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Edmond H.S. Park
1885

THE
BOOKBINDER'S
COMPLETE INSTRUCTOR

IN ALL THE BRANCHES OF BINDING;

Particularly

MARBLING, STAINING, AND GILDING

THE

COVERS AND EDGES OF BOOKS:

With all the late improvements and discoveries in

That useful Art.

BY
A PRACTICAL BOOKBINDER.

PETERHEAD:

P. BUCHAN, PRINTER, AND PUBLISHER.

1823.

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Dedication.

TO THOSE IN THE PROFESSION.

BRETHREN,

AFTER many years of laborious research into the necessary secrets of our trade, I have found from long experience that, the RECEIPTS which are here published for your use, and Dedicated to you, are genuine, and the most approved of any I have yet met with, and have no doubt but they will exceed the most sanguine expectations of all those who are pleased to make trial of the same.

I am fully convinced that there have been many works published upon this subject, (not a few of which I have seen myself,) but they are either so high priced as to exclude the generality of workmen from purchasing them; or so deficient in the most essential requisites, that few of them have become useful in common practice.

It is therefore sincerely hoped that the present instructive, though little volume, will meet with your kind approbation and patronage, and give satisfaction to all concerned.

G. MARTIN.

LONDON, }
June 24th 1823. }

THE BOOKBINDER'S INSTRUCTOR.

THE Art of Bookbinding, there can be little doubt, must be as ancient as that of writing books; for, whatever might be the substance on which the work was written, some mode or other of uniting the parts became necessary. The earliest method that we are acquainted with, is that of rolling the different parts or sheets round cylinders. Phillatius, a learned Athenian, was either the inventor or improver of this mode of binding, his countrymen having erected a statue to his memory on that account. This method consisted of first glueing together the leaves, and then attaching them to cylinders, round which they were rolled, this is called Egyptian binding.

The present manner of binding books, is, however of great antiquity; some authors state it to be the invention of one of the Attali, kings of Pergamus, to whom we are also indebted for the mode of preparing parchment.

Modern, or square binding, is of two kinds: the one particularly adapted to printed books, where leather forms the general covering, and the other more immediately applied to account books, where parchment or vellum is made use of as the outside covering. We shall begin with the former, and for

the purpose of rendering the subject as clear and intelligible as the nature of it will allow, we shall arrange it under different heads, beginning with a description of the tools.

1st. The *Standing Press*, which is a large press, with its screw perpendicular, and similar to those used by paper-makers; this is strongly fastened to the room in any convenient situation, its use being to press the books flat, in various stages of their progress.

2d. The *Cutting Press*. This is very different from the former, and consists of two cheeks, or beams of about three feet in length, laying horizontally on a tub or frame; in the off cheek is cut two inside screws, and in the near cheek, exactly opposite, is bored two cylindrical holes, near the ends, through which two wooden screws pass, and enter the nuts or inside screws in the off cheek. These screws are about eighteen inches long, having large heads, through which are bored at right angles to each other, two holes, for the purpose of introducing the press pin, by which the books are pinched between the cheeks. Whatever, therefore, is to be put into this press, must not exceed in length the distance between the two screws. On the upper side of the off cheek, and running lengthwise, are nailed two slips, about an inch and half asunder, forming a groove or channel, in which the cutting plough is to run.

3rd. The *Plough*. This, like the former, consists of two cheeks, made light and small, which are drawn together in a single screw. To one of its cheeks is affixed a knife, which lies flat upon the upper face of the cutting press. The mode of using it is this: having placed the book intended to be cut in the

cutting press, with as much of its leaves as you intend cutting away, rising above it, place the plough in the groove, and open its cheek so much as to let the point of the knife pass without cutting any part of the book. Grasp with the right hand the head, and with the left hand the other end of the screw, and proceed to draw it towards, and push it from you, shuffling the screw a little at each time it passes the book; and in this manner proceed until the knife has removed that part of the book which is intended to be cut away.

4th. *The Sewing Press.* The bed of the sewing press is commonly a piece of hard wood, about one inch thick, one foot wide, and about two feet long. A groove is cut through it, which extends near its whole length, and about one inch in, from one of its edges; this groove may be about three quarters of an inch wide. Into the bed is fixed two wooden screws furnished with nuts, on that side the board in which the groove is made, and as near the ends as is consistent with strength, and the centre of the screws agreeing with the centre of the groove; a piece of wood is then fitted on the screws, having two holes in its ends, of sufficient size to admit of its sliding freely up and down on the threads of the screws. The middle of this bar is turned round, leaving the ends flat, for the purpose of making the holes; and as the bar rests upon the nuts, it rises or sinks with them. Its use is to stretch the cords or bands to which the sheets or sections of a book are sewn. To perform this, fasten one end of the cord to the bar, and the other end to a small key, first passing the cord down through the groove; proceed to fasten the number of bands required (which is six for folios

and five for quartos and smaller sizes) in the same manner, and bring the whole to a proper degree of tightness, by means of the two nuts, which force the bar up from the bed of the press.

5th. The *Beating Stone* is commonly fourteen or fifteen inches square on the upper surface, which is required to be smooth. The stone should be hard and sound, and of considerable thickness. It is generally placed in a barrel nearly filled with sand, which keeps it from springing.

