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## FORMULAS FOR BOOKBINDERS

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the leather by the glair. This is true of delicate shades of calf, law-sheep and skivers. These leathers must be well filled and not glaired until the filler has had time to thoroughly harden. This, of course, applies only to finished (tooled) work; in press work the filler should be omitted and the glair so far diluted as not to leave a stain on even the most delicate shades of leather.

However, in gold tooling (finishing) also, good results may be obtained without a filler. The texture and the finish of some leather is sometimes of such fineness that mere washing with vinegar or glycerine and rose-water mixture is quite sufficient. To fill such leather with either paste or glue would be an unpardonable blunder. Do without the filler if you can. A piece of furniture cannot be polished without filler: the filler in this case will enhance the effect of the finished product. Like the furniture maker, we must aim to heighten the effect of the finished product. In our case, however, the filler is not a suitable medium, because it will harden the leather and produce an entirely unnatural appearance, resembling paper. Do not try to obtain the desired results by simply plastering the leather with gold and colored inlays, without giving due attention to the preservation of the natural appearance of the leather, which to destroy would be an inexcusable outrage against the laws of esthetics. Always preserve the natural beauty of the leather—this softness—which is an artistic effect in itself. Often this is shamefully neglected by most binders; the forwarder also usually spoils this beauty by excessive stretching of the leather, and soaking in water before it is put on the book.

Finishing and  
Stamping.

General infor-  
mation relating  
to the filling  
of leather.

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material for producing a nice, deep brown in blank-rolling fleshes. The great number of chemical combinations I give will afford the ardent student great opportunities for further improvements. Good results and artistic effects are possible only when true love for the work in hand exists. The intelligent man who is interested in his work will always succeed. To him nothing seems impossible, and no matter how great the obstacles may appear, he will overcome them and gradually force his way to the top of the ladder. The collection of sizes for finishing and stamping includes one formula of which I am particularly proud. It can be used with equally good results for gold or other metal; it is fluid like milk and is readily absorbed so that it can be easily applied with either a sponge or a camel's-hair brush. It does not stain even the most delicate shades of leather and is very adhesive, even in a diluted state. The results are equally good, whether it is used on calf or morocco, cloth or paper. This fact makes it, practically speaking, an all-around size of exceptionally good qualities, and with great pleasure I refer to it as one which has never failed me. I am confident after a few trials you will agree with me that this one formula alone is worth many times the price of the book.

The gilding of edges has received equally careful attention. Every detail of the process was made a special study and the results have been clearly stated under the respective headings. The formulas bearing on this subject I have simplified as much as possible, and given to the craftsmen at large, confident that the results will prove as satisfactory to them as they have

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been to me. ¶ The filler "B" for soft paper will be much appreciated, especially because of the extensive use of soft paper at the present time. Filler "A," a very complete description of which appeared in *The Whisper*, can be used as filler and gives fair results. It is really better adapted for rubbing down, whenever this operation seems expedient. Another very important pointer, included in the treatise on gilding edges, is the one relating to the gilding of books printed on surface-coated paper. This paper, as we all know, has the tendency to "stick" badly in gilding, but if treated according to my instructions, that serious trouble is entirely averted. Several formulas for preparing bole (generally known as red chalk), and black lead are given. Glair and commercial albumen sizings for laying-on have also been fully treated; the results of my investigations in this field, too, have been very satisfactory. There need be no fear of pin-holes or lack of lustre in your edges if my instructions are carefully followed. The suggestions on metal edging, both in white and yellow metal, are exhaustive and valuable. They are also timely, since the manufacture of metal leaf has greatly improved during the last few years, and very little has ever been said on this subject in trade literature.

The art of marbling has never been placed in a true light before the craft, and is, consequently, to this day, shrouded in mystery. The most important detail connected with this work is the way of preparing the color so it will neither rub nor break; this is fully accomplished by the use of my formulas. Any of the common dry mineral colors as well as lamp-black

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### FILLERS

**W**HEN leather is to be gilded by the machine, a class of work generally referred to in practice as "stamping" or "press work," the filler can safely be omitted. With hardly an exception, such work does not require a filler, owing to the absolutely steady impression produced by the machine.

Not so, however, in finishing. Here hand impressions form the basis of the work. Success in this work largely depends upon certainty and steadiness. But these hand impressions, produced by the direct application of physical strength to the die, without an intermediate agent, such as a machine, reducing exertion to a minimum, are always, even under the most favorable conditions, more or less uncertain—unsteady. Many defects in finishing and tooling can be traced directly to this shortcoming.

The application of a coat of filler to the leather will, of course, not affect a certain and steady impression, but it will have a tendency to cause the gold to adhere ("hold") where, without it, owing to unsteadiness of impression, it probably would not, for the filler—as we all know, or should know—if properly applied, fills every little pore and crevice, thereby preventing to a large degree the absorption by the leather of the glair which is subsequently applied. The glair then dries on the very surface of the leather. This condition makes the "holding" of the gold so easy—so certain—and almost entirely independent of any steadiness of impression. In some instances a filler may be necessary to prevent discoloration of

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glues them to the die-block. The die-block is also washed with it. This causes the paper mount to adhere better to the iron. For these purposes some stampers prefer to dissolve the acid in wood alcohol.

