LEATHERWORK

A MANUAL OF TECHNIQUES

Geoffrey West

LEATHERWORK

A MANUAL OF TECHNIQUES

Geoffrey West

Contents

TOOLS AND MATERIALS

To make straightforward items, and where time is of no account, only a few basic tools are required for leatherworking. While these can be obtained only from specialist suppliers, most firms offer mail-order services to long-distance customers. In addition to your basic range of tools you will need a fairly sturdy table set at a comfortable working height for either sitting or standing. Professional leather workers use a special (and expensive) purpose-built timber cutting board, but cutting can be done just as efficiently on a sheet of 9mm (⅜in) – or thicker – medium-density fibreboard (MDF) or a cheaper purpose-built cutting board; plywood is not such a good choice, as the knife blade's tendency to follow the grain (beneath the cutting line) may cause inaccuracy. Those who enjoy carving and dyeing thick leathers will require stamps, carving tools and various dyes and sealers, but if you are interested only in making light leather goods, such as wallets, soft handbags, tool pouches, and so on, a more basic selection of tools will suffice. The wisest initial option is to buy the minimum number of tools and increase the range as and when required.

TOOLS LISTS

BASIC SELECTION

Awls
Awls comprise a handle and a blade, the blade being permanently fixed in the handle. There are two types: the **scratch awl** and the **stitching awl**.

Fig 1 Basic tools: (top) *clam;* (left) *ruler and rawhide mallet;* (right) *sharpening strop;* (middle – clockwise from top) *thread, step creaser, adjustable creaser, scratch awl, stitching awl, curved blade for clicker knife, clicker knife with straight blade, pricking iron, skiving knife, dividers, edge beveller, bone folder, stitching groover, beeswax, revolving punch-pliers.*

The scratch awl has a round blade that tapers to a sharp point, similar to the sharp woodworker's bradawl, and it is used to stab location marks around leather pieces when cutting out and also as an aid when pattern-cutting. **The stitching awl** has a diamond-shaped blade to pierce holes in leather so that the blunt needle can pass through. It is available as a wooden handle to which a separate blade is fitted by the user. Needles for leatherwork are not sharp, as they are not intended to pierce the leather, merely to enter a hole already made by the awl blade.

Bone folder
This is a 15cm (6in) by 19mm (⅜in) piece of tapered polished bone that curves slightly at its centre. It is used for flattening seams, or

for turning over and pressing down leather edges. It is extremely useful for applying pressure uniformly along a line and for flattening corners.

Clicker knife
The short, 100mm (4in), tapering, cylindrical wooden handle has an adjustable, screw-tight socket for the insertion and attachment of blades. Curved and straight blades are available, the curved ones being useful for cutting around curves. To ensure accurate and efficient cutting, the best way to hold this knife is as a drawing pencil is held. Blades are sharpened occasionally on an oilstone and frequently on the <u>strop</u>. *See* <u>Chapter 2</u> for correct usage.

Creasers
These have handles, curved shafts and blunt blades, and are used to make decorative crease-marks on leather grain (top surface) at a predetermined distance from the edge. There are three types: **adjustable screw**, **single** and **step**, each of which works in a slightly different way. Single and step creasers are heated before use to allow the blade to make an acceptably deep impression. An adjustable screw creaser can be used either heated or cold, for marking a non-permanent line at a measured distance from an edge, for instance when marking out a line of stitches.

Cutting-board
A sheet of thick (9mm/⅜in or thicker) MDF, or thick (12mm/½in minimum) plastic-covered blockboard/particle board. Also available are plastic cutting boards and, for professional use, timber cutting boards that are composed of square wooden blocks glued together so that the grain edge forms the cutting surface: the spongy surface of the timber's end-grain does not blunt cutting tools (although blunting tools in use is not an issue unless much work is envisaged). Suitable sizes would be 915×457mm (36×18in) or 457×457mm (18×18in).

Dividers
These are adjustable double-pointed tools, similar to geometrical

compasses. They are held as shown in Chapter 3 for marking guidelines a precise distance from an edge (when hand stitching, thonging and pattern-making).

Edge-finisher
A plastic wheel with a semicircular groove around its circumference for burnishing leather edges (*see* Chapter 2).

Hammer
This is used for flattening edges, turning seams, fitting metal fittings and attaching press-studs, and so on. A shoemaker's hammer which has a flattened head is ideal, for these jobs, but unless much specialized work is envisaged an ordinary hammer is quite adequate. *See also* Rawhide hammer.

Harness needles
See stitching needles.

Lacing fid
Tool used in lacing (thonging), for making holes bigger by stretching, thus allowing easier entry for the thong needle (*see* Chapter 8).

Paring stone
A piece of soft stone, otherwise known as a litho-stone. It is useful when skiving (or paring, *see* below), because the stone's surface does not blunt the knife's edge when the two touch (which inevitably they will). Equally suitable is a thick piece of plate-glass or marble; not vital, but useful if much work is anticipated.

Pliers
These are used for pulling thonging needles through holes (occasionally) and for removing wrongly placed rivets, and so on. Long-nosed and snub-nosed types are both useful.

Pricking irons
Made of high-carbon steel, these are stamping tools for making marks on a leather surface in preparation for piercing holes for

hand stitching. The tool is held at right angles to the work, and its shank is struck with a hide hammer in order to imprint a prescribed number of teeth to the inch (normally 8 or 10) onto the leather surface.

Punch pliers

These consist of six sizes of hole-cutters mounted on a revolving head. Sometimes holes for thonging are punched with these.

Punches

These are variously shaped steel tools, used for cutting out a particular shape from a piece of leather. The cutting part is fixed to a shank, and the shank is struck with a hammer so that the metal slices the leather in the manner of a biscuit-cutter. A crew punch cuts a long narrow slot, such as would be required when fitting a buckle to a belt. Other types of punch might give circular or oval holes, and some punches are shaped to produce a neat shape to the end of belts and straps.

Rawhide hammer

This hammer is essential for striking steel stamps and pricking irons. A metal hammer (such as a general DIY type) would damage steel stamping tools.

Saddler's clam

Made from two curved pieces of ash, beech or oak, this provides a means of holding the work securely while hand stitching or thonging. The clam is normally held between the knees, and the work is repositioned between the leather-padded wooden jaws as it progresses. The curved pieces are bonded together in such a way as to spring the jaws shut, therefore gripping anything within them tightly.

Scissors

Upholstering scissors, approximately 20–23cm (8–9in) long, are necessary. Smaller general household-type scissors are perfectly adequate for cutting ancillary materials like silk or card, as well as for

cutting some thinner leathers and rexine.

Skiving knife
Otherwise known as a paring knife, this is simply a flat piece of metal, angled at one end. The angled side is bevelled to a sharp edge that is kept razor-sharp and used for reducing the thickness of a piece of leather at its edge to facilitate making a fold, particularly in turned-over-edge work. Skiving knives are produced for right-or left-handed people, as the side on which the tool's blade is set is specific to each.

Spirit lamp
This burns methylated spirit and is used for heating creasers. As an alternative, a general-purpose, gas-fired blowlamp is equally effective but, when using it in a confined area, care needs to be taken to ensure that it is firmly fixed in position so that it cannot fall over. For safety reasons, it must always be extinguished when not in actual use.

Steel ruler
305mm (12in) long. This is mainly used for pattern-cutting. Make sure that the zero mark is placed at the end (most are).

Stitch-marking wheel
Also known as a pricking wheel, this comprises a frame into which exchangeable wheels can be fitted for marking stitch positions on leather according to the numbers of stitches per inch required. It is used as an alternative to pricking irons.

Stitching needles
These are blunt egg-eyed harness needles, normally size 4 for general purposes, threaded onto waxed linen thread, as shown in .

Thonging chisels
These have either one tapering, chisel-edged point, for punching singly around corners, or three or four points for continuous

punching in straight lines. The chisel-end width is either 3mm (⅛in) or 1.5mm ($^1/_{16}$in). For more details of these and thonging needles (below), *see* Chapter 8.

Thonging needles
With a diameter comparable to a small nail rather than to a needle, and even blunter than harness needles, these are designed to enter comparatively large, previously punched, holes. There are two types: one grips the leather thonging strip between two jaws, holding it fast by means of one or two angled spikes, while the other type requires the tapered, thinned leather to be screwed into a threaded entry-port, where a tiny metal thread grips the leather.

TOOLS FOR THICK LEATHER

Swivel knife
Small knife, with a replaceable blade, used in a very specific way when carving leather. Different types of blade are used for different applications (*see* Chapter 6).
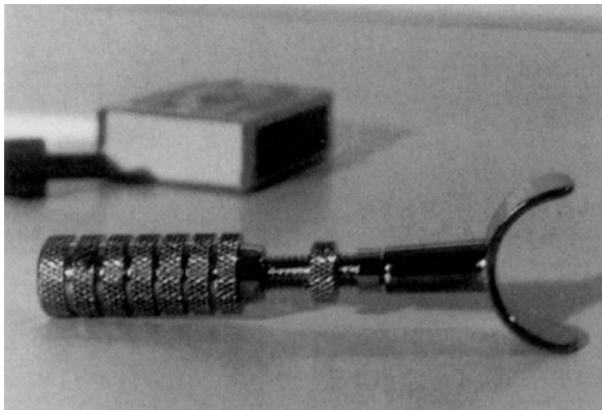
Fig 2 Close-up of swivel knife without blade to show adjustable yoke and easy-grip handle.

Stamps
Steel tools comprising a 10cm (4in) shank and a head with a machined design on its surface. To be held horizontally and used for stamping designs on damp leather (*see* Chapter 7).
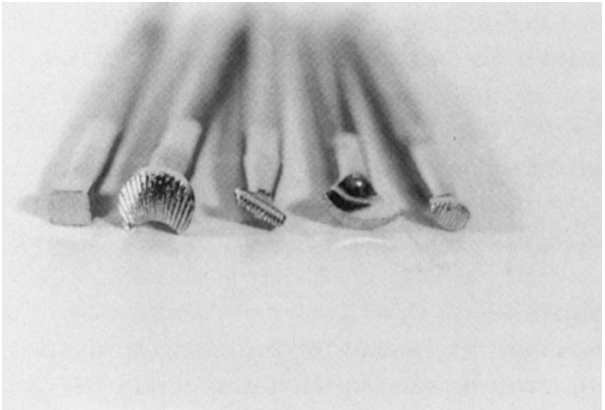
Fig 3 Close-up of heads of five stamping tools: (left to right) *beveller, camouflage tool, backgrounder, veiner, ridged pear shader.*

Edge beveller
Also known as an edge shave, this rounds off the edges of thick leathers prior to burnishing. It is available with either a flat or a concave hollow back (*see* Chapter 2).
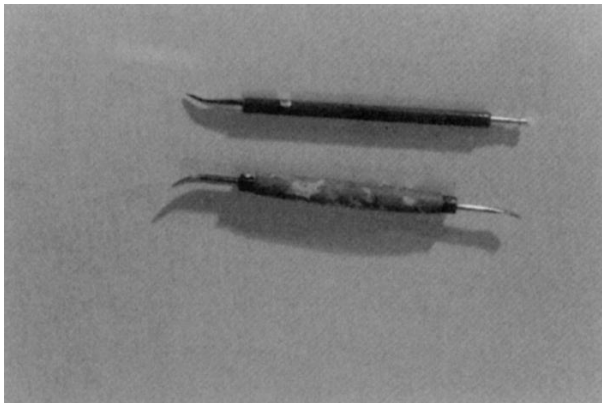
Fig 4 Two types of modeller (stylus): (top) *point and beveller heads*; (bottom) *spoon-shaped heads.*

Stylus

This tool is similar to a sculptor's modelling tool, with a central barrel and an angled point at one end, and an angled flat face (spoon) at the other. As well as being useful for tracing designs from tracing paper onto damp leather, the pointed end is invaluable for inserting under a thonging loop to disassemble or loosen a thread. It is one of a range of tools used for moulding and shaping damp leather and for transferring designs from paper to leather before carving begins.