6th. The *Beating Hammer*. A short heavy hammer, sometimes twelve or fourteen pounds, resembling in some measure the shoemakers' hammer, having a smooth and convex or round face, the handle being about six inches long. Its use is to beat the book until it becomes solid, flat, and smooth; to perform which, about one hundred pages are laid on the beating stone at a time, and held by the corner firmly, between the finger and thumb of the left hand, to prevent the sheets shifting, whilst they are beat with the hammer in the right hand, taking care to change the book about, so as to beat the whole equally, and frequently changing the order of the sheets so as to present each sheet to the action of the hammer. When books are fresh printed great care must be taken not to beat them too hard, that the print from one page, may not set off on that which is opposite; and when there are prints, silver paper should be placed before them, to prevent the same thing happening; indeed, where the engravings are valuable, they should not be put into the book until it has been beaten.

7th. The *Gold Knife* is commonly a long spatula or painter's knife, which is used for cutting the gold

leaf into proper sizes on the gold cushion.

8th. *The Gold Cushion.* This is made by laying a quire of blotting, or other soft paper, on a flat board of the same size, and covering it with a piece of rough calf skin. It should be kept carefully from grease, which is best done by rubbing some warm ashes over it before it is used.

9th, *The Backing Hammer.* For this purpose the common shoemaker's hammer is used, of the largest size.

10th. *Ivory or Bone Knife,* for folding or cutting paper.

11th. *Pressing Boards,* are flat boards made of weel seasoned beech, the small ones being about 5 eights of an inch thick, and the large ones one inch. The sizes depend on the books they are intended to press, and therefore, are known by the same name, as octavo boards, quarto boards, &c.

12th. *Cutting Boards,* are slips of feather edged board, thinner one side than the other, the thick side being from one half to one inch, which is reduced half on the thin side.

13th. *Backing Boards.* These are the same as the cutting boards, with this difference, that they are a little levelled on the thick, or upper edge, in order to make the groove which they are intended to form, sharper.

TOOLS FOR FINISHING OR LAYING ON THE GOLD.

14th. *Rolls.* These are brass wheels of various thickness, having different figures and designs engraved, or rather embossed on their edges. They

are mounted on a spill of iron, terminating on two cheeks, through which a hole is made to receive the pin on which the roll turns; the spill is driven into a long wooden handle, which, when used, rests against the shoulder; they are used for rolling the bands on the backs and sides of books.

15th. *Pallets* are pieces of brass of about two inches long, set in a handle, and engraved like the former. They are much less expensive, but do not make the same dispatch, and they are only applicable to the backs of books.

16th. *Back Tools*, are buttons of brass, of various sizes, set in handles, and cut or embossed with various devices, such as flowers, stars, &c.

17th. *Alphabets* of different sizes, all of brass, for lettering the backs of books; they are distinguished by octavo, quarto, and folio alphabets, according to their size. The manner of using the finishing tools will be given when we treat of that part of the art.

Books are sent from the printer in quires; the sheets are then folded into a certain number of leaves, according to the form in which the book is to appear, viz.—two leaves for folio, four for quarto, eight for octavo, twelve for duodecimo, &c. This is done with the ivory knife or folder, and in the arrangement of the sheets, the workman is directed by the catchword and signature at the bottom of the pages. Great care should be taken in the folding of a book, as its beauty will be much injured by any inattention to this particular; for when cut, the margin will appear unequal, and in books with small margins, there is some danger of cutting the print. When the leaves are thus folded, they are next beaten, as before described, and the blank paper at

beginning and end being added, each book is divided into small parcels, between each of which, a pressing board is to be placed, and the whole put into the standing press, where they should remain for some hours.

When the sewing press is prepared with bands or cords, according to the foregoing directions, the books are taken from the standing press, and placed upon the table or bench, with the title-page upward. The bands are now to be adjusted, which is done by keeping them at an equal distance from each other, allowing the distance between that band next the head of the book, to be somewhat greater than the distance between themselves, and the distance of the band which is next the tail or bottom of the book, to be greater than either. It should here be observed, that when the bands are meant to project as is sometimes the case, they are suffered to lie on the surface of the back, but when the back is intended to be fair and smooth, grooves are cut in the back, by screwing the book in the cutting press, and making a saw-earf for the bands to lie in; in either case the mode of proceeding is as follows; lay the blank leaf section on the bed of the sewing press, with its head from you, and having put the left hand to the middle of the section, with which you must keep it against the cords, pass with the right hand the needle through the middle of the section, about one inch from the head, turn it round the first band and go to the second, and so on to the last, and finally, bring the needle out about one inch and a half from the bottom. This fixes the first or blank leaf section. The second, or title sheet is proceeded with in the same way, only changing the

direction of the work, this being from tail to head, and the former from head to tail; but as the back would be too much swollen with the thread, were each set or sheet sewn throughout (unless in cases where the section or sheets are thick,) it is necessary to sew on two or three sheets in once passing from head to tail, by taking one stitch in the first sheet laid down, and placing a bit of card in the middle of the sheet before the left hand is withdrawn, in order to find it again with readiness; then lay down a second sheet and make the second stitch in this, just as if the first had been continued, withdraw the hand from this, and place a card as before; then return to the first sheet and make the third stitch, and again return to the second sheet, and so on alternately till you reach to the end, which is called the kettle stitch. The last two or three sheets should be sewn all through like the first, as the beginning and end of a book serving for the hinge of the covers require more strength. If three or more sheets are sewn on, the same method is pursued. A little paste should be rubbed along between the first and second sheet, to attach them more firmly together. Care should be taken not to draw too hard on the thread at the kettle-stitch, which would make the book thinner there than else where.