Finishing and  
Stamping.  
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The Mounting of  
Embossing Dies,  
and the  
Covering of Metal  
with  
Leather, etc.

When articles made of tin, or any other kind of sheet metal, are to be covered with leather, cloth or paper, it is well to wash them with oxalic acid, dissolved in either water or alcohol, before covering. For covering, use strong fish glue diluted with vinegar. The same medium should be used by the stamper for glueing the dies to the blocks. Dies so fastened will seldom drop.

This concludes the chapter on that part of finishing which is generally termed "washing." That on the "filling" of the leather follows.

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can be used with perfect results. For red, a lake color is preferable. It should be bought in paste form (pulp), and if it is of the right quality, it will offer very little difficulty. Small dealers do not generally handle lake colors, and it is often difficult to get the right article from large dealers. There are several houses in New York and Chicago dealing in marbling colors, but in my practice I often found their red lakes unnecessarily dear and generally not sufficiently light-proof. As a rule, they soon fade on exposure to sunlight. Red lake, suitable for marbling, need not be costly, still, in shops where but little marbling is done, a few cents, more or less, for the price of red lake need not be seriously considered. Bright maroon-carmine lakes are necessarily expensive, but the pleasant effects produced, and the durability which these colors possess, more than repays the difference in cost. Besides the complete instructions for the preparation of color, the size and expanding mediums are completely described. Gum Hogg, Tragacanth and Irish moss, being the principal ingredients used for marbling size, are separately treated and full particulars are given of all details connected with the preparation of each, together with original suggestions relating to the preservation and "cutting" of the sizes. In addition to the usual expanding mediums, gall and soap-water, a few other ingredients are mentioned which have always produced superior effects.

Marbling I have always considered as the most interesting study connected with our craft, and I sincerely hope that these comprehensive formulas, accurately and truthfully given, will prove an incentive for many to take up this art. The

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publication of these formulas will remove every obstacle that ever confronted the ambitious beginner.

The formulas thus far enumerated comprise the main feature of this work. In addition to these, the book contains several other formulas which, while of minor importance, are not less valuable. These relate to red edging, paste making, colored edges with tooled effects in gold, etc., together with some valuable suggestions on sundry other subjects. Beyond question, this is the most valuable collection of trade secrets ever made public, and offered to the craft at a nominal figure.

¶ What would I have not offered twenty years ago for like opportunities! And will this great sacrifice meet with the approval and appreciation which it justly deserves? Will those who are benefited by it volunteer their aid in my behalf by freely and unreservedly telling their friends of it? I have every confidence in you and know that you will not hesitate to conform to so fair a request as this. It is our duty as men of lofty principles and as fellow-workers to help one another. Give credit to whom credit is due. Most of us spend many a dollar needlessly for amusements. Here is the opportunity for an investment of a few dollars which will bring you joy and success and enable you to turn out good work. This means a steady position with a good salary.

In a spirit of sincere friendliness I give my book, which contains the results of twenty years of persistent study, to the public. I trust this little volume will shed light upon some mysteries which hitherto have been jealously and successfully guarded. I hope my gift will be received with the same good

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from 100 to 200 per cent of water, according to color of the leather. It can be used successfully on dark-colored roans (sheep) and skivers, but it is not suitable for moroccos, levants or light shades of leather of any description.

[No. 3.] *Juice of Lemon*. Use in place of vinegar for delicate shades of leather of any description.

[No. 4.] *Muriatic Acid*. Sufficiently diluted with water to taste slightly sour.

[No. 5.] *Nitric Acid*. Diluted with water, the same as muriatic acid.

[No. 6.] *Urine*. This should be bottled and left standing from two to four weeks before using. Throw away the sediment at the bottom of the bottle. Fresh urine is not effective. A few drops, say from 8 to 12, each of aqua ammonia and nitric acid added to a cupful of old urine, will prove effective.

[No. 7.] *Glycerine and Rose-Water*. Put one teaspoonful of glycerine and rose-water in a cup and add to it five teaspoonfuls of water. This mixture will not only keep the leather moist a considerable length of time, but will also render it soft and pliable. I prefer it to any wash I have ever used. It is easily obtained and very agreeable to use.

[No. 7a.] *Oxalic Acid*. Dissolved in water and sufficiently diluted with the same to leave a strong, sour solution, is a good wash for leather. It is especially adapted as a cleanser for law sheep and skiver.