Rubber board

The board is placed under the leather when stamping or carving so that hole-punches and knife edges are prevented from making contact with the table surface.

Stitching groover
This slices a channel along a leather surface, so as to allow stitches to be recessed below the grain's top layer. The distance from the leather's edge can be adjusted precisely.

Adjustable gouge
The gouge is useful for removing material to a specified depth: for instance when making a fold without skiving the total area of turnover.

Race
A grooving tool with a U-or V-shaped cutter.

Vice
A general woodworker's vice can be useful.

TOOLS FOR SHARPENING

Oilstone
This is used for sharpening all cutting tools. Regular sharpening is necessary, and the stone must be periodically soaked in light oil, which is never removed.

Sharpening strop
This can be home-made from a piece of wood covered with leather (*see* below). The strop is frequently used to sharpen the clicker knife and skiving knife to keep them ultra-sharp, so that major sharpening sessions on the oilstone are required only occasionally.

Emery paper
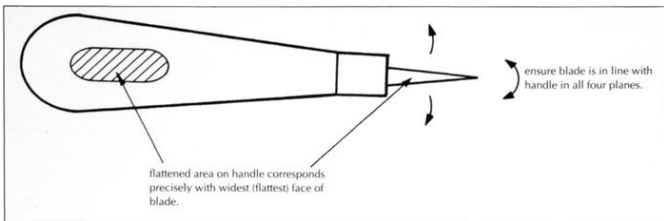Fine-grade emery paper is required for sharpening edge bevellers, and for general sharpening of fine-edged tools.

Fig 5 Awl, showing correct fitting of blade and shaping of handle.

ASSEMBLING, MAKING AND SHARPENING TOOLS

FITTING AN AWL BLADE

There are two ways of fixing the diamond-shaped awl blade into the awl handle:

1. Hold the end of the blade in large pliers (covering the handgrips with a cloth); then heat the bottom inch of the blade to red-heat in a flame (from a gas-hob burner or blowlamp). While the metal is still hot, insert the end into the wooden handle; the hot steel will burn the soft timber and, as it cools, fixes it in place.
2. The second method is to clamp the bottom inch of the blade between two coins or other pieces of metal in a woodworker's vice. Then carefully tap the handle onto the blade.

Whichever method is used, it is important that at least 20mm (¾in) – preferably 25mm (1in) – of the blade projects from the handle, and also that the blade is set in line with the handle and not slanting in either plane.

Fig 6 Stitching awl, to show flattened area of handle in line with flat part of diamond-shaped blade.

MARKING THE AWL HANDLE

It is a good idea to flatten the part of the awl's handle that coincides with the flat part of the blade. When hand stitching it is then possible to accurately judge the exact angle of the awl's insertion simply by looking at the handle from above.

Clamp the handle in a vice, ensuring that the flattest (widest) part of the blade is uppermost, and in line with the top surface of the vice's jaws. Then, using a plane or sharp woodworker's chisel, sandpaper or a file, remove part of the circular wooden surface to create a flat plane.

Finally, polish each of the four facets of the blade on fine emery paper, finishing by rubbing on the strop.

MAKING A STROP

From 9mm (⅜in) – or thicker – MDF or plywood, cut a piece

approximately 355×60mm(14×2⅜in).

2. Mark 100mm (4in) from one end and round off the edges to form a handle. Shape a comfortable grip.

3. Using clear contact adhesive, stick pieces of reasonably thick (2.5–3mm/³/₁₆–⅛in) leather, grain side down, to each of the surfaces, as in the diagram. Cut the leather slightly oversize, and trim it to fit after fixing. (*See* Chapter 2 for method of cutting leather.)

4. Rub some fine grinding paste (available from car accessory shops) and oil into one side of the strop, and apply some jewellers' rouge to the other. The rouged side is used for fine polishing (if required) after the tool has been stropped.

SHARPENING THE CLICKER KNIFE

Regular sharpening of the clicker knife is vital as the blade quickly loses its edge in use. It should be sharpened on the oilstone occasionally and frequently on the strop. The bevel is on two sides of the blade, and the aim is to maintain this angle when removing metal by sharpening. **Always use plenty of oil when sharpening tools on a stone**. The purpose of the oil is to float away particles of metal, so never use the stone dry, and add oil when in use.

flesh side

leather
wood
leather

flesh side
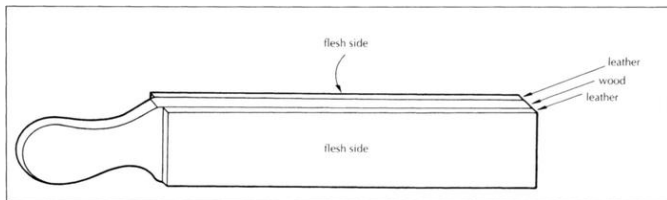
Fig 7 Construction of the sharpening strop.

1. Place the blade flat on the stone, then angle it until the stone is in contact with the angle of the blade.

2. Push the blade forwards and backwards along the length of the stone, at the same time maintaining pressure from above.

3.   When a thin metal shaving (swarf) is visible, turn the blade over
     and sharpen the other side.
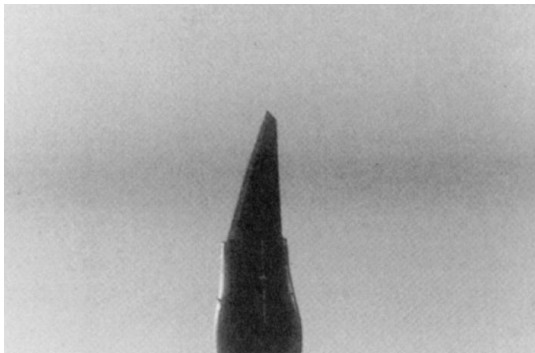4.   Remove the metal swarf on the strop.

Fig 8 Clicker-knife blade: correct shape after sharpening.

The correct shape of the straight-edged clicker-knife blade is as
above. When the knife has been sharpened a number of times, the
blade forms a sharp point at its apex. When this happens the knife
is harder to use accurately, because the initial insertion point is not
precisely discernible. It is then worth grinding away some metal
(using suitable eye protection) so as to create a new angle. If a
grinder is not available, grinding wheels can be obtained to fit elec-
tric drills, but care must be taken to secure the blade in a vice, and
to wear eye protection. Otherwise, an ironmonger or blacksmith
can do the job. Clicker-knife blades are made from hardened steel,
and cannot be filed as softer, more pliable metals can.
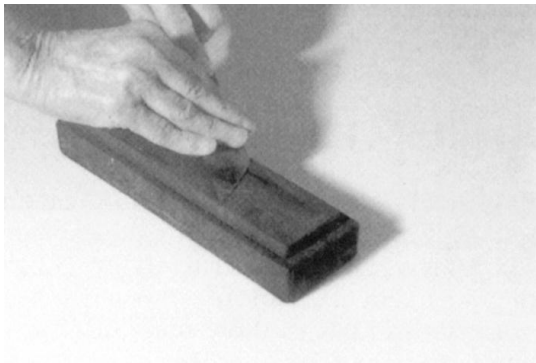
Fig 9 Sharpening the skiving knife on an oilstone.

SHARPENING THE SKIVING (PARING) KNIFE

The skiving knife is sharpened in a similar way to the clicker knife, except that there is a bevel on only one side of the metal: the other is completely flat, like a woodworker's chisel. It is therefore sharpened from one side only, afterwards keeping the flat side perfectly flat against the strop or stone surface to remove the swarf. As with the clicker knife, sharpen the skiving knife frequently on the strop and only occasionally on the stone. It is worth making a protective case from thin leather to protect the delicate edge of this blade, and forming the habit of keeping it inside this case when it is not actually in use. The skiving-knife blade is supposed to culminate in a sharp point, so do not grind it back as with the clicker knife blade.

SHARPENING EDGE BEVELLERS

Flat bevellers

Rub the underside of the beveller on the oilstone to sharpen the blade, then remove the swarf of metal with a piece of emery paper

drawn through the groove from the top.

Hollow-edge bevellers
Rub the underside of the tool on the side of a small oilstone.

AUXILIARY MATERIALS

The auxiliary materials used for leatherwork fall into three main categories: those that either support the structure of an item or line it, for example cardboard, silk or other kind of fabric; those that join leather pieces together, such as thread, adhesive, thong or metallic fixing devices; and finally dyes, and various kinds of preparation for leather finishes, as well as sundry items such as oil and emery paper (for tool sharpening).

ADHESIVES

These are used either to bond panels permanently, or, more often, to hold them temporarily until stitching or thonging can complete the job. Generally speaking, adhesives for leather can be used for wetstick (closed-assembly) bonding, when the adhesive is applied wet to one or both surfaces and the joint closed immediately, or for drystick (open-assembly) bonding, when the glue is applied to both surfaces and allowed to dry before fixing them together.

When assessing the suitability of an adhesive, the key factors are: elasticity, tenacity and penetration.

PVA (wetstick)
This is used when making small leather goods and handbags, for instance when gluing in linings for reinforcements, and so on. It can be applied by brush, and it is flexible and colourless when dry. Strong and fairly elastic, it has reasonable penetration. Buy a grade suitable for leatherwork, as some strengths of woodworking PVA may not be suitable. Although it is normally used wet, it can sometimes be helpful to allow the glue to dry slightly before assembly.

Rubber Solution (drystick)
This is a thin rubber solution in a volatile solvent. It has no

penetration. It is useful for turnovers; but it is hard to spread over large areas, and it is not to be used for cut-edged work as the adhesive will form an adhesive barrier which will prevent successful staining of the edges.

Latex Adhesive (drystick)
This is a latex solution with solvents, but it is non-flammable. It has good elasticity and penetration, and it is stronger than rubber solution. Good for leathers but unsuitable for fixing linings. It is one of the most useful adhesives of all, especially for turned-over-edge work.

Neoprene (drystick)
Neoprene is a brown viscous liquid. Strong, powerful and permanent, but messy to use.

Nitrile (drystick)
A clear, neat adhesive, sold in tubes, and convenient for bonding small areas or items quickly and permanently.
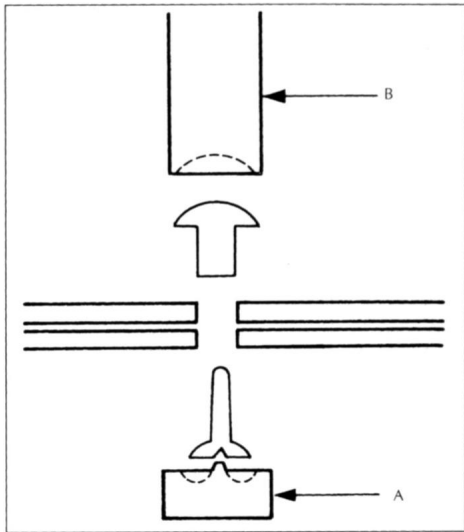
Fig 10 Method of fixing tubular rivet.