Before the book is glued, stand the book on the table with its back uppermost, supporting it between the two hands and with the thumbs, open and adjust the sets, so as to make it equally thick on all parts, then knock the back even and flat by turning it downwards and striking it smartly on the table, while it is held firm between the hands. Hold the book in the left hand, with the back upwards, and with a brush

glue the back even and well, with glue of a tolerable consistence. This should always be done near the fire in cold weather, as the glue is apt to be chilled, in which case it will not take sufficient hold on the paper. After the books are glued they must not be dried too hastily as that would render the glue too crisp. When the glue is sufficiently dry, paste the first and second leaves of the end or blank paper together, and with a blunt knife, after having untwisted the cords or bands, scrape them to a point; then with the backing hammer, *round the back* by laying the book on its side with its back from you, hammering gently on the edge of the book, while the hand draws the upper part of the book towards you; then turn the book and repeat the same on the other side. By this means the back is rounded and prepared for backing, or in other words, for forming a groove or shoulder for the paste-board sides of the book to lie in; to accomplish which, having placed the upper or thick edge of a backing board about one eighth of an inch from the back, with the cords or bands free turn the book and place another backing board on the other side in the same manner, holding the book firm between the fingers and thumb of the left hand, and taking great care that the boards do not slip, to prevent which, wet them a little with the tongue, in this position, with the book suspended between the fingers and thumb of the left hand, drop it between the cheeks of the cutting press, and screw it up with the right hand, letting it rise a very little above the surface of the press; examine whether the boards and back keep their position; then, with the press pin, screw the book up as tight as possible, and with the backing hammer beat the back round and ever

causing it to spread as much as possible, and thereby forming the grooves for the reception of the boards.

The paste-boards being roughly cut with shears to something like the size, are cut to a proper width before they are put on the book; with the plough, to ascertain which, take the width of a book by placing one foot of the compasses close against the shoulder of the groove, and extend the other foot towards the fore-edge, piercing two or three leaves with it, in order to ascertain how much it is necessary to cut away; then allow as much more in width as you desire the boards should project beyond the book, mark it on them, and proceed to cut them with the plough. Place a paste-board on each side the book and with the bodkin make two holes to each scratch, one about one quarter of an inch from the edge, and the other half an inch farther in. With a little paste between the finger and thumb rub the bands to a point, and pass them in through the first and out through the second hole, and then draw them as close home as possible, cutting off the ends of the bands to about half an inch in length, rub the ends with a little more paste, and lay the board flat on the edge of the press, hammering smartly on the bands to close the holes on them and to make them flat and smooth.

The book being now in boards, with a fine point or knife, mark where the boards come on the side near the fore-edge. The next step is to cut the edges; beginning with the fore-edge, which is concave or hollow. This operation, though difficult to describe, is nevertheless very simple. To perform it, the back, which is now round, is made flat by

introducing two pieces of thin iron 4 or 5 inches long near the head and tail of the book, between the paste-board and the back; the ends of the iron resting on the inside of the boards, and the back on the middle, the boards standing out from the back at right angles, forming a figure somewhat resembling the letter J, the stem of the letter representing the leaves, and the arms, the boards. In this position the leaves are pressed between the flat of both hands and the book struck upon the flat of the cutting press so as to take the round out of the back. Two cutting boards are now applied, one before and the other behind, bringing the front one, or runner, up so near to the mark, which was before described, as to leave the boards a sufficient square or projection beyond the leaves of the book; then raise the book, by pressing the boards between the fingers and thumb of the left hand, slipping out the irons as you raise it, but taking great care to keep the book from shifting. Then drop it between the cheeks of the press, which when done and the screws are pressed gently upon it, force it down till the runner or front board, comes exactly even with the surface of the press, the back board rising as much above it as that part of the leaves of the book intended to be cut away, and proceed to cut it as before described. To cut the head and tail, the boards must be drawn as far down from the head as the bands will admit. Then place the cutting boards as before, having previously marked on the paste boards, with a square, the quantity intended to be cut away; and cut through boards and all. To cut the tail of the book, draw the boards from the tail towards the head, and proceed as before. This

is called *cutting in boards*. To cut out of boards, which is the way in which all school books are done the fore-edges of as many as can be conveniently held in the hand, are cut before the backs are rounded, after which they are rounded, backed, and boarded, when they are again put into the standing press and suffered to remain for some hours, and then taken out, the heads and tails cut as other books; but the paste-boards not having been cut to the proper width, previous to their being put on, are then cut, allowing a proper square, by means of a large pair of shears, like those used by tinmen. All kinds of account books are sewed on slips of parchment or vellum, and after being glued, the edges are cut, and coloured, and then the boards put to them by pasting the board to the first blank leaf, and the ends of the slips of parchment on which the book is sewn.

To return to the printed book; the edges must now be coloured, and having cut away a very small bit of the four corners of the paste-boards, next the back, it will be ready for *head-banding*, a name given to the small rope of coloured silk or worsted which is put at the head and tail of the back, the mode of doing which is, to roll paper under a board to the required size, having previously pasted it, and having taken a piece of it of a proper length for the book. (which must be fixed in the end of the press) with a needle and silk of one or two colours as is desired, pierce the back at one corner and bring it round the roll of paper, and having fixed the roll, twist the different colours of the silk alternately round the band or roll, crossing the one over the other as you change them, and fastening it occasionally as you proceed by repiercing the back with the

