TECHNIQUES OF UPHOLSTERY

Easy Chairs, Settees & Occasional Chairs

Robert J. McDonald

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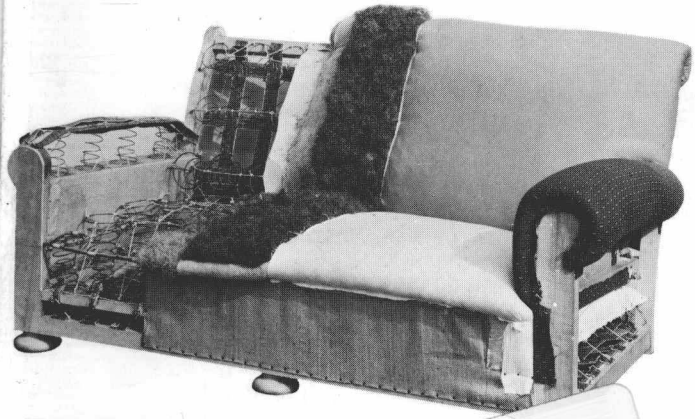

Easy Chairs, Settees and Occasional Chairs

by
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B.T. Batsford Ltd, London

First published 1987

ISBN 0 7134 5631 0

Printed in Great Britain by
R J Acford Ltd
Chichester, Sussex
for the publishers
B T Batsford Ltd
4 Fitzhardinge Street
London W1H 0AH

Contents

Introduction

This is the second in a series of four books taking the craft of upholstery several stages further than the work I described in Book 1. Projects included in this book are more difficult and challenging because they are larger and more complicated. However, I have included text which is easy to read and understand and instructions with many simple line drawings and photographs.

My purpose with this series is to give you, the reader, a closer and more detailed coverage of specific projects in a graded system throughout the four books. You would therefore be able to select one book which could carry details of the particular type of upholstery that you want to specialize in.

Projects dealt with in Book 1 are mostly for smaller items of upholstery that can be worked upon on a small table or worktop with little upset to the rest of the household. The larger items featured in this book, however, will need a clear working space and probably cause a certain amount of débris and dust. If you intend to carry out the work at home, lay a dust cover or sheet over the floor. This will protect the surface from the old tacks that you rip out of the work and become embedded in the floor or carpet. The old tacks, which are unusable, should be gathered up from time to time and disposed of.

To avoid many hours of unnecessary back aches and pain, where possible, raise the item, whether it is a chair or

1. Trestle suitable for upholstery work

settee, and place it at a comfortable working height. You can carry out work much more comfortably by doing this.

Figure 1 shows a trestle which professionals use for standing upholstery on when working. Should you intend to carry out much upholstery, a pair of trestles would be an excellent investment. You can make them from soft or hard wood.

Like most craft work, upholstering requires a degree of skill which will improve with practice, and above all, demands your patience. It is unwise to undertake a project which is too ambitious, without first trying a simpler item to give you the feel of the soft and flexible materials and the confidence to handle them. I have also noticed that women often enjoy upholstery more than men do because, unless they have been trained in the craft, men find working with wood and metal easier than fabric.

As mentioned earlier, patience is an important virtue when learning upholstery techniques. It is very tempting to finish a job quickly without properly considering the final appearance, smooth line, and sculptured look of the work.

To obtain the professional look, ample temporary tacking at all times is needed. A professional upholsterer will always 'temporary' tack inner materials and outer covering before finally 'tacking off'. This term is one that I will use frequently throughout the book.

To temporary tack, align the material being worked on as straight as possible and hammer tacks to hold the material onto the timber so that the tacks are only partly into their depth. After temporary tacking on all sides, inspect the work and check the straightness of weave lines, tensions of material and flowing lines of work. If any of these are not satisfactory at the temporary tacking stage you can simply lift the tacks out and reposition or re-align them to satisfaction. Rarely can you lay a piece of material onto an upholstered surface, tack 'home', and find that the straightness or line is perfect. Temporary tacking ensures against bad workmanship — it should never be omitted.

MATERIALS

A problem which many amateurs undertaking upholstery frequently find most difficult, other than the work itself, is locating a supplier of upholstery materials. This is not as difficult with modern upholstery when you are perhaps replacing resilient rubber webbing or renewing foam cushions or foam filling as most of these commodities can be purchased at the larger D.I.Y. stores or even local smaller traders.