THREAD

Best-quality linen thread is the most suitable for hand stitching. Thread size is determined by the number of stitches to the inch. Sizes available are: 18 (3-, 4-, 5-and 6-cord), 25 (3-cord), 30 (3-cord), 35 (3-cord) and 40 (3-cord). Reels come in 25g, 50g, or 250g, in black, brown, white and yellow. Beeswax is used to coat the thread before use (*see* Chapter 4).
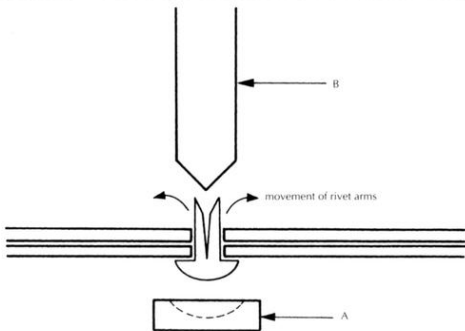
Fig 11 Method of fixing bifurcated, or split rivet.

THONGS

These are continuous strips of leather, sold in various lengths. Colours are: white, natural, tan, black, or medium or dark brown. Individual thongs are also available in short lengths, although not all widths are available in all colours. Vinyl lace is produced, which can be more suitable than genuine leather for certain projects. Sizes are flat (3mm/$\frac{1}{8}$in or 5mm/$\frac{3}{16}$in wide), and round (1.5mm/$\frac{1}{16}$in ranging up to 6mm/$\frac{1}{4}$in wide).
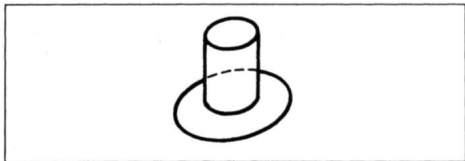
Fig 12 Single part eyelet.
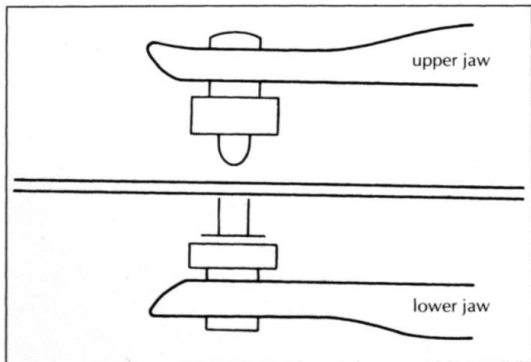
Fig 13 Single-part eyelet being fixed using pliers-type tool.

METAL FASTENERS AND REINFORCERS

Rivets

Rivets are used for fixing heavy leather panels together, particularly at points of stress.

Tubular rivets comprise two cylindrical tubes, one fitting inside the other, both having a cap on one end, one of which is domed. A hole is punched in the leather panels to be joined, and the wider rivet inserted through both thicknesses. The slimmer one is inserted from the other side and the flat-sided rivet is placed on the lower part of the fixing tool (part A). Part B is struck with a metal-headed hammer until the soft metal of the slimmer tube is squeezed so that it expands, and forms a tight fit inside the outer tube.
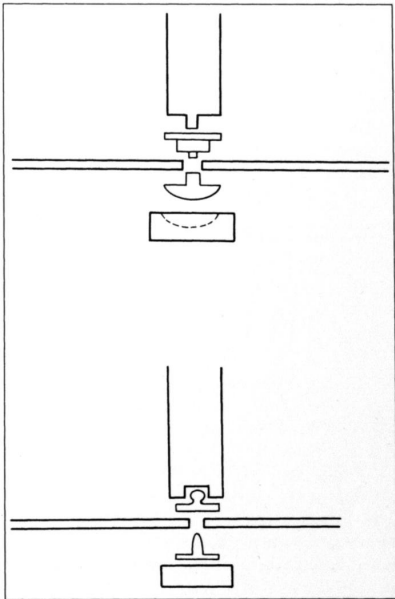
Fig 14 Press-studs: methods of fixing male and female parts.

Bifurcated or split rivets As can be seen in the diagram, the two-pronged rivet is inserted into the pre-punched hole, the domed rivet head placed on top of the recess in the tool's part A, then part B inserted between the rivet prongs and struck with a hammer; this causes the prongs to curl outwards, then bend over, thus gripping the material tightly.

Eyelets

Eyelets are for creating metal-reinforced holes in leather panels, such as might be required for lacing ports. **Single-part eyelets** are normally fixed using a special pliers-type tool, as shown. This punches a hole in the leather at the same time as fixing the eyelet in place. **Two-part** (**sail**) **eyelets** are fixed with the two-part hammer tool, as previously described for rivets. The central part (A) is inserted into a pre-punched hole from one side. From the other, part B is placed around the shank of part A.
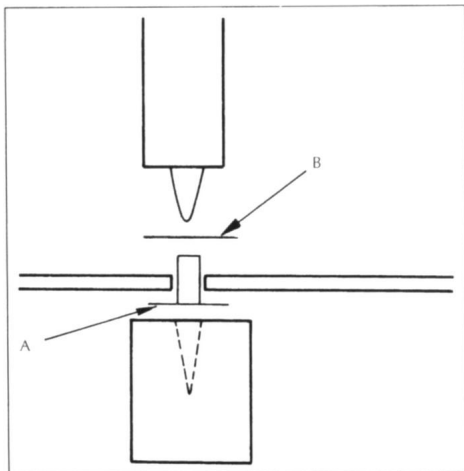
Fig 15 Method of fixing two-part eyelet.

Press-Studs

These are for making simple fastening flaps on purses or handbags, or as an alternative to buttons on clothing. Male and female parts of the stud (two parts for each) are fixed on their respective panels,

using special fixing pliers or the hammer fixing tool, as shown.

Ring spring fasteners
These are similar to press-studs but larger, the male half having a hole in its centre.

Hooks, Clasps and Corners
Swivel hooks are useful for attaching bag and satchel straps. The swivelling action prevents the strap from twisting in use. **Heavy-duty steel hooks** are stronger than swivel hooks, but do not swivel. **Clasps** for handbags come in a range of types. **Brass corners** are attached to the corners of wallets and keycases to protect the leather from wear and tear. They are not purely decorative.

FINISHES, DYES AND TREATMENT PREPARATIONS

Generally speaking, the above are used only for vegetable-tanned leather: chrome-tanned leather is tanned in such a way as to prevent penetration of moisture, dye or wax finish (*see* Chapter 2). But the cut edge of chrome-tanned leather needs to be dyed, and a specialist edge dye product is available for this.

Dyes
Water-soluble and spirit-soluble dyes both penetrate deeply into a leather surface and, because of this, do not affect the grain pattern. It is normally used to stain complete leather articles. The stained article is likely to turn out a darker hue than the colour of the dye.

    Edge dye is specially formulated for dyeing the cut edges of leather and as a preparation for burnishing (*see* Chapter 2). Available in varying shades of brown and also black.

    Acrylic dye is available in bright, lively colours, and does not penetrate the grain surface at all. It is intended for surface decoration only – when colouring different areas within a decorative, often carved, design on vegetable-tanned leather.

Treatments
For use with vegetable-tanned leather, these are sometimes

required after carving and staining a project, and before applying a finish. Alternatively, they can be used to rejuvenate dried-out leather.

Oxalic acid solution is sometimes required for removing stains from freshly carved or stamped leather. It should be diluted as instructed, and all safety warnings taken heed of, as it is a dangerous chemical (keep it away from children). It can be bought from chemist's shops.

Saddle soap is used for general cleaning, and also for removing residues of dye left on the leather's surface. It is available as a solid in bars or tins, or as a liquid.

Neatsfoot oil lubricates the fibres, softening and preserving leather.

Paper gum of the brown type is mixed with water to be used for edge-burnishing (*see* Chapter 2), when the use of a dark-staining edge dye is inappropriate. There is also a clear edge-burnishing solution available, which fulfils the same purpose.

Finishes

Clear lacquer finish is for permanently sealing a surface. It has little penetration and should be applied very thinly.

Liquid wax penetrates grain to some extent, and most types are water-soluble. It is available in black, brown or neutral.

Antique polishes are used mainly to darken grain colour, while at the same time imbuing an attractive 'antique' appearance to an article. It tends to enhance the beauty of the grain and it buffs to a very attractive, deep shine. Available in several shades.

In addition to the above, there is a wide range of products for various specialist purposes. The manufacturers of these can give detailed information on their application and appropriate selection and uses.

LEATHER

There are four main sources of leather. These are the hides from calf, cow, kid and sheep. Calf, kid and sheep hides are normally

sold as complete skins, whereas cowhide, being so much larger, is sold in 'sides': half the whole skin.

The grain side of leather is always the best, shiny or treated side that is to be seen, whereas the flesh-side of leather is always the underside, often fibrous and usually hidden from view.

CALF

Size 0.5–1.6sq. m (5–18sq. ft).
Structure Close, fibrous and even.
Grain Close, with a fine small break. No definitive pattern. Small bends can be made without causing cracking.
Feel Rubbery and resilient.
Colour Uniform; good dye absorption.
Surface defects Tick, warble fly, wire scratches, brands.

COW

Cowhide is sold as a full hide or half hide (side). The skin can be subdivided further:
Butt The best part of the hide.
Shoulder Not quite such high quality as butt, but it is less expensive and gives good results. Slightly more uneven fibre than butt.
Back The butt area plus the shoulder.
Side The complete side.
Belly This has a loose structure and stretches. It is not suitable for many projects because of this.

Full grain means the best quality, the hide not having been buffed by machine to take away various marks and scratches. Although this buffing process improves the leather's appearance, it also dulls and flattens the surface and may cause difficulties with dyeing. Only full grain hide is suitable for carving.

Russet
This is natural (un-dyed) cowhide.

Size 1–3.25sq. m (11–35sq. ft).

Structure Strong, fibrous. Looser in the belly than in the butt.
Feel Coarse and heavy.
Grain Similar to calf, but coarser.
Thickness 1.5–3.5mm (1/16–⅛in). Thicker at the butt than at the belly.
Colour Varies. Lighter at butt than at belly.
Surface defects Ticks, warble fly, wire scratches, brand marks.
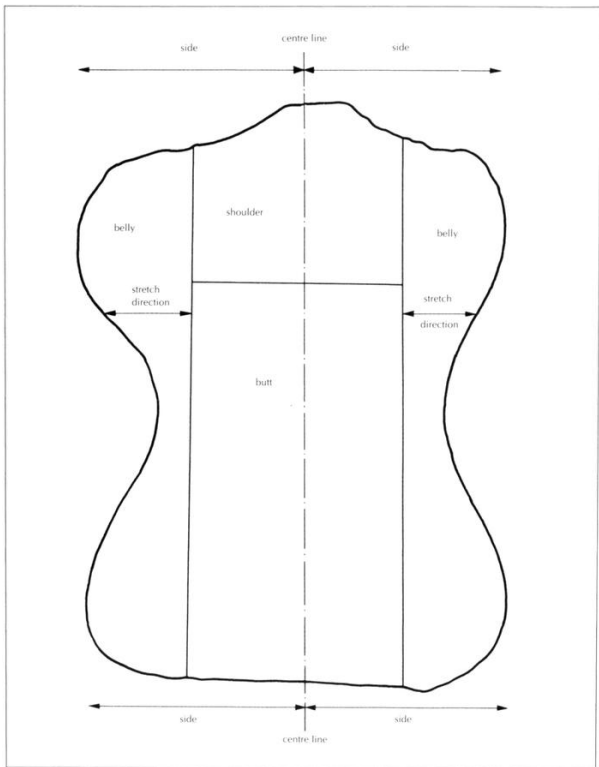
Fig 16 Divisions of cowhide.