needle. The back must now receive another coat of glue, and be lined with cartridge or other in order to render it smooth and to fix the head-bands. To cover it, you must wet the leather first, and having pressed the water well out, lay it on a paste-board, avoiding touching it with steel or iron, as that will turn it instantly black; and having cut it to the size required, pare the edges thin on a piece of marble or other smooth stone, with the common shoemaker's paring knife, cutting from the rough or flesh side of the leather; when thus prepared, paste it evenly over with good paste, and laying the book on its side on it, bring the leather as tight over the sides as you can, turn the edges in, making the corners as neat and flat as possible, by cutting away all the leather which projects beyond the corner of the board, and doubling one over the other by stretching the leather a little, setting and putting the leather close as you proceed. After this lay the book again on its side, and rub the leather smooth with the edge of the ivory folder or paper knife, drawing the leather up over the head-bands, and setting it in, square and neat on them, and tie twine or thread round the book to nick the leather by the ends of the head bands. In drying it, set it with its back towards the fire on a clean board at some distance from it, (or, if in summer, in the sun,) till the back is nearly dry, which is known by the leather assuming its primitive colour; as soon as this is perceived to be the case, with a folder rub the back up and down, whilst warm, and the glue being softened by the water of the paste and the heat, attaches the leather strongly to the back; whilst the superfluous quan-

tity, if any, is driven out at the head-bands, from which it must be removed with care, that they may not suffer injury from it.

Great care should be taken if books are dried by the fire, not to place them too near it, as the glue is very apt to show through the leather, and the books should frequently be examined, lest they should get too dry for setting. It should here be observed, that if the book is to be bound in rough calf, *i. e.* with the flesh side of the leather outward, it should not be wetted, but pasted on the grain side, and suffered to lie till sufficiently softened. The next stage is to marble, colour, or spot the sides and back, directions for which, and for colouring the edges, will be found in their proper place, with the manner of preparing the colours. After the back is marbled or stained, it is ready for the lettering piece on the back. Take a piece of morocco, and proceed to strip or divide the grain from the flesh side, as follows; having cut through the grain or coloured side in an oblique direction, with a knife, raise it with your nail so as to take hold of it, then by pulling the one from the other, it will render it thin and fit for your purpose. It is to be observed, however, that some parts of the skin of morocco are more difficult to separate than others, particularly near the neck; these parts will therefore be best reserved for other purposes, or they may be pared to a proper thickness. The back of your book being divided with a pair of compasses, into seven compartments, allowing a large one for that next the tail, proceed to put on the lettering piece by cutting a piece of the thin morocco of the proper size, and paring its edges on the paring stone with a very

sharp knife, and having pasted it well, apply it to the back and rub it well into contact, by laying a piece of paper over it, and rubbing it well down with the folding stick. It should have been remarked, that after dividing the back into compartments with the points of the compasses, in order to have a guide in rolling the bands on the back in finishing, a piece of paper previously doubled many times, is laid across the back where the points of the compasses have marked, holding it down with the fingers and thumb against the sides of the book, and marking by its edge on the back with a folder. The book is now ready for gilding, or as it is called, *finishing*. The back and sides of the book are now to receive three coats of glaire, which is made by beating the whites of eggs, with about two drops of sweet oil to each, until they are quite thin; this is best done by splitting a small piece of cane stick, six inches long, and putting through it, at right angles with it, bits of quill; by immersing this in the cup, and rolling it round briskly between the palms of the hands, the eggs will soon lose their ropiness and be fit for use. Let each coat dry before another is put on. When the last coat of glaire is dry, rub the back with a greasy or oily rag; and having laid a sheet of gold on the cushion, and divided it into strips sufficiently to cover the back, lay it on gently, and the gold will attach to it, then pat it into contact with a little cotton wool.

As the handling of gold is a matter of great nicety, and requires a great deal of practice to do it well, I shall describe the proper manner as near as possible, and give such cautions as are necessary. Books of gold contain 30 leaves, and that sort which

it with an oil rag, which done, it must be polished with the polishing iron. This tool is a round piece of iron, 4 or 5 inches long, a little swelling in the middle, and polished on one side, out of the upper side proceeds a spill, to which is affixed a long wooden handle, which, when used, rests against the shoulder; before used, it is heated pretty warm and rubbed upon an old leather back, on which some fine ashes are occasionally thrown, to clean and polish it; in this state it is rubbed over the back and sides of the book, which require to be lightly touched with the oil rag, during the operation. Extra work is sometimes pressed again between horns, which gives it a more exquisite polish.

MISCELLANEOUS OBSERVATIONS.

All stationary work is sewn with strong waxed thread, and as the vellum or parchment is never attached to the back like leather, but lies hollow and loose when the book is open, it cannot of course afford that security to the back, which leather does; it is therefore common to line the back between the slips, with coarse canvas or slips of leather, letting them come as much over the sides as to paste down with the boards and slips. The boards for stationary are not so thick in proportion as for printed work, and, when put on, are placed at least half an inch from the back. On each side the parchment slip which they are sewn upon, you must cut with scissors a very narrow strip, which is not to be pasted down, but left for the purpose of drawing through the parchment when the cover is applied, and serving to attach the cover, before it is pasted to the

boards. Parchment or vellum covers should always be lined before they are put on, and applied before they are quite dry. The edges of stationary work are most commonly sprinkled, and not burnished, but printed books, whether sprinkled or coloured, are burnished with a dog's tooth, or agate, set in a long handle, and the leaves of the book being screwed tight between boards in the cutting press, are rubbed over with them till they have acquired a gloss.

In warm weather, gild but a few backs at a time before finishing, otherwise they will get too dry.