Other types of supplies that may be used for refurbishing a traditionally upholstered piece are rather more difficult to track down. You may need linen or jute webbing, hessian (canvas), different sizes and gauges of coil springs, fillings such as fibre and horsehair, and a variety of other bits and pieces including tacks of different sizes.

To help you with the problem of finding supplies, the appendix includes a useful list of addresses of suppliers of upholstery sundries spread throughout the country. These traders should be able to supply the enthusiastic amateur

with most items in small amounts. Unfortunately, wholesale suppliers to the upholstery manufacturers will not sell the items on a small scale.

TACKS AND STAPLES

Using tacks or wire staples for fixing upholstering materials to the timber frame is optional. Staples fired into the material and frame using a compressed air tool are widely used by today's manufacturers producing modern styles of upholstery with the use of modern materials. This method speeds up production and is less costly than using steel tacks. The home-based upholstery worker, of course, would not have the benefit of compressed air or of such a staple-firing tool, but there are some reliable and strong manual staple-firing tools on the market which are easily obtainable. Figure 2 shows such a tool in use.

2. Using hand stapling tool

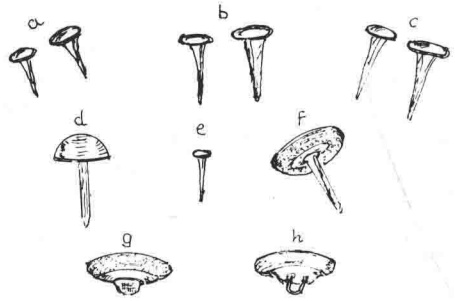
Suitable sizes of staples to use with these tools are 6 mm ($\frac{1}{4}$ in) and 8 mm ($\frac{5}{16}$ in). This measurement refers to the length of the leg of the staple; widths of staples are normally 12–13 mm ($\frac{1}{2}$ in). The normal paper-fixing staples are too soft for upholstery as considerable pressure is required to force the wire staple into the hard wood frame. A good staple-firing tool is an asset for the person about to embark on a series of upholstery projects using modern materials.

Temporary fixing materials is still as necessary when you use a staple-firing tool as when you use tacks. To do this hold the stapling tool a little distance away from the fixing point as the staple is fired into the timber. The staple will penetrate the timber only partly, enabling you to remove it easily with pliers or a small screwdriver when you adjust the material.

Staples, however, should not be used for fixing materials on certain kinds of upholstery work – that is, most traditional forms of upholstery, particularly the refurbishing of antique upholstery. Linen webbing, hessian (canvas), calico, leather etc. usually requires a traditional tack for a sound, lasting job.

Normally the professional upholsterer using the tacking method would have a range of tacks to hand, conveniently stored in small hanging bags close to his work.

The range of tacks available for upholstery is: 16 mm ($\frac{5}{8}$ in); 13 mm ($\frac{1}{2}$ in); and 10 mm ($\frac{3}{8}$ in). There are larger and smaller tacks available but the home upholsterer would probably not need them. In addition, each size is produced in 'improved' and 'fine' forms. The term improved describes a tack with a thicker shank and a larger width of head than its fine counterpart, seen in figure 3. With the wide selection of materials to be tacked during upholstering some are best tacked with the improved tack: for example, use 16 mm ($\frac{5}{8}$ in) improved tacks on woven webbing or hessian and scrim (loosely woven materials) on the thick timber of the underframe on an easy chair or settee; use 13 mm ($\frac{1}{2}$ in) improved tacks for webbing and hessian on lighter timber and 13 mm ($\frac{1}{2}$ in) fine for resilient rubber webbing. Use



3. **a** 10 mm ($\frac{3}{8}$ in) fine and improved tacks **b** 13 mm ($\frac{1}{2}$ in) fine and improved tacks **c** 16 mm ($\frac{5}{8}$ in) fine and improved tacks **d** oxidised decorative nail **e** gimp pin **f** covered stud **g** covered button with tuft **h** covered button with wire loop

10 mm ($\frac{3}{8}$ in) tacks for calico or coverings on polished rebated edges.