KID

Size 0.14–0.3sq. m (1½–3½sq. ft).
Structure Not as dense as calf. Strong.
Grain Tight grain.
Thickness 0.3–0.8mm ($^1/_{64}$–$^1/_{32}$in).
Feel Papery, like thin wallpaper.
Colour Little variation.
Surface defects Few.

SHEEP

Wool-hair sheep. Persian is the best known.
Size 0.18–0.83sq. m (2–9 sq. ft).
Structure Loose and fibrous.
Grain Loose; similar to goatskin but coarser.
Substance Light to medium.
Feel Soft; little resistance.
Colour Even. Good dye absorption.
Surface defects Brands, wire scratches, ticks.

Skiver is the very thin top layer of sheepskin, used for bookbinding and similar crafts. It tears easily. **Knappa** is good-quality skiver. **Suede** is the flesh-side of sheep skin.

One other type of leather that you may come across is pigskin, which is of a very good quality and has a distinctive grain. It is also strong and hard wearing. Rexine is a kind of 'imitation leather' made from plastic; it is very thin, tough and hard wearing.

> ### Tanning
> There are two main types of tanning: **chrome tanning** and **vegetable tanning**. Chrome tanning is used for leather for making shoes, sofas and chairs, and other applications where the surface is intended to repel water and dyes. For the craft leatherworker. chrome-tanned leather is generally considered to be more suitable for machined work (because of the time

factor), but it is, however, perfectly suited to the [wallet](#) and [cheque-book](#)-cover projects described later on ([Chapter 9](#)).

Vegetable-tanned leather absorbs water and is therefore suitable for carving and dyeing. However, it must be finally sealed with a suitable product to give a waterproof finish. First of all, the hide is cleaned, and the hair and epidermis (top layer of skin) removed along with the layer of flesh from underneath (the flesh side). This leaves the **corium**, which is treated with oils and preservatives, stretched, and then soaked in vats with chemicals and oils for a long period.

BASIC TECHNIQUES

Some people are interested in making leather fashion accessories, in which case they are most likely to want to learn pattern-cutting and constructional techniques for making handbags and garments. The wide range of commercially available (sometimes brightly coloured) chrome-tanned leathers will be of interest to them, and some may consider buying a heavy-duty sewing machine at some stage (second-hand machines can be good value). Fashion accessory enthusiasts will wish to learn about leather as a way of augmenting their present dressmaking or fabric-related skills.

Others prefer the more intricate craft-type leatherworking, normally involving the use of vegetable-tanned leathers, which are hand stitched or thonged and carved and/or dyed. Strikingly individual items can be made in this way, and the scope for anyone with flair and artistic ability is limitless, since any design can be transferred to a leather panel or belt. Designs can also be copied from books and pictures and transferred in the same way.

Between these two extremes lie a variety of items that fall into neither or both camps. Below is a guide to the main methods of construction used within the leatherwork industry.
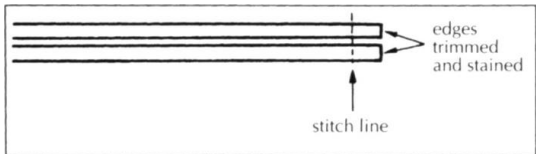
Fig 17 Cut-edge construction.
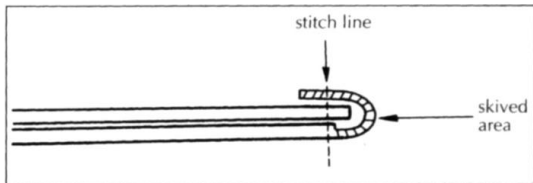
Fig 18 Turned-over-edge construction.

Cut-edge work The leather is joined, flesh-side to flesh-side, and the cut edges stained to match the main surface areas. Good-quality leather, such as pig or calf, is required. Wallets and purses can be made in this way.

Turned-over-edge work The outer leather edge is cut with an overlap that is turned over the inner layer (s), before stitching begins, so that no cut edges can be seen: the rounded grain side of the outer layer covers them up. Before turning, the leather along the folding part of the outer layer needs to be skived (pared), that is thinned down from the flesh-side before the turnover is made so as to avoid making a bulky seam. Goods like wallets, purses and jewellery rolls can be made in this way, using high-quality leather. This is a better, more professional, type of construction. Leathers such as pig or calf are often used for turned-over-edge work.

Semi-limp The leather is partially stiffened with paper for items such as diaries and books. Rexine is often used for making this kind of product.

Stiffened Leather is applied over a foundation of board or wood. This is necessary for memo-pads, desk-blotters and photo frames. Cheaper thin leather, such as skiver, can be used for this, as well as rexine.

Boxwork Same as stiffened, but the leather covers a box constructed from plywood or MDF. Jewellery boxes, card boxes and document cases can be made in this way.

Moulded Three or four paper layers are bonded together using PVA adhesive around a mould. Examples of moulded work are instrument cases and cigar cases. Leather itself can be moulded too.

Zipped Zips are attached to such items as writing cases and manicure cases.

> **Classification of leather goods**
> **Light leather goods** Wallets, purses, soft leather handbags, jewellery rolls.
> **Heavy leather goods** Heavy belts and more robust handbags: items that may be carved and stained.
> **Built-up work** Photo frames, jewellery boxes, attaché cases.

Germane to these seven methods of construction are various essential techniques, the first of which is cutting.

CUTTING

THE CLICKER KNIFE

The best way to use a clicker knife is to hold it as you would a pencil and draw it towards the body, always cutting against a hard surface like a steel rule or thick cardboard (or wooden) pattern. Either straight or curved cuts can be successfully made in this way, and, since the knife is small, it is accurate and the user always has complete control. Those who are right-handed should keep the left hand to the left of the cutting edge, holding down the pattern or metal rule; vice versa for left-handed people. The clicker knife is ideal for cutting paper, card, and thin and thick leathers. It blunts particularly quickly when cutting card or paper, so remember to sharpen it regularly even when not actually cutting leather itself.
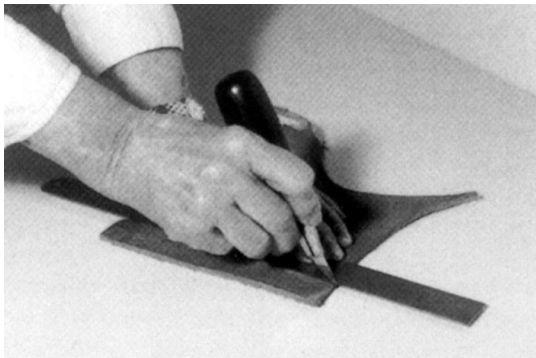
Fig 19 Using the clicker knife.

Cutting Heavy Leather
When using the clicker knife on heavy leather, there are a few points to be borne in mind:

- Cutting heavy leather often requires several strokes of the clicker knife before the full thickness of the leather is pierced.
- Regular sharpening of the knife is required, as it soon blunts.
- Take care to support the knife blade securely against the card pattern or a metal ruler or straight edge.
- When cutting curves, begin with a gentle incision and repeat the process many times, cutting progressively deeper. Once a deep groove is established, the knife will follow this established route automatically.
- Position patterns on the skin carefully, bearing in mind which parts are most visible (for example, the front flap and the front pocket of a handbag), and avoid using stained or damaged leather for these. Small flaws or discolorations of the surface finish may be permissible for the gussets of handbags, or even the back of the main body.

Safety when cutting

- Press downwards, not sideways, as cutting commences.
- Cut against a thick metal rule or cutting pattern to prevent the possibility of the knife sliding sideways onto the non-cutting hand.
- Keep the blade sharp: blunt blades require more pressure and consequently involve more risk.
- Never rush: the heavier pressure required to effect a cut in thick leather exacerbates the potential danger to the leatherworker.

THE SCRATCH AWL

When cutting a specified width from a piece of leather, the scratch awl can be used to ensure an accurate, quick result without using a pattern:

1. Place a ruler along the top edge of the work, the desired measurement on the ruler aligned with the leather's left-hand edge. Place the awl's point hard up against the ruler's right-hand end (this is assuming that the ruler measurement begins at the ruler's end). Use the awl to make a pin-prick mark on the leather's surface.
2. Position ruler along the bottom edge, with the point of the scratch awl held against heel of the ruler, as before. Mark the surface of leather with the awl's point. Leave awl held in this position.
3. Move the ruler and rest the bottom of its side edge against the awl point and align its top edge with the pinprick mark made previously. Cut along the line.
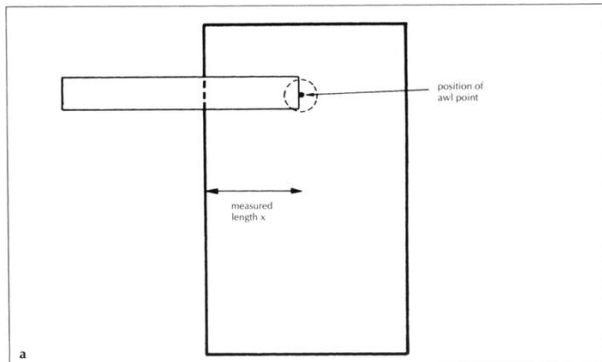
Fig 20a, b & c Measuring and cutting leather – quick method.

position of
awl point

measured
length x

a

measured
length x

awl position
leave awl
in place

b
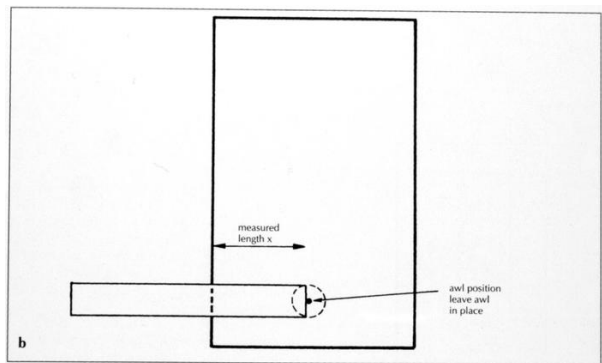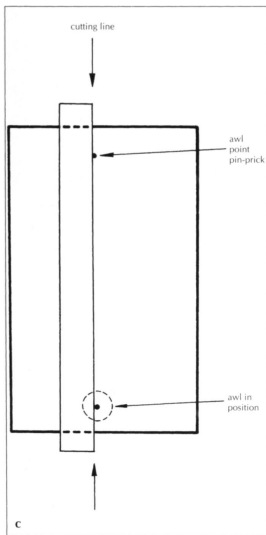
BEVELLING

PURPOSE

Bevelling is usually only required for thicker leathers. The idea is to remove the 90-degree angle from one or both sides of the leather's cut edge so as to present a pleasantly rounded edge surface rather than a sharply angled one.

METHOD

1. Lay the leather flat on a raised surface (something like a 305×305mm/12in×12in piece of 50mm/2in thick blockboard or similar), and push the edge beveller along the edge.

2. Press hard on the leather with the other hand, which should be used to rotate and manipulate the leather as necessary to follow curves, rather than having to adjust the cutting hand too much. A continuous strip of shaved leather should appear. If the cutting tails off and breaks, start again at the point of breakage – the break will not show.