All extra binding is rolled round the sides of the cover, both within and without, and the head-band is generally a double one; it is also usual to put a register of coloured ribbon, which must be put in before the leather back is put on the head-band. It is now very common to give an artificial kind of grain to the backs of russia and calf books; this is done by pressing them between boards, cut for the purpose.

Russia leather, being harsh, should be well soaked for half an hour in water, and beat, and rolled, before used.

Morocco, requires less glaze for finishing than other leather, and is only rubbed well with a piece of rough calf skin. Polishing with the polishing iron, spoils the grain and destroys its colour.

Rough Calf books are finished with hot tools without gold; the tools should be heated a little hotter for the purpose. Keep your gold free from damp, as it spoils it.

A charcoal stove similar to that used by tinnmen, is preferable to a coal fire, as the letters and tools suffer less from the former than the latter; another advantage is, that it may be placed near the work

In rolling the bands on the back, the book should be held against a board, which is screwed firmly in the cutting press, and projecting nearly the height of the book above it.

All extra books have marble paper at beginning and end, besides blank leaves, which when pasted to the cover, is rubbed into the joint neatly, and suffered to dry whilst the book is open.

Before gilding russia leather, wash the cover once with serum of bullocks blood; this gives it a proper gloss, and prepares it better for receiving the gold.

Calf should be glaired three times, and sheep twice, before gilding or polishing.

When quarto plates are to be put into an octavo book, the plate should be neatly doubled in the middle, with its face inwards, and a small slip of paper about an inch wide, affixed to the back, half of which is pasted to the front, and the other half left projecting beyond it, to affix it to the book; this is called guarding.

As it sometimes happens that port-folios for prints are wanted of a larger size than paste-boards are commonly made, the way to obviate this difficulty is to make each cover of two layers of boards, by bringing the joints of one layer, over the middle of the boards which form the other layer, or as it is called by bricklayers and masons, breaking the joints by this contrivance, boards may be formed of any size required. You must lay the boards on an even floor whilst they are drying, placing paste-boards and other heavy substances on them, as they are of course too large for the press.

A very good kind of paper for covering memorandum and copy books, may be made by mixing

with paste any cheap colour, and going over any printed or waste paper with it, then with a comb or piece of flat wood broken across the grain, wave it over the colour, and hang it up to dry. In boiling paste, add a little pounded alum to the flour and water before you boil it; and always boil it as thick as you can, as it keeps much better, and can be thinned by adding water as you want it.

Always keep good old glaire for finishing, as it produces better impressions of the tools, and gives the gold a better colour.

It is a proper thing to keep a second plough, with an old knife in it, for cutting the paste-boards, otherwise your knife will never be in order, and will cut the edges rough.

Mix a little paste with your common colours, for sprinkling and colouring the edges, to bind them.

Too much attention cannot be given to the quality of the thread for sewing the books; to be good it should, be strong and not too hard twisted, which common threads generally are. Keep thread and silk always well secured from the air. Sometimes raised bands are put on books, which have been sewed for flat or fair backs, this is best done by slips of paste board or vellum, many times doubled, cut in square slips and glued to the back; which gives a very neat effect, if the sharpness and squareness of the artificial bands is preserved after the leather is put on, particularly if the bands are given a different colour from that of the back, and tooled neatly. Sometimes head-bands, instead of being round, are square; the same materials are made use of for them as for the bands of backs. In half-bound books,

parchment corners are preferable to leather ones; as they resist blows better, and are less troublesome. Before lining your parchment covers for stationary, sponge them with water and lay them one on the other, with a weight on them to soften.

INSTRUCTIONS FOR MARBLING AND SPRINKLING THE SIDES OF BOOKS.

Let the book be put between two wands or slips of wood, with their ends resting on boxes or any other thing that will keep the books at a sufficient or convenient height from the floor, inclining the book in any way that you would have the marble run which will ever follow the direction that the book is inclined to; but should it be wished that the marble be of the tree kind, having a centre or stern, it is easily done by bending each side of the book in the middle, forming a kind of shoot or gutter, so that the water or colour being thrown on, runs first from the sides to the centre, and then through this gutter to the tail of the book, forming a marble somewhat resembling a tree. Let a sufficient quantity of each colour be taken out of the bottles, in open cups, with a common painter's dusting brush for each, of a size proportioned to the quantity of colour required; provide also a large pail of clear water, with a large piece of sponge in it for washing away the colours when they have remained a sufficient time on the cover. Every thing being thus prepared, throw on water with a bunch of quills tied together by

the neather ends into a kind of brush, in large splash-
 es, by dipping the quills in the water and knock-
 ing them gently against the iron press pin, which is
 held in the left hand, then take a small quantity of
 any of the colours as hereafter directed, on your
 brush, and having knocked out the superfluous co-
 lour by striking it lightly against the press pin, hold-
 ing it over the cup, from which you took it, then
 hold the press pin over the book, and strike the
 brush, so as to let the colour fall in a kind of rain
 on the cover of the book; and so proceed with all
 the colours, following the one upon the other as
 quick as possible, that the whole may run together;
 then with the sponge and water wipe them lightly
 over, and stand them on their ends to dry.

If the book is to be spotted or sprinkled, it should
 be kept flat, not inclining either way; but should you
 wish to have it splashed or mottled, a small degree
 of inclination may be given to the book, to induce
 the colours to run together, which sometimes has
 the happiest effect.

To sprinkle the sides or edges of books the pro-
 cess is the same, having a stiff hair brush cut off
 square at the ends; you dip it in the colour, and
 holding it in the left hand, rub over the ends of the
 brush the folder or ivory knife, this causes the co-
 lour to fall on in fine or coarse spots according as the
 brush is more or less charged with colour.