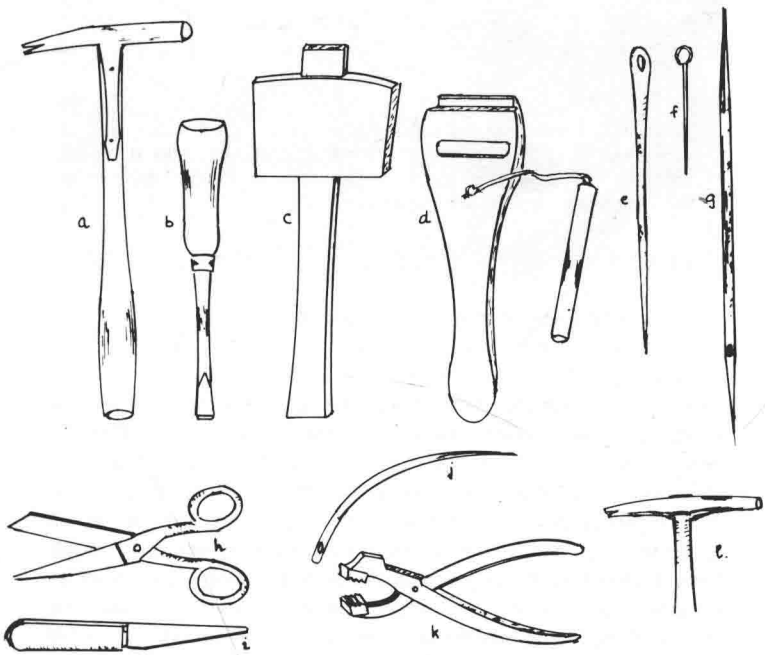
The basic principle in selecting the appropriate tack for a particular operation is to choose the smallest size which will successfully hold the material sufficiently strongly and also the size of tack which will not split the timber, particularly on the lighter frames. For the amateur upholsterer probably 16 mm ($\frac{5}{8}$ in) improved would suffice for webbing heavy work and 13 mm ($\frac{1}{2}$ in) or 10 mm ($\frac{3}{8}$ in) for fine work.

In addition to tacks, 'gimp' pins are very useful for certain operations. These are very slender tacks with very small heads and available in black lacquer or other colours. These are extremely convenient for holding covering or fixing gimp into position. Use the appropriate colour to blend with the colour of the covering or gimp, and make them practically invisible by easing up one or two threads alongside the gimp pin and laying them over the head of the pin.

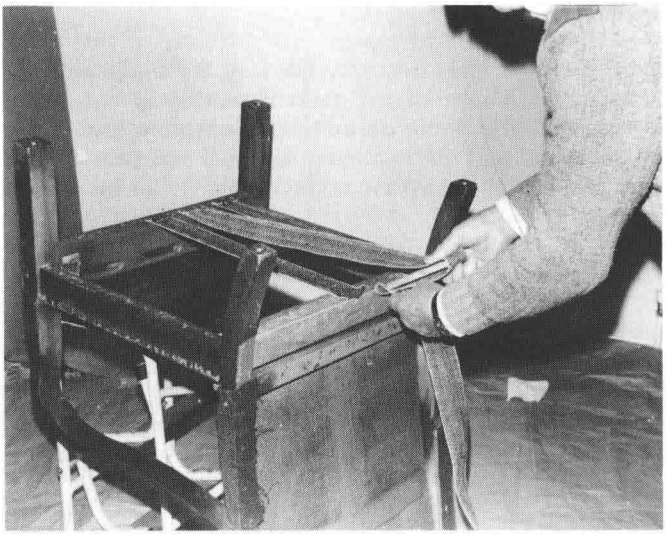
Tacks are available from most D.I.Y. stores, although purchasing them in small packs does work out expensive; they can be purchased in larger quantities of 500 g (1lb 2oz) or more at upholstery shops.

TOOLS

Figure 4 shows tools normally used by the traditional upholsterer. Each one of the tools illustrated is not vitally necessary for the home upholsterer. Substitute tools often may be found and used successfully but if you plan to do a good deal of upholstery the correct tools would be a good investment.