A concentrated solution made with hot water is efficient in removing grease from metal, hence the stamper uses it for washing the backs of electros and brass dies, just before he

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Finishing and  
Stamping.  
—  
Washing.

glair, will assist in producing a better polish, but at the same time, its presence in the glair is detrimental to the "holding" of the gold. I would rather sacrifice it for the "holding" of the gold, if it were impossible to otherwise produce a high polish. Glycerine is well qualified as a softener, and it will preserve the pliability of leather, for a number of hours at least. If its use is desired, you will do better by adding it to the wash. Moisture on the surface of the leather is highly objectionable. To do moist finishing successfully, you must follow these rules: Wash thoroughly with any solution likely to keep the leather moist for several hours, immediately apply the filler, if one is deemed necessary, and follow this with a coat of glair, plain or combination, which will leave the surface of the leather sufficiently dry within ten or fifteen minutes from the time of its application to admit of finishing. Thus you will obtain the desired object and have the moisture where it is needed, not on the surface, but in the very body of the leather. Now you can commence finishing. This moisture is necessary to keep the leather soft. It is also well to remember that the thicker the leather, the longer it retains moisture. I give now a number of ingredients which serve this purpose well, either singly or in combination.

### FORMULAS

[No. 1.] *Vinegar*. Preferably cider or pure wine vinegar. Can be safely used on any leather.

[No. 2.] *Aqua Ammonia*. Commercial aqua ammonia (not the "Household," which is considerably weaker) diluted with

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and the large majority of embossed leathers. However, in all fine grades of leather, imported moroccos and levants especially, this defect is directly due to the nature of the animal which furnished the pelt, a condition over which the tanner, of course, had no control. Extensive users of imported levants are fully acquainted with these facts. Leathers, like most other things, excepting salts, will not keep moist forever. It does not attract moisture, but expels it by evaporation, and dries out very soon. Even our best efforts to keep the leather moist can only meet with limited success, no matter what ingredients we may use. The drying process goes on without intermission, and this fact renders the finishing more or less uncertain. To meet this condition, we must consider the temperature of the workshop as well as the atmosphere without, the amount of finishing to be done, and accordingly, prepare a larger or smaller number of books at one time. The heat of the tools, too, must be increased as the leather dries out. Thus you will readily agree with me that in order to obtain the best uniform results with the least possible efforts, the leather should be finished dry. With very few exceptions this can be successfully done. Before closing this chapter, I wish to call attention to the erroneous belief of some finishers that the glair also should be made as slow-drying as possible. To attain this object they generally add to it a little glycerine. This practice is absurd, for it prevents the drying of the glair, leaves it sticky, and so delays the work. By the time the glair is sufficiently dry to commence finishing, the leather too is nearly dried out. A drop or two of glycerine added to the

Finishing and  
Stamping.

—  
Washing.

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### WASHES

**O**FTEN a thorough washing of the book is necessary, because of untidy forwarding, or rather covering, where otherwise successful finishing might just as well be done without it. A great variety of leathers do not require to be finished in a moist state. My long and varied experience in this work has thoroughly convinced me that the best results are obtained when leather is finished dry. When should books be finished dry and when moist? To answer this question properly would require more space than I have here at my disposal. In my *Treatise on Hand-Tooling*, fully illustrated, which I will publish in the spring of 1905, this point will be thoroughly explained.

To be brief and consistent, all smooth and soft-grained leather should be finished dry, while hard-grained stock will work better somewhat moist. To the former class belong blank-book cowhide or buffings, calf, calf-finished roans, sheep or skivers, likewise soft-grained moroccos and levants, whether real or imitation; these should be finished dry. On the other hand, any hard-grained roan, sheep, skiver, buffing, cowhide, morocco and levant will work better if finished somewhat moist. A little judgment will soon put you on the right track. It is simply a matter of being able to distinguish hard from soft leather. Not all pelts make soft leather; it is according to the nature, age and sex of the animal whether the pelt will make soft or hard leather. The unnatural hardness of some leathers is often caused by tanning. This is especially true of Persian morocco, domestic Turkish moroccos, levants

[ 2 ]

## PART ONE

### FINISHING AND STAMPING

Finishing and  
Stamping.

Washing.

## FINISHING AND STAMPING

**T**HERE are many finishers who attach an unnecessarily great importance to the various details connected with this work, and worry about the results. Worry causes uncertainty, and uncertainty means questionable, often poor, results. Therefore, be confident! If you but put faith in your work, you will easily overcome all obstacles. By applying the following formulas you will succeed. ¶ The formulas for finishing I have classified under five headings, viz., Washes; Fillers; Glair and Sizings; Oils and Greases for laying-on, and Grease Removers; Brightening of the Gold. ¶ In dissolving gums, glues, etc., it is sometimes advisable that it be accomplished in a double boiler (in water bath) rather than to apply fire directly to the vessel containing the ingredients to be dissolved. The result will generally be more satisfactory; the solution will be stronger and always clear. This very principle you must apply to the glue every day. You dissolve and keep the glue hot by placing the vessel, or kettle containing it, within a larger vessel, called a boiler, which you partly fill with water. The fire must be applied to this boiler. This is what I mean by "dissolve in bath." ¶ Wherever alcohol, or any highly inflammable ingredient is used, it must always be accomplished in "bath," and even then great care must be used to avoid ignition of the fumes.

Finishing and  
Stamping.

Introduction.

### NOTICE

The Formulas always begin with their respective numbers and to render these more distinct they have been indicated by brackets printed in red, thus: [No. 57a.]