BURNISHING

PURPOSE

Burnishing consolidates hairy and fragmented cut edges, and cements these into a continuous shiny surface. Where two or more thicknesses of leather join at an edge, burnishing unifies the two edges, merging the disparate thicknesses into one. Sometimes a darker colour of solution (edge coat) is used to deliberately contrast with the main colour, or to blend with it if the grain's surface happens to be markedly different from the hide's cross-sectional colour. If no darkening is desired, a virtually colourless 'paper glue' solution achieves the purpose while only marginally darkening a light leather.

There are three types of solution used in the burnishing process:

- Specially formulated edge-coating solution, available in black, brown or tan.
- Paper glue (brown type) mixed with warm water (two-thirds water to one third gum).
- Colourless burnishing agent, produced by some manufacturers, similar to the paper glue type.

METHOD

Use a folded cloth or felt pad held in a clothes peg to apply the solution to approximately 180mm (7in) of the edge's length, then rub briskly along this, using canvas or an edge burnishing wheel. Continue around the whole of the edge in this way.

CREASING

PURPOSE

To imprint a dark line at a predetermined distance from the leather's edge. The creaser is heated to effect this, but since it is blunt it never tears the grain's surface, simply presses and compresses it along a line. The purpose of creasing is largely decorative, but it also serves to strengthen and compress the loose fibres at the edge of a freshly cut piece of leather. Sometimes creasing is done on top of stitching as a way of pressing the stitch-line downwards, into the leather, so as to make the stitches appear less obtrusive. Normally used as a way of finishing off cut-edge work, both for thin and thick leathers, creasing is also sometimes used for turned-over-edge work, but this is relatively rare. For heavy leather items, creasing is normally confined to single-thickness pieces, for instance straps and sometimes flaps.

METHOD

1. Heat the blade in the flame from a blowlamp or spirit-lamp. Then use an offcut of the same leather for testing the tool's heat: too hot and the line will appear blackened, too cool and the metal will not run smoothly across the leather's surface. During use, heat up the creaser periodically as heat is lost.

For step creaser or adjustable creaser:

2. After heating the blade, grip the handle as shown, keeping the shoulder of the step creaser (or the other blade of the adjustable creaser) hard up against the leather's edge. It is usual to pull the tool towards the body, exerting pressure downwards, although in some circumstances it may be found easier to push it away from the body. Often, it can be helpful to angle it, so as to maximize the advantage of the step creaser's heel (or the adjustable creaser's other blade) that is being supported against the leather's edge.
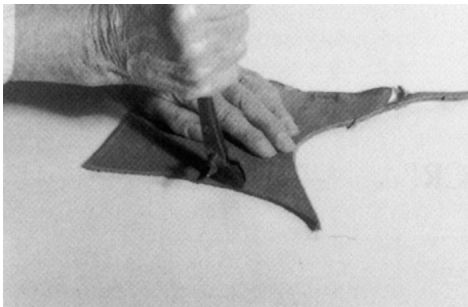
Fig 21 Using the adjustable creaser.

For single creaser:
2. Mark the line initially using dividers (*see* below for correct use of dividers). Keeping a straight line takes practice. Instead of pulling the tool towards the body, push it forwards, away from the body.

There are no hard and fast rules on whether to pull or push the creaser in any given circumstances. It is down to the leatherworker's individual preference.

Safety when using the creaser
- Remember that the tool's end is hot, and will burn flesh faster than leather.
- Hold the material firmly with your other hand, ensuring that the tool will not slip sideways.
- Extinguish the heating flame as soon as is practical.

USING DIVIDERS
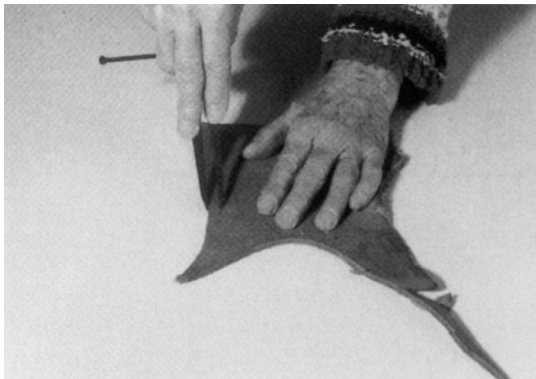
Fig 22 Using dividers to mark a measured line from the edge of the leather.

Lay the work down flat and draw the dividers along, keeping one divider arm against the leather's edge, the other on its surface, pressed down so as to leave an impression.

TURNING OVER EDGES

After skiving (reducing the thickness of) the leather edge the requisite distance from the edge (*see* Chapter 4), latex adhesive is applied to the flesh-side of the edge to be turned over.

1. After applying adhesive and waiting for it to tack dry, establish a straight edge by holding a metal ruler on top of the edge to be enclosed; then lift and push up the turnover, using a bone folder.
2. Rub the bone folder along the leather held against the ruler's edge to consolidate the turn.
3. Fold over and stick down the turnover, prior to turning the

article over, stitch-marking and stitching from the other (best) side.

There are two methods for neatly finishing off square corners:

TRIMMING TO AN ANGLE

This method is used for average thickness leathers:
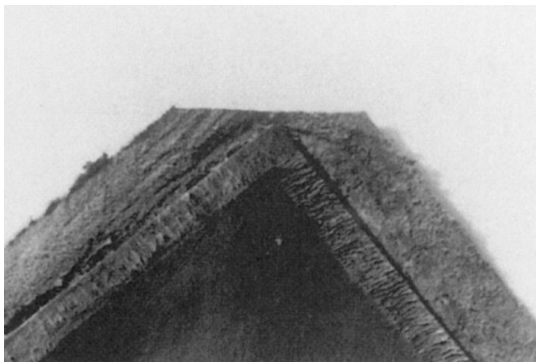
Fig 23 Turned-over-edge work. Angle-cutting the corner before the turn, showing the scratched grain surface of leather to be bonded.

1. Cut the corner as shown, with the distance between the angled cut line and the point of corner being approximately the thickness of the material to be folded over. Cut it oversize and fold up the corner to check for accuracy. Remove a sliver more if necessary.
2. Apply adhesive and tap up the turnover as described above, both sides of the corner, then fold it over and stick down. Use the side of the bone folder to tap against the corner to round off the sharp point and fold the small piece of leather upwards.
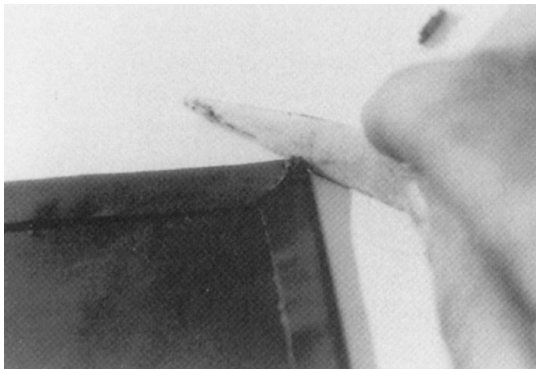
Fig 24 Tapping the comer of the turn with the bone folder.
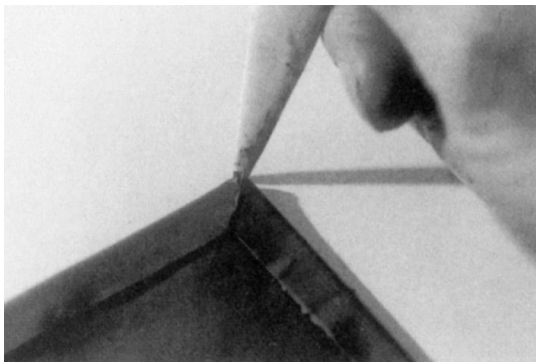
Fig 25 Using the point of the bone folder to drag and stretch turned-over leather to neatly cover a corner.

3. Use the point of the bone folder to drag the corner part over any uncovered area, then to push the sides together neatly. The thinned leather will stretch to a certain extent if covering the material is difficult.

TRIMMING OFF WITH SCISSORS

This method is used for thinner-than-average leathers or rexine:
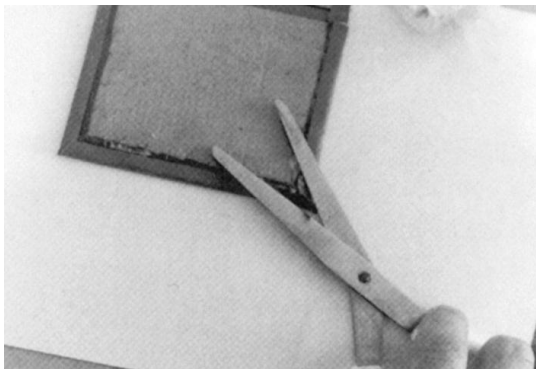
Fig 26 Trimming off excess material at the corner using scissors – for thin leathers or rexine only.

1. Do not cut the corner leather at all, but apply adhesive as usual and pull the turnover up and over and stick it down.
2. Using sharp scissors, trim off the excess material. When the cut edges are smoothed down the result should be a neatly finished corner.

PATTERN-MAKING AND DESIGN

INITIAL STAGES

Whatever item is to be made, the process for construction is firstly to consider the finished piece, deciding upon its size, its practical purpose and the details of its appearance. Magazines and shop windows are useful sources for ideas for the more usual articles like handbags or wallets. Alternatively, a more unusual item may be required for a specific purpose: a leather tool-roll for a little-known craft, a shoulder holster for a gun, or a saddle for a rocking horse.

Either draw sketches of the proposed finished piece, or, alternatively, cut shapes of paper or card and make a mock-up of the product using sticky tape or glue. Whatever method is used, it is important to have a clear idea of sizes and design details. After that, the general approach to construction has to be decided upon, and then each component part considered.

A making-pattern is prepared when exact sizes and constructional details have been decided. After this stage it may be necessary to make allowances for seams (the space taken up on leather by lines of stitching and the small amount of material on the waste side of these) and positions for fastenings or buckles. Finally, a cutting-pattern is made.

PATTERN-CUTTING

Cutting-patterns are ones produced for cutting pieces of leather or other materials for specific purposes. **Making-patterns** are made as a first stage to confirm and clarify exact dimensions, and do not include seam allowances and certain constructional markings. Sometimes, where these extra considerations do not apply, making-patterns are identical to cutting-patterns.

Patterns are normally cut from reasonably thick paper, such as sugar-or cartridge paper, and cutting-patterns are then transferred

to fairly thick card (stick them on and cut round) before being used to cut the shape out of leather or other material such as silk or rexine. Using card patterns to cut the actual leather means that the edge of the card can act as a guide for the clicker knife. Do not use thin paper, such as newspaper, for producing patterns, as this is not substantial enough for accuracy. Anyone envisaging using the same cutting-pattern repeatedly over a long period (such as when manufacturing items) may prefer to transfer it from card or paper to zinc panels, as used in the leather industry. Or wooden patterns may be cut from plywood or MDF, using a jig-saw. For one-off projects, thick-card cutting-patterns are perfectly satisfactory.

The first, thick-paper making-patterns are normally cut from paper folded in half upon which half of a symmetrical design has been marked out. This ensures that any curves will exactly match on both sides, and also saves time. Use a clicker knife, held as for cutting leather: as if it is a pencil, and always drawn towards the cutter, never away. Cut on a surface like MDF or plastic rather than plywood, as the grain in ply might pull the blade fractionally in a wrong direction. The four tools used most in cutting paper patterns are the knife, ruler and pencil, plus the sharp-pointed scratch awl. Piercing the paper with the awl's sharp point can often be a more accurate method of marking the pattern than marking with a pencil, especially as two layers of paper can be marked at once.