4. Upholstery tools: **a** upholsterer's hammer **b** ripping chisel **c** mallet **d** webbing stretcher **e** regulator **f** skewers **g** bayonet needle **h** scissors **i** leather knife **j** spring needle **k** hide strainer **l** cabriole hammer



5. Use of a piece of wood to tension linen webbing

Figure 5 illustrates how you can tension woven linen or jute webbing using a piece of wood instead of the traditional upholsterer's webbing stretching tool. A light weight cabinet maker's hammer with small face may substitute for the upholsterer's hammer; an old screwdriver may be used to remove tacks in conjunction with a hammer with a large face instead of the conventional ripping chisel and mallet as illustrated. Do not use a new or good screwdriver for this tack-removing operation if using it with a hammer, as the wooden handle will quickly be damaged; always use a wood mallet against any wooden handled tool. A large circular needle, usually available at drapery stores, could replace a spring needle.

Unfortunately, there is no substitute for the long upholsterer's stitching needle used for 'blind' stitching, rolls and stitched edges, but normally these should be fairly easy to obtain and not too expensive.

STRIPPING UPHOLSTERY

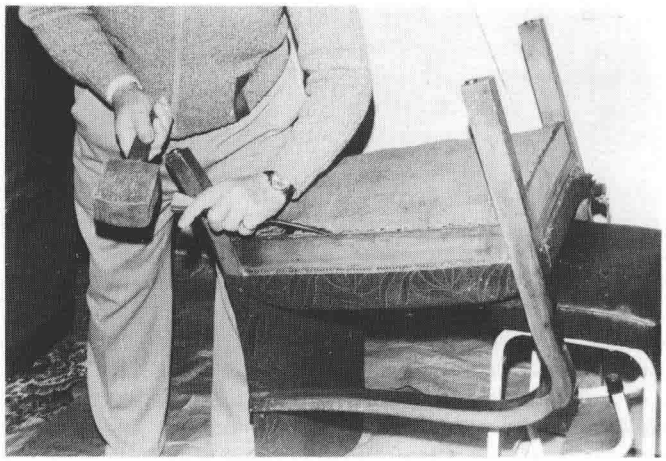
Frequently, it is necessary to re-cover only an item of upholstery without any major repair to the actual interior. The method of re-covering varies a great deal depending upon the type of upholstery in question. If, for example, the item has foam filling as in figure 2 this is easily removed without too much bother. Covering on upholstery such as this is generally held in place with staples; these may be difficult to remove if a compressed air tool has been used to insert them. Remove as many staples as possible whilst stripping the covering. Ease them out with a narrow-blade screwdriver or other pointed tool – an upholsterer's regulator, if available, is ideal, being thin, pointed and strong. Force the point of the tool under the crown of the staple, lifting the staple from the covering and finally lifting them out with pliers. If it is impossible to lift the staple out of the timber, snip the covering alongside with a sharp knife or scissors to pull the covering away.

A word of safety – whilst using a pointed tool, do not hold the item with your hand behind the staple being removed as the tool may slip and injure you.

Stripping traditionally upholstered items needs a little more thought and a systematic approach as generally each part will be fixed with tacks. If the upholstery has been stuffed and stitched with horsehair or fibre you may find that sections of the stuffing have been fixed into position over a piece of covering which had been positioned during an earlier stage in the upholstering. In this case, the covering will need to be cut away if complete removal of the stuffing is not intended. The easiest and most convenient method of stripping covering from an easy chair or settee is by working systematically on one section at a time. Firstly, upturn the item, resting the seat upon a stool, chair seat or box (*figure* 6). This will put it at a suitable height to help you remove tacks or staples holding the bottoming fabric and base edges of the outer covering — that is, outside back, outside arms and border.

At all times hammer tacks out using the ripping tool

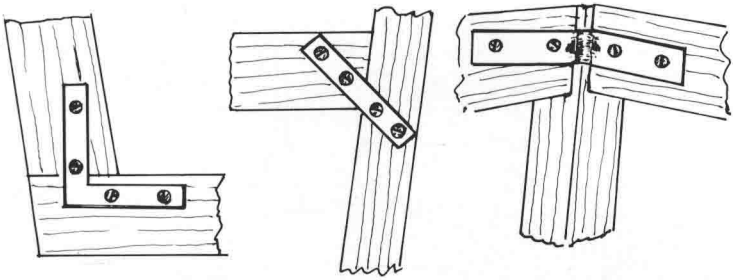
or screwdriver in the direction of the grain of the timber (*figure* 6). Forcing tacks out against the grain or across the width of the rail may cause pieces of timber to break away or split a rail close to its joint, thus giving additional work in repairs to the frame.