Let your brushes and sponges be always used for
 the same colour, and never add spirit to colours till
 they are about to be used. Always wash out the
 brushes and sponges in pure water after using, other-
 wise they will be soon destroyed.

RECIPTS FOR MARBLING AND STAINING THE
BACKS AND SIDES OF BOOKS.

Black. Boil half an ounce of copperas, with two quarts of soft water; when a good black and settled put it into a clean bottle for use.

Brown. Half a pound of the best potash, dissolved in one quart of rain water, and when clear bottle it for use.

Vitriol Water. One ounce of the best oil of vitriol, mixed with three ounces of water; boil it for use.

Vinegar Black. Steep iron filings in vinegar or table beer, for twenty-four hours; then give them a quick boil on the fire, and when settled, strain and bottle the liquid for use.

Dark Sprinkle. Wash the cover of the book with a sponge and very weak potash water, and immediately place it between wands or sticks, letting the leaves of the book drop between them, whilst the covers remain extended flat, and sprinkle them very fine and dark with the copperas.

Another beautiful sprinkle may be done by giving in addition to the dark sprinkle, a sprinkle of brown and vitriol water.

Common Marble. Wash the cover with weak potash water, and give it a coat of glaire made with whites of eggs; when the cover is dry, put the book between the wands, throw on water, with a bunch of quills, in all directions, and immediately sprinkle with the copperas water and brown; let the marble remain a few minutes, and then wash it with a clean sponge and water.

Another Marble. Wash the cover with strong potash water, glaze it, throw on water, use the vinegar black, and lastly throw on a fine sprinkle of vitriol water, which will be a great addition to the marble.

A marble in the form of trees may be made by bending the boards in the centre, after their being glazed and washed as before directed.

Red Spots. Aqua regia. Mix in a quart bottle, two ounces of the best double aqua fortis; one table spoonful of spirits of salts, half an ounce of grain tin, and four ounces of rain water. The whole must remain twenty-four hours before using.

Black the cover of the book with copperas water, and when dry give it a coat of brazil red. Mix a little aqua regia and dry brazil together, and when settled, spot the cover, when between the wands, with the red liquid. When the spots are perfectly dry, wash the cover with a sponge and water.

Yellow Spots. Black the cover of the book, and when dry, put it between the wands. Mix aqua regia and turmeric together, and when settled, throw on large or small yellow spots.

Red and Yellow Spots. Black the cover, throw on the yellow spots, and when dry, throw on small spots of liquid red. Wash the cover with a clean sponge and water. Mix no more colours with the spirit than what are wanted for immediate use, as it destroys the colour.

Transparent Marble. Marble the boards of the book with a tree down each centre, place it between the wands, and put on each board an oval, made of a thin piece of press paper, with a piece of lead on each. Black the cover on the outer parts of the

oval, and when dry, go over the same with strong brazil water. Throw on red spots, let them dry, then remove the ovals; wash the cover where red spots are, with a clean sponge and water. Colour the inside of the oval with the following liquid, which will have a beautiful effect. Mix an ounce of spirits of wine and a tablespoonful of powdered turmeric together, in a bottle; shake the liquid well, and let it settle before using.

Give the ovals two fine coats of the liquid, with a camel's hair brush, and when done, cork up the bottle to prevent evaporation.

Egyptian Marble. Before covering the book, colour the leather with Scott's liquid blue, and immerse in water to extract the spirit. When the cover has been half an hour in the water, take it out and lay it between pieces of brown paper till almost dry. Cover the book, place it at a little distance from the fire till perfectly dry, and glaire it. Put the book between wands, throw thereon potash water with a bunch of quills, and lastly, a fine sprinkle of the vinegar black. The book must remain till nearly dry, and be washed with a sponge and water.

Purple Marble. After the book is covered and dry, colour the cover with strong hot purple liquid, two or three times. Glaire the cover over when dry and put the book between wands; throw on water with quills, and sprinkle it with strong vitriol water, which will produce bright red veins. After the colours are dry, wash them with a sponge and water.

Stone Marble. Glaire the cover, and when dry, put the book into the cutting press with the boards sloping, to cause the colours to run gently down. Throw on copperas water freely with a brush, dip a

sponge into the strong potash water, and press it out on different parts of the back, so that the colour may run down each side; where the brown has left a vacancy, apply vitriol water in the same manner. Let the book remain till the colours are perfectly dry, then wash the cover.

Rice Marble. Colour the cover with spirits of wine and turmeric, put the book between wands, and throw on rice very regular. Throw on a fine sprinkle of copperas water, till the cover is nearly black, and let it dry. The cover may be spotted with red liquid or potash water, before the rice is thrown off.

Chinese Marble. Colour the cover of the book with a dark brown, and put it between wands; mix whiting and water of a thick consistency, and throw it on in spots or streaks which must remain till dry. Spot or sprinkle the cover with liquid blue, and lastly, throw on large spots of the liquid red. The colours must be dry before washing off the whiting.

Another Marble. Black the cover with copperas water, let it dry, and give it two coats of strong brazil water. Throw on whiting as above mentioned, and give the cover a bold sprinkle with the red liquid.

Red Marble. Before covering the book, it will be necessary to sponge the cover well with lime water, and dry it in brown paper.

Boil, on a slow fire, one ounce of brazil dust; a teaspoonful of powdered cochineal; a little alum, and half a pint of the best vinegar, till the whole produce a bright red.