The awl is also handy when using one paper pattern to measure along the edge of another, particularly when one of these is curved. The two are held together with the awl point at the beginning of a change in direction, the curved one then rotated, then a point on both patterns is stabbed again further along at the point where there is the next change in direction, before rotating the curved pattern again.

Dividers can be used as a quick, convenient way of marking an extra measured distance beyond a line, particularly when making cutting-patterns from making-patterns when it is necessary to add seam allowances, for example. They are set to the required measurement, then held almost flat and drawn along, with one divider arm running alongside the known edge, the other arm indenting a line on the paper pattern beneath. As before, the paper is marked

from one side of the folded paper, and both thicknesses cut through at once.

PRACTICAL CUTTING HINTS

Before starting to cut a pattern, ensure that the top edge of the paper is at right angles to the side (do this at the start of every new pattern). To determine this, fold the paper in half. If the paper is not 'square', the fold will cause the top edges so formed by the fold to slope out of line with each other. To correct this:

1. Mark near the top edge, using a scratch-awl point, piercing through both layers of the paper. Alternatively, use a knife to make a slit through both layers, at the edge.
2. Unfold the paper and spread it out flat. Position a straight edge or ruler against the holes marked in Step 1, and cut across the complete width.
3. Fold the pattern back along the original fold line.
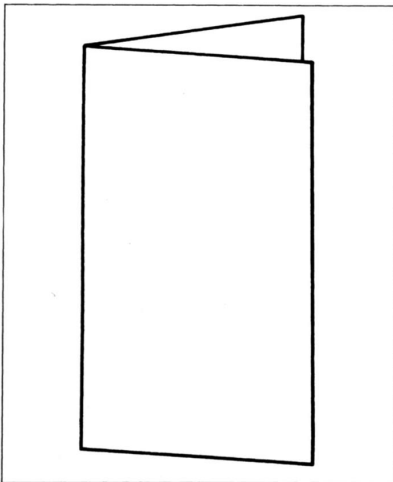
Fig 27a Non-square top of paper.
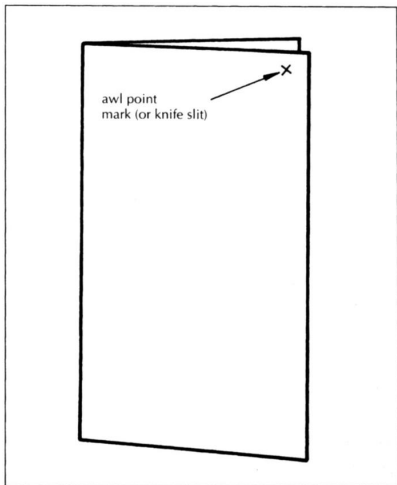
Fig 27b Entry-point of scratch awl point.
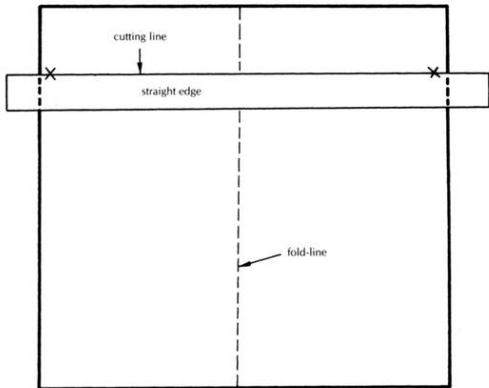
Fig 27c Paper opened out for cutting top edge square.

Cutting a Rectangle x wide and y long
1. Cut the top side of the paper square, as shown.
2. Measure the distance ½x from the fold-line, parallel to the top edge and about 2.5cm (1in) down. Pierce both thicknesses of paper with the scratch awl.
3. Measure the same distance from the fold-line parallel to the top edge near the bottom of the pattern and mark it in the same way.
4. Lay a ruler or straight edge against these two marks and cut away the waste.
5. Measure the distance y from the newly cut side. Pierce both thicknesses of paper with the awl, or cut a slit through both with the knife.
6. Open out the paper, lay a ruler or straight edge against the pierced holes or slit marks and trim off the waste.
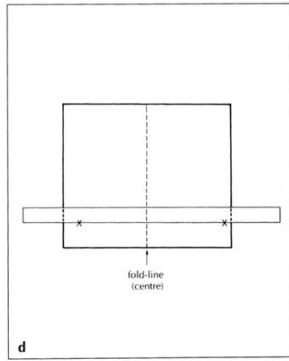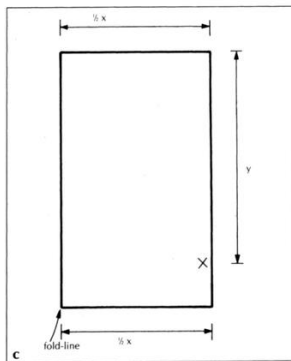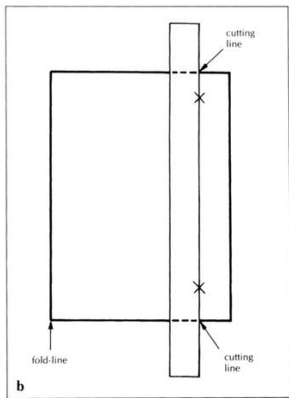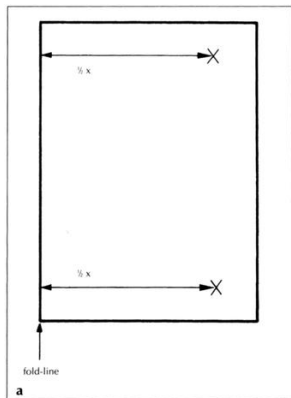
Fig 28a-d Cutting a rectangle from paper.

Cutting a Curve
1. Cut the top edge at right angles to the sides.
2. Draw the desired curve.
3. Cut along the drawn line through both thicknesses of paper.
   (This ensures that the curve will be the same sweep on both the left and right side.)
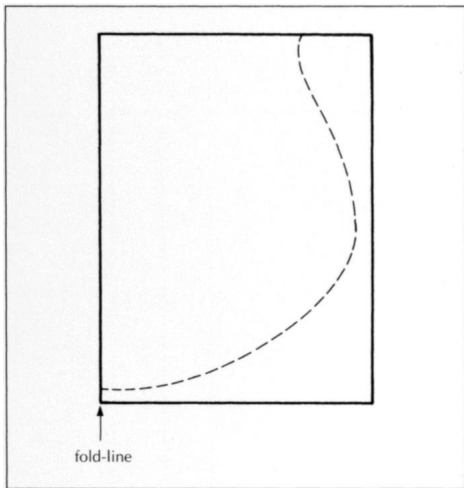
Fig 29 Cutting a curve from paper.

LABELLING PATTERNS

For any constructed item there are likely to be more constituent parts than there are cutting patterns, since one pattern may be used to cut two identically shaped and sized pieces either from the same material or from different materials. It is therefore important to mark cutting-patterns with all relevant information. On each

pattern, the following should be marked:

1. Description and purpose of the piece to be cut: front flap, pocket front, and so on.
2. Material from which it is to be cut, e.g. leather, silk, card. Sometimes more than one material is to be cut from one pattern.
3. Number of pieces to be cut, e.g. 1 leather, 1 silk.
4. Name of the item to be made (wallet, handbag, for example), plus the total number of patterns for the complete set. (For brevity's sake, the cutting-patterns in later chapters do not include this information.)

Labelling patterns in this way saves time and insures against the possibility of mistakes later on.

MARKING REFERENCE POINTS

In addition to their use as templates for cutting out leather pieces, marks cut as tiny Vs, as well as small encircled holes in patterns, serve as a way of identifying where to mark the leather surface to show the position of panels or buckle-straps, or as lining-up points when piecing panels together before stitching. These should be transferred to the leather surface either as the small V itself, or, for an encircled hole, as a pin-prick on the grain surface made with the scratch awl.

EXAMPLE PATTERN: WALLET

A simple wallet serves to illustrate the correct approach for producing patterns for this type of article.
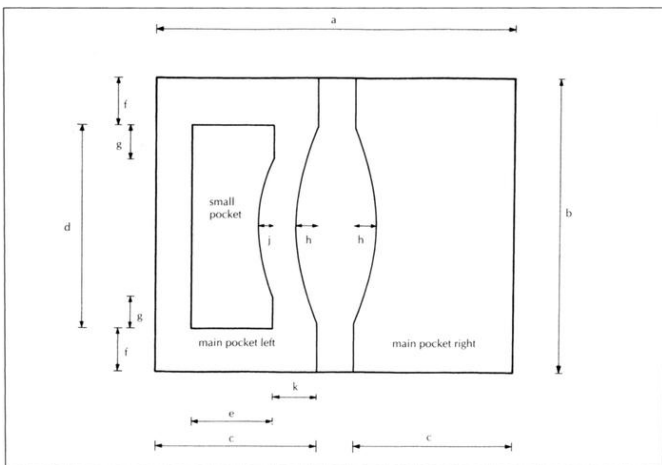
Fig 30 Constructional diagram for making a wallet.
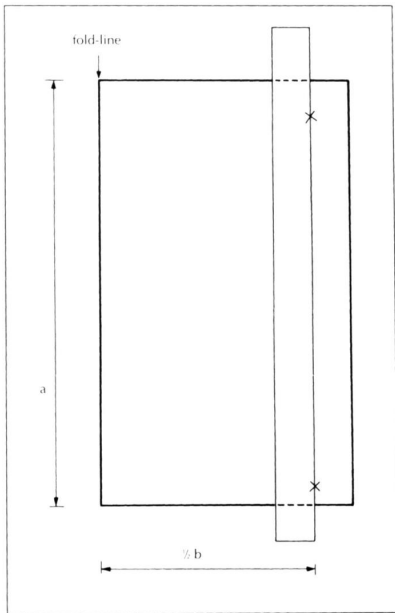
*Fig 31a **Wallet**. Cutting main body making-pattern.*
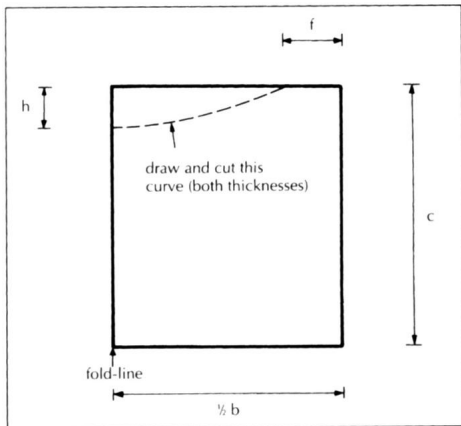
Fig 31b Cutting curved main pocket.
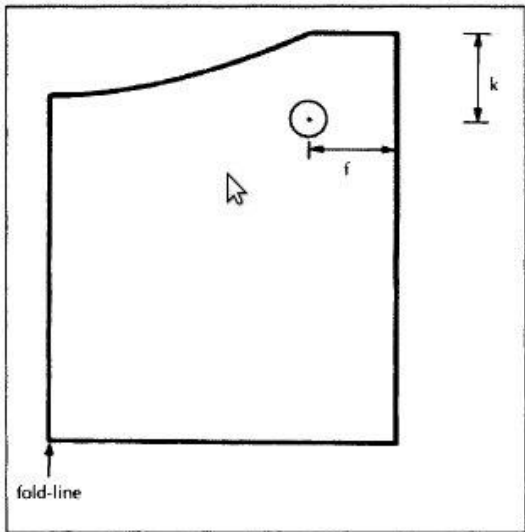
Fig 31c Marking curved main pocket for establishing position of small pocket.