6. Removing tacks in direction of timber grain

It is wise before starting to strip off the covering to test the timber frame for any damaged or slack joints. With one knee firmly on the seat of the item, grip various parts of the upholstered frame and see if there is any noticeable movement, other than the movement of the upholstery, at the junctions of arms, backs, wings, etc.

With prior knowledge of a faulty joint, you can make additional clearance around the joint to undertake repairs. Frequently, just one or two joints will need attention. This situation is easily remedied by screwing steel reinforcing plates across the joint. Various types of plates are available (*figure* 7). These are quite thin if fixed to the outside line of the timber frame; if you cover them with one or two layers of wadding under the covering fabric and they are



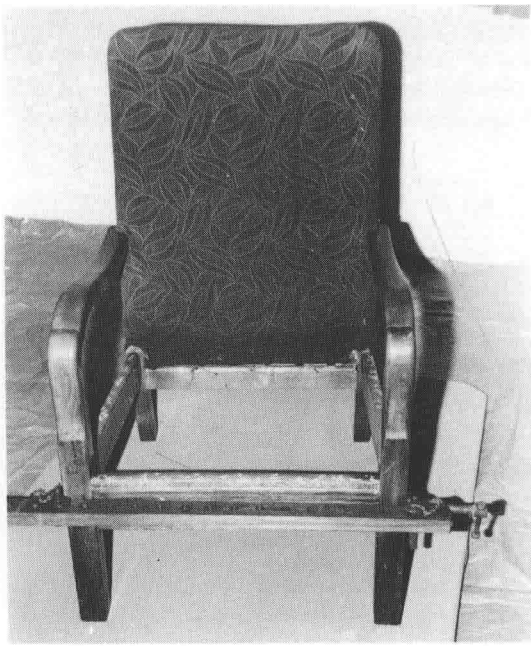
7. Use of steel reinforcing plates to strengthen frame joints

indiscernible. If possible, ease any slack joints open, remove old glue and apply fresh adhesive; then screw a reinforcing plate into position. A good suitable modern adhesive to use is P.V.A. adhesive. Although this is relatively quick drying, work should be halted for at least 12 hours to allow the adhesive to set thoroughly.

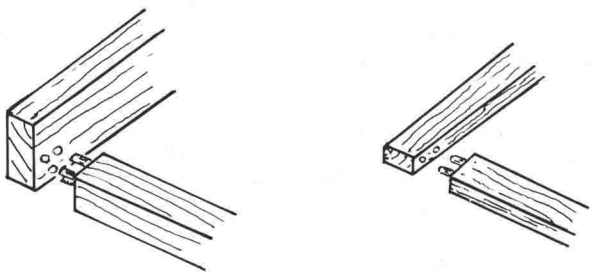
Should an upholstery frame be severely unstable because most of its joints are slack, a complete strip down of the upholstery will generally be required so that the joints can be attended to and cramped together using sash cramps or 'G' cramps (*figure* 8). A frame often becomes unstable when an upholstered piece gets wet and the adhesive breaks down.

Modern upholstery frames are constructed using the dowelled joint with one, two or three short pieces of dowel in each joint, dependent upon the section size of the timber; thicker timber, i.e. around the base of easy chairs and settees, has three dowels and slimmer rails have one dowel (*figure* 9).

When refurbishing and repairing older style or antique upholstery, you will often find mortice and tenon joints; if a tenon joint is damaged it is often broken at the neck. Unfortunately, this calls for a major operation of knocking the frame apart and replacing the complete rail with sound tenons, consequently disturbing the original upholstery.



8. Use of sash cramp to close front joints of chair



9. Dowelled joints

Take care not to strip too much upholstery unnecessarily when refurbishing. Some of the basic work may be in sound condition, particularly if good quality materials were used in the first instance and the work was carried out well originally.

If a coil-sprung seat, the springs may need replacing and consequently the webbing. This will call for a complete strip out of the seat, but the arms and back of the item may well be sound and may be left undisturbed with just some fresh cotton wadding put over them, followed by the top covering.

Bent or buckled springs should never be straightened and re-used. In most cases the wire will have weakened and, within a short time, if re-used will revert back to its earlier crippled or bent shape. In fact, it is wise to discard all remaining coil springs if some have been distorted because the movement of the others will have been affected to a degree and there is a high risk that they, too, would also soon buckle.