Colour the cover two or three times over, while the liquid is hot, and then immerse it in alum and

water, previously dissolved. Cover the book in the usual manner, and let it be perfectly dry. Glaze the cover and put the book between wands; throw on potash water with quills, and sprinkle with vinegar black.

A few drops of aqua regia may be put into the liquid before colouring the cover, which will give it a brighter and more permanent red.

Wainscot Marble. Colour the cover with strong brown, glaze it, and place the book in the cutting press or wands, having the boards flat and even. Throw on water till every part of the boards is covered. Take a sufficient quantity of copperas water in the brush, and dash it on the boards freely; do the same with potash water, and lastly a bold sprinkle of vitriol water. This marble will have a fine effect when great attention and care is paid thereto.

Japan Colouring. After the book is covered and dry, colour the cover with potash water, give it two good coats of brazil wash and glaze it. Put the book between wands, allowing the boards to slop a little. Dash on copperas water, then with a sponge full of liquid red, press out on the back, and on different parts, large drops, which will run down each board, and make a fine shaded red. When the cover is dry, wash it over two or three times with brazil wash, to give it a brighter colour.

Green Shade. In addition to the stone marble before mentioned, use Scott's liquid blue in the same manner as the other colours, before finishing the marble with vitriol water.

In every receipt for marbling, be careful to let the colours have time to dry, as they will then have their full effect, and shew their brightness better.

When the backs are intended to be of one colour which is very fashionable, and shews the gold to the greatest advantage, a piece of thin pasteboard must be put thereon, previous to marbling, colouring, &c. which will prevent the backs receiving any colour.

The following will be found to answer that purpose.

Green. Colour the back twice with Scott's liquid blue, when dry, wash it two or three times with sponge and water

Purple. Rub the strong purple wash well on the back, near the fire, three or four times, and wash it, when dry, with clear water.

Blue. Colour the back with copperas water, and give it two coats of liquid blue.

Brown. Colour the backs with strong potash water.

Lead Colour. Colour the back with very weak copperas water, or give it a coat of copperas and potash water mixed

The backs being so coloured, there will be no occasion for coloured lettering pieces, or pieces for the number of volumes. All these are laid on with a sponge.

RECEIPTS FOR COLOURING EDGES OF BOOKS, &c.

Blue. Two ounces of fine powdered indigo, dissolved in two ounces of double oil of vitriol, and a tea-spoonful of spirits of salt.

This liquid must be kept in an open earthen vessel, and remain for a week before it is used; when

a little is reduced with water, it will make a beautiful sprinkle for the edges.

Green. Two ounces of French berries, and a little alum, boiled in a pint of rain water for half an hour. Strain the liquid through a fine piece of flannel, and add a little of the liquid blue.

The green must be kept in a glass bottle well corked up, and used for sprinkling, or colouring the edges with a sponge.

Purple. Half a pound of logwood chips; two ounces of powdered alum; and a small piece of copperas, boil them in three pints of soft water, till reduced to two, and strain the liquid. This purple will be found a cheap colour for sprinkling common work.

A fine purple for immediate use may be obtained from strong potash water and brazil dust. Should any of the colour remain unused, it will, in a few hours change to a brown.

Orange. Two ounces of brazil dust; one ounce of French berries bruised, and a little alum, boil them to a pint of soft water, and strain and bottle the colour for use. This colour may be spotted on the edges to fancy, with other colours.

Brown. Boil in rain water equal quantities of logwood and French berries; and to give the colour a darker shade, add a little copperas; when it is cool strain and bottle it for use.

Red. Half a pound of brazil dust, and two ounces of powdered alum, boil them well in a pint of vinegar, and a pint of water, till reduced to a pint; strain it through a fine cotton cloth. This liquid red will be of great use for sprinkling and spotting the edges, together with brown and purple.

Gold Sprinkle. Put into a marble mortar, half an ounce of pure honey, and one book of gold leaf; rub them well together until they are very fine; add half a pint of clear water, and mix them well together, when the water clears, pour it off and put in more, till the honey is all extracted, and nothing remains but the gold.

Mix one grain of corrosive sublimate, with a teaspoonful of spirits of wine, and when dissolved, put the the same together with a little thick gum water to the gold, and bottle the liquid for use.

The edges of the book may be coloured or sprinkled with blue, green, or purple; and lastly, with gold liquid, in small or large spots, shaking the bottle before using. Burnish the edge when dry, and cover it with paper. This gold sprinkle will be useful for extra binding. Ladies may also use it for ornamenting their fancy works, putting it on with a pen or camel hair pencil, and burnishing it with a dog's tooth.

Rice Marble. When the fore edge of a book is cut, let it remain in the press, and throw on rice in a regular manner, sprinkle the edge with any dark colour till the white paper is covered, then shake off the rice. Various colours may be used, the fore edge may be coloured with yellow or red, before using the rice. By laying any other substance instead of the rice, so as to obstruct the sprinkled colour, various effects may be produced.

Fancy Colouring. Let the book remain in the press when cut on the fore edge; mix whiting and water to a thick consistency, and with a small brush throw it on the edge, in spots or streaks; when the whiting is almost dry, spot the edge with blue, green

purple, and brazil red. When quite dry, shake off the whiting, and brush the edge with a soft brush. A sprinkle of dark blue thrown on immediately after the whiting, will produce a beautiful shaded edge.

Water Marble. Provide a wooden trough two inches deep, and six inches wide. Pour hot water in it till nearly full, and put therein three ounces of gum dragon, which must be dissolved before marbling. Grind the following colours on a marble slab, with old ox gall, very smooth and fine, and procure a small brush and cup for each.

