, there must be a wide field open in that direction for the exercise of talent, and the development of

artistic skill and ingenuity, which would doubtless in time meet with its reward, especially if a few artistic touches were applied by hand, in conjunction with the natural and easy flow of the colours peculiar to this process, and which no hand work can equal or imitate, but which might be improved in effect by a judicious and skilful combination of both. Of course the patterns, and everything connected therewith, would be on a much larger scale than has hitherto been attempted.

MARbled CLOTH.

In the year 1851, during the time of the first great Exhibition, after numerous experiments, it was found that this process might be applied to dyed and plain cloth, so extensively used in the binding of books, and on some of the coloured cloths the effects produced surpassed in brilliancy any that had hitherto been executed upon paper. When first introduced to the notice of a few of the principal bookbinders and publishers of London, it was received with the most cordial approval and orders to a large amount were promised; but these flattering indications of success ultimately contributed to its failure, and although orders to a large amount were taken and executed, those in whose hands the control and management, or rather mismanagement, was vested, thinking that from the great demand for the article they could command any terms they thought proper to exact, proceeded to impose such arbitrary terms that the trade in general turned against it, and a reaction took place which they were not able to hinder or check, and a patent

having been taken out, not only for Great Britain but also for other countries, it resulted in a loss. The writer, who first brought it to perfection, being under an engagement with the firm for a term of years, was excluded from any participation in the benefits, and his advice was rejected, though afterwards, when too late, it was regretted it had not been followed. The patent and the firm are now both extinct.

For the sides of half-bound extra work it certainly is an improvement, both as regards durability and appearance; of course it is a little more expensive, but in the binding of a good book that is an item not worthy of consideration.

One proof of the success which attended its first introduction may be adduced from the fact that another manufacturer of bookbinders' cloth, finding that he must not infringe the patent, attempted to imitate some of the patterns by printing, but the results produced fall far behind the hand-work, and are very imperfect imitations at best, the only advantage being that pieces may be printed in any length, while those which are *bonâ fide* marbled are limited to a yard or two in length at most.

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