DESCRIPTION

- Wallet with two main pockets, plus one smaller.
- Cut-edge construction (i.e. no turnovers at the edges).
- Material: thin (approximately $1mm/^1/_{32}$ in) leather (calf or pigskin), lined with silk.
- Hand stitched.
- Size: a (opened width) ×b (length); c = half (closed) width.
- Since it is of cut-edge construction, the making-patterns are the same as the cutting-patterns (i.e. no seam allowances need to be considered).

COMPONENT PARTS

Part	Materials used	Size
Main body	1 leather, 1 silk	a×b
Curved main pockets (2)	2 leather	b×c
Small pocket	1 leather	d×e

Main Body
Using the method described earlier, cut a rectangle size a×b from folded paper, measuring ½b from the fold-line, as shown above.

Curved Main Pockets
1. Cut a rectangle size b×c, as above, then cut a curve as shown.
2. Make a hole with the scratch awl through both thicknesses of paper. Mark the hole with a circle. Open up the pattern and mark the other, corresponding hole with a circle; these holes denote the position of the top corner of the small pocket on one of the pockets.
3. After cutting the pieces from the leather, reposition the pattern and prick through the holes to make a tiny hole in the leather surface for positioning the small pocket later.
4. Mark circled holes, 'Top corner of small pocket'.

Small Pocket
Cut a rectangular pattern, then cut a curve in the long side, as above.
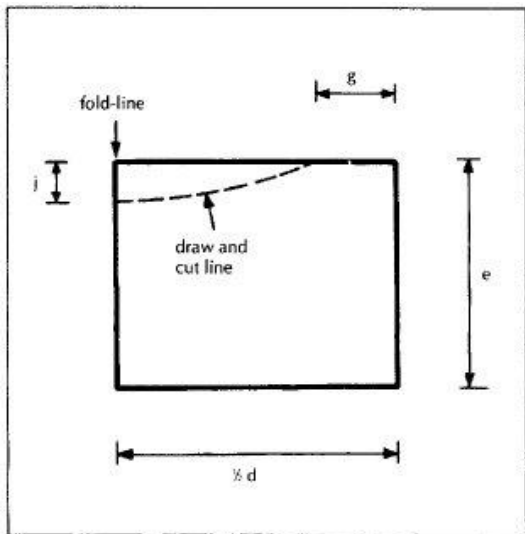
Fig 31d Cutting small pocket.

The same principles apply when designing and making all kinds of light leather-goods, so when the principles have been grasped more complicated items like wallets with many compartments can be planned and constructed easily. Remember that turned-over-edge work requires extra leather for the turnover. Also, allow extra material for cut-edge work to take account of wastage when all the layers are trimmed to ensure a neat edge. The <u>wallet</u> project outlined in <u>Chapter 9</u> is turned-over-edge construction but, apart from that, the patterns were designed in the same way as described above.

EXAMPLE PATTERN: HANDBAG

Before outlining any patterns for handbags, it is important to understand the four basic types of handbag construction: cut edge, turned-over edge, faced edge, and turned:

Cut edge The edges of the main body parts and gusset (i.e. the side and bottom part of the bag, usually made up of one or two panels of leather) are fixed together flesh-side to flesh-side by stitching, and the exposed edges either stained or joined by decorative thonging that completely covers the edge.
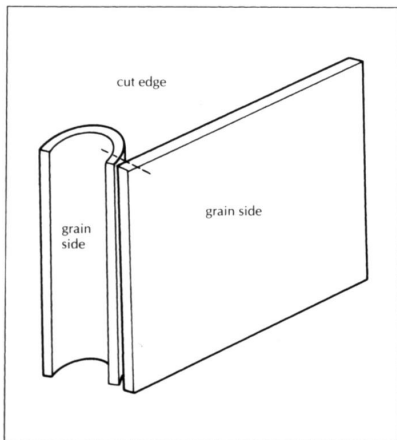
Fig 35a Cut-edge construction.

Turned-over edge The edges of the body panels are skived, then turned over the gusset edge, and all the leather thicknesses stitched through.
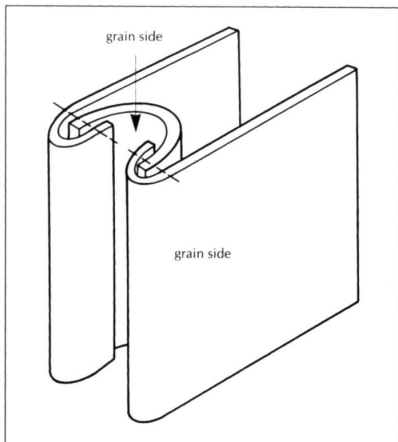
Fig 35b Turned-over-edge construction.

Faced edge Two turned-over-edges are stitched together.
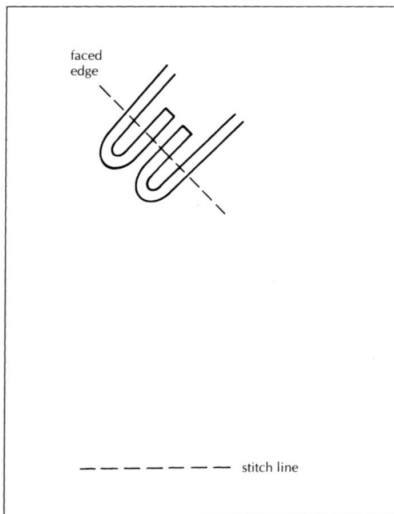
Fig 35c Faced-edge construction.

Turned The panels are sewn together with grain sides facing, then the whole thing is turned inside out.
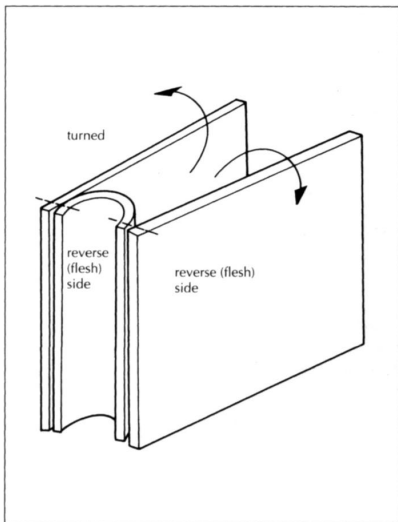
Fig 35d Turned construction.

As can be imagined, stitching allowances are required for all methods apart from cut-edge construction.
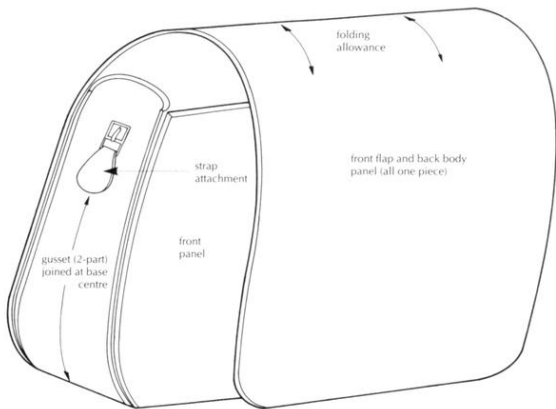
Fig 36 Plain cut-edge construction handbag design.

DESCRIPTION

- Cut edge.
- Hand stitched.
- Unlined.
- Buckle-on strap.
- No pockets.
- Vegetable-tanned side (cowhide) leather, unstained (natural).

As will be seen from the above, the front flap, and rear body panel are formed by one piece. The rear body-panel section and front-flap

section of it must be identical to the front panel. The larger and the smaller part are joined by a tapering, two-part, gusset. Vs are to be marked on the patterns, which should then be transferred to the leather so as to indicate precisely where parts meet, in order for everything to line up correctly.

COMPONENT PARTS AND MAKING-PATTERNS

Front Panel
Cut a rectangle from squared folded paper. Draw a curve as shown and cut through both thicknesses. Make the line from A–B straight, starting the curve at B. Make a 'V' mark at the base on the fold-line (centre) so as to mark the central part of the base, for transferring to the cutting-pattern and lining up later. When the paper is opened out, the point corresponding to B on the other side of pattern should be marked C.
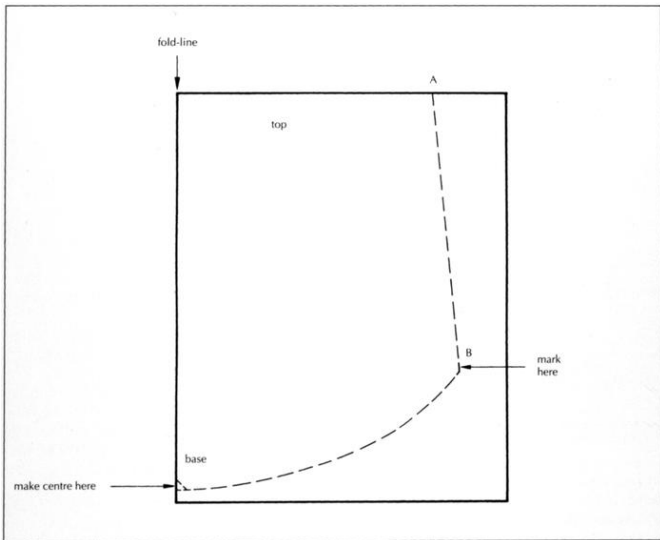
Fig 37a **Handbag making-patterns.** *Cutting front panel, folded.*

Front Flap and Rear Body Panel

1. Having prepared the squared folded rectangular paper, place the folded front-flap pattern upside down and approximately 12mm (½in) down from the top, so that the folded edges line up. Draw round it.
2. Measure the folding allowance as shown, below the bottom horizontal line, and draw a line parallel to it.
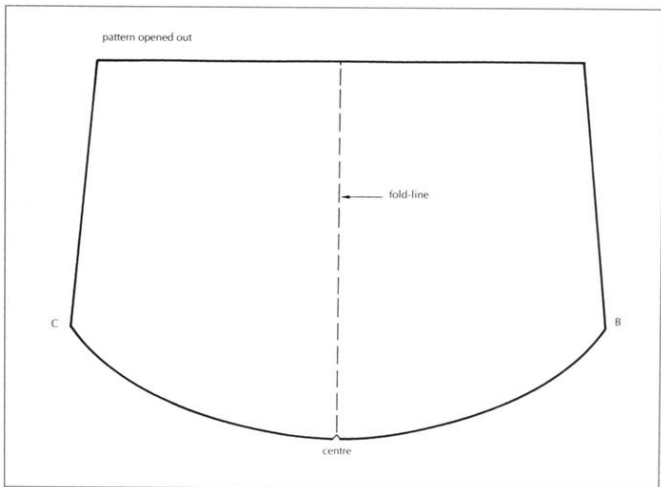
Fig 37b Front panel, opened out.

3. Reposition the front-flap pattern with its top on this new line as above and draw round it.
4. Join the lines using a ruler, as shown, then cut out the pattern in the usual way. Mark the points X and Y with Vs, on the back part of the pattern. These marks, later to be transferred to the cutting-pattern, then to leather, will assist in lining up the gusset panels. Do not make marks on the flap part.
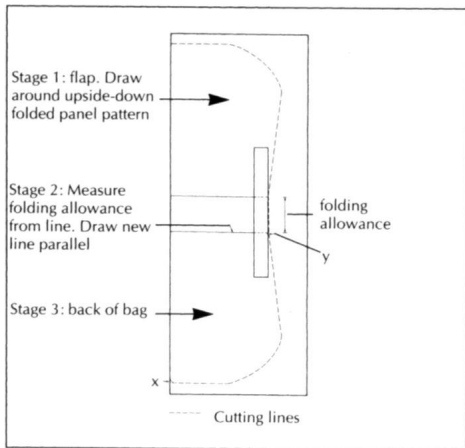
*Fig 37c Cutting front flap and rear body pattern: Y and X
to be transferred to cutting pattern.*

Gusset (two-part)
1. Lay the unfolded body pattern on top of a long piece of squared
   doubled paper that is (in total) the width of the gusset at its
   widest point, with the top edges precisely aligned. Line up the
   mark B on the body pattern with the gusset edge. Cut off paper
   from B to the top, so that the pattern tapers in line with the body
   pattern.
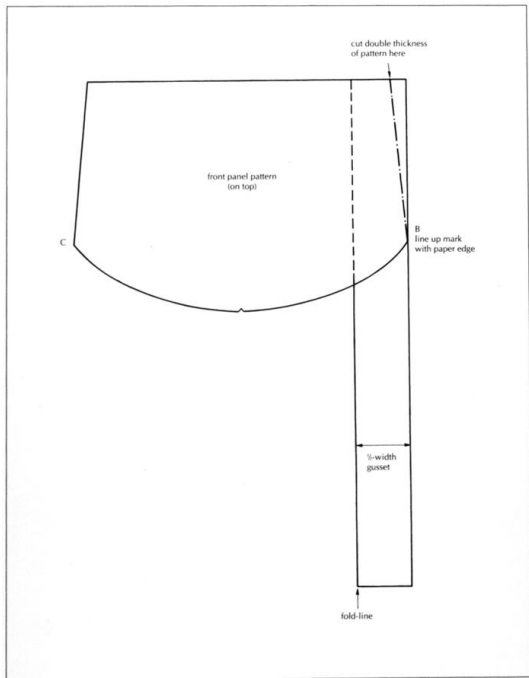
Fig 38a Cutting gusset pattern.

1

2

3

4

end point of
gusset matches
front panel centre
of base.
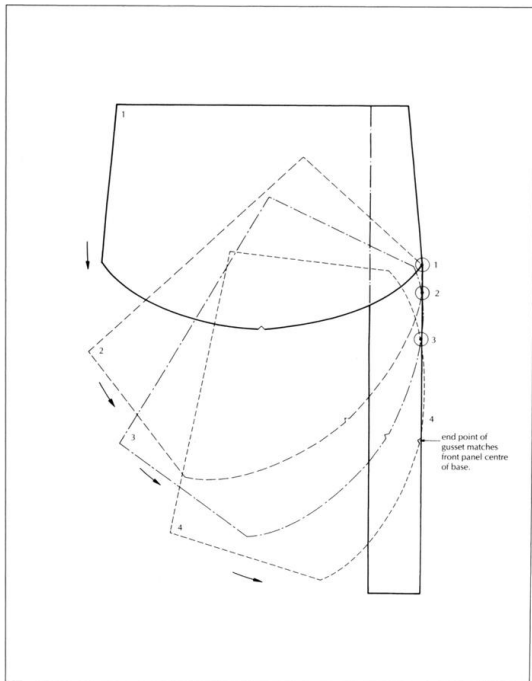
Fig 38b 'Awling' around body pattern to ascertain gusset length.
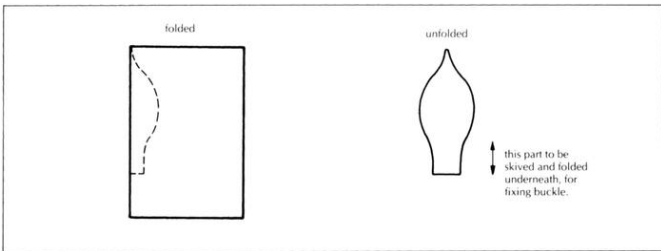
Fig 38c Cutting buckle-strap.

2. Use the unfolded body pattern to 'awl' along the edge of the paper so as to establish the length of the gusset. When the central V mark is reached, mark the two thicknesses of paper with the scratch awl or knife, open up the pattern, and cut off excess.
3. Mark the buckle position as encircled holes. Estimate the position, making it approximately 75mm (3in) from the top.

Buckle-strap
Cut a buckle-strap pattern from folded paper as above.

CUTTING-PATTERNS

These are made using the making-patterns, adding on the requisite seam allowances and transferring some of the V marks, as above. Use dividers, laid flat, to scribe a line around the making-pattern to mark the outer lines of the cutting-pattern. Work on folded, double-thickness paper, as usual. Note that the main body and flap has a seam allowance all around, when only the rear part of it will be stitched: this is necessary in order for the flap precisely to match the front panel. The buckle-strap cutting-pattern is the same as its making-pattern, as no seam allowances are required.

The patterns for making the small plain handbag and the large plain handbag in Chapter 10 were made in this way.

EXAMPLE PATTERN: FRAMED PURSE OR HANDBAG

Many purses and some handbags have an opening metal frame that is fixed to the side panels (usually by gripping the material between a U-shaped metal channel) and this incorporates a means of fastening the frame shut at the top. The upright section frame can be fitted by hammering or squeezing the metal to grip the material, but the inverted section frame requires a special machine for fitting, and is more often used for long production runs.
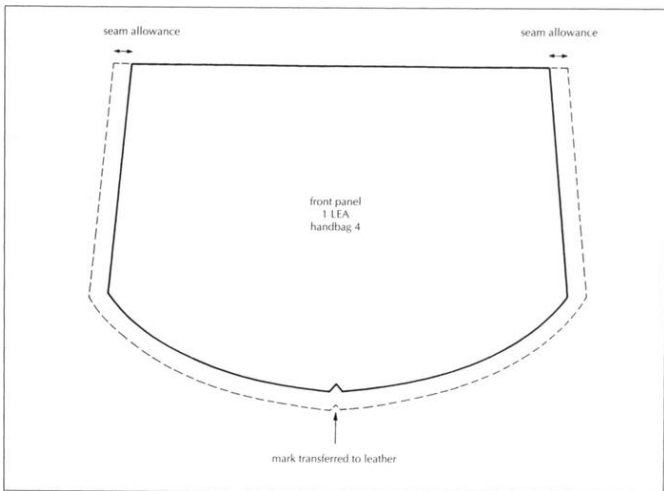

seam allowance

seam allowance

front panel
1 LEA
handbag 4

mark transferred to leather

*Fig 39a **Handbag cutting-patterns**. Front panel.*
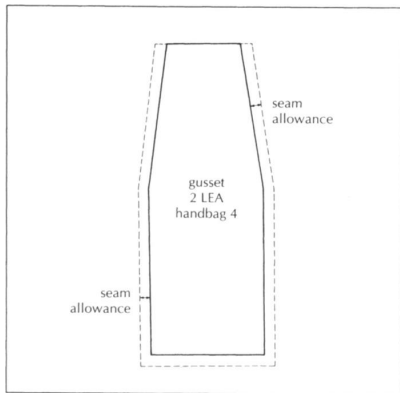
Fig 39b Gusset.

DESCRIPTION

- Turned construction.
- Hand sewn.
- Consisting of two sides and a two-part gusset.

MAKING-PATTERNS

Design Constrictions
The body width must fit inside the leg of the frame and therefore must be smaller. Any depth is possible, but if the purse was shorter than its frame it would look odd.
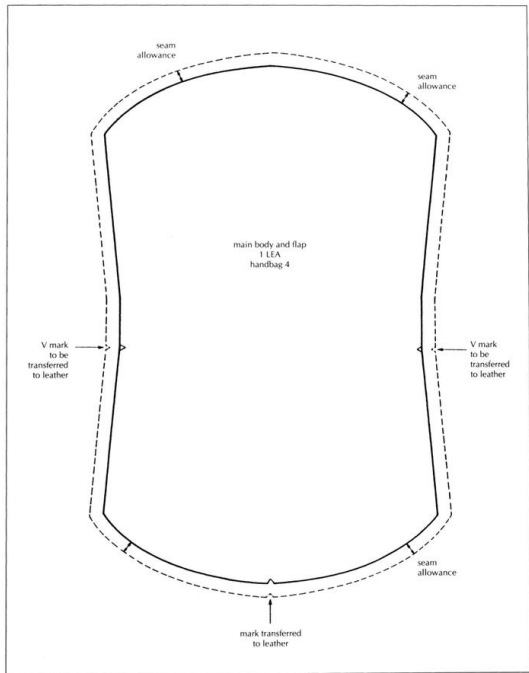
Fig 39c Main body and flap.

Body Pattern

1. Decide on the body length. Mark this on the metal frame (A).
2. Place the frame on folded paper as opposite, parallel to the squared top, and with its centre exactly on the fold-line. Mark the position of A on the paper and draw along the top of the

frame, marking point A on this line. Remove frame.
3. Decide on the shape of the side view of the purse and draw lines accordingly (marked opposite as dotted). Ensure that the body line misses the hinge of the frame. Decide where the flat part of the base begins (B) and mark this point.
4. Mark the centre point of the base (D) by cutting a small V mark. Do the same for B and A, pricking with the awl or slitting with a knife through both thicknesses to establish B1 and A1. Cut the pattern in the usual way: cutting through both sheets together for the curves and marking with the knife, and opening up the paper to cut across flat parts.
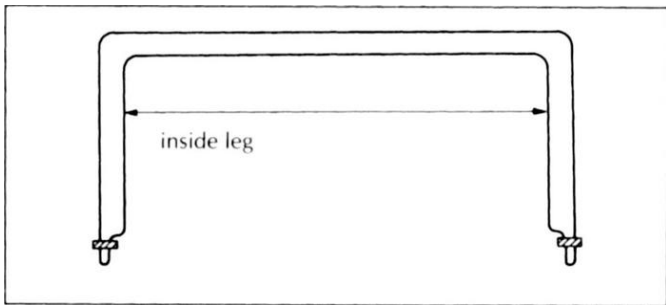
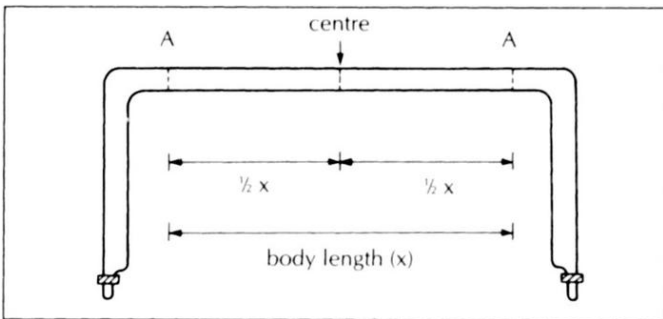*Fig 40a **Framed purse or handbag.** Frame, to show span of inside leg.*
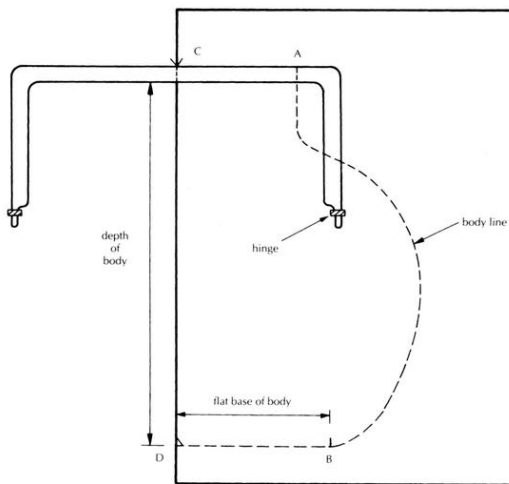
Fig 40b Body length parameters.