Prussian Blue.

King's Yellow.

Rose pink, or Lake.

Flake White.

Lamp Black.

Green.—Blue and Yellow.

Orange.—Red and Yellow.

Purple.—Blue and Red.

Brown.—Black and Yellow.

To prevent the water entering the leaves of the book tie it tight between cutting boards of an equal size. Place the trough in a steady situation, and throw on the colours with their respective brushes, beginning with the blue, or any dark colour, and so on till the surface of the water is covered. The colours may remain in this situation, or be waved with a small iron din. Hold the book with the edge downwards, and press it even and lightly with the colours and it will immediately be marbled. Two or three colours only may be used, or as many as the marbler may think proper.

Should any of the colours not swim well, which is seldom the case, a few drops of spirits of wine

may be added.

Soap Marble. The following is a very recent discovery, by very simple means, and may be used for marbling stationary book-edges, or sheets of paper for ladie's fancy work.

Grind on a marble slab, prussian blue, with a little brown soap, and have king's yellow with white soap. Lake may be used for a ground colour, and prussian blue ground with white soap.—Brown umber for ground colour, and flake white ground with white soap. Any colour of a light substance may be used for marbling.

Marbling. Pour hard clear water into any vessel large enough for marbling; throw on large spots of prussian blue till the surface of the water is nearly covered; then throw on king's yellow, in small spots which will immediately run into streaks or veins in all directions.

When marbling book edges, tie the fore edges, &c. between boards before rounding the back, and press it lightly on the surface of the colours, which will make a beautiful marble, and burnish well if required.

In like manner, all colours as above mentioned, will have the same effect, provided the ground colour, (that is,) the colour thrown in first, be ground with brown soap, and that for the veins with white soap.

Sheets of good strong paper may be marbled for ornamenting fire screens, &c. or a thinner kind for half bound books, without any preparation whatever, except a vessel large enough to receive sheets, and putting them on in a careful manner, that the whole may receive the colours.

Gilding Vellum. Glaire the cover once, let it be perfectly dry, and rub it over with the oil rag, where the gilding is intended to be. Make the roll hot, and work it firm and strong, to make a good impression.

Gilding Paper and Book Edges. With the white of an egg mix twice that quantity of water; a table spoonful of bullock's blood, taken from top, when it has settled some time; beat them well together for an hour, let the whole stand three days before using. The paper must be well pressed, and when cut, made very smooth with a piece of glass, or an iron scraper. Put the gilding boards even, on each side of the paper, and screw it tight in the cutting press. With yellow ochre, and gold size mixed together, colour the smooth edge, rub it till it is quite dry, with paper shavings, and burnish the same with a dog's tooth. Cut the gold leaf, and with a thin piece of paper, previously rubbed on your forehead, to induce the gold to adhere, press it on the gold gently, which will attach itself to the paper, and proceed until there is sufficient to cover the edge. With a camel's hair brush float the edge with a gilding size, hold the paper on where the gold is, with the fingers of each hand, and lay it gently on the size. When the whole is covered, let the superfluous size run from under the gold, by inclining the press; stand it a little distance from the fire till dry; to ascertain which breathe on the gold; and if it immediately becomes bright, you may conclude it is ready for burnishing.

Red Ink. Half a pound of brazil dust, half an ounce of powdered cochineal, a piece of lump sugar and four quarts of viengar. Let them steep for 12 hours, and boil them on a slow fire till you have a

good red. When the ink is settled, strain it thro' a piece of fine cotton, and bottle it for use.

Slate Paper. Boil glue and water to a good consistency, and when on the fire, add lamp black, and fine powdered emery. Give the paper two coats of the liquid with a fine brush.

Splash Paper. Before colouring the paper, it will be necessary, in the first place, to prepare the proper colours, and have them bottled for use. They must also, after being boiled, be steeped for twelve hours, in their respective quantities of water and vinegar, as follows:—

Purple.—Half a pound of logwood chips, with vinegar and water, each half a pint.

Dark Red.—Half a pound of brazil dust, with vinegar and water, each one pint.

Bright Red.—Before colouring put a few drops of aqua regia into a small quantity of the dark red.

Green.—Half a pound of French berries, bruised; water and vinegar, each one pint, with two ounces of liquid blue.

Brown.—Two ounces of strong potash water, with one ounce of brazil dust, which must not be boiled, but remain till the colour change from a light purple to brown.

Yellow.—Half a pound of French berries, water and vinegar, each one pint.

The preceding colours must have a small quantity of alum bruised, put therein, and boiled over a slow fire. Strain them through a piece of fine flannel, or cotton cloth, till quite pure.

Dissolve half a pound of alum in two quarts of rain water; sprinkle it on the sheets of paper for colouring, and lay one upon another.

Put the paper between the boards, with a little pressure thereon, and leave them to soak for five hours before splashing.

Purple Splash. Place small stones at a little distance from each other, and lay the sheet thereon; throw on with a brush, purple liquid in splashes.

Tortoise Shell. Splash on black ink, and throw on dark red, and yellow spots where the paper is white.

Various other combinations may be formed by using different colours.

To Colour Vellum Green. Dissolve an ounce of verdigrise, and an ounce of strong vinegar in a bottle, and let them remain near the fire for five days, shaking the bottle three or four times each day. Wash the vellum over with weak potash water, and colour it over three times with the green liquid.

The preceding RECEIPTS are warranted to be Genuine, as all of them have been repeatedly proved.

G. M.

FINIS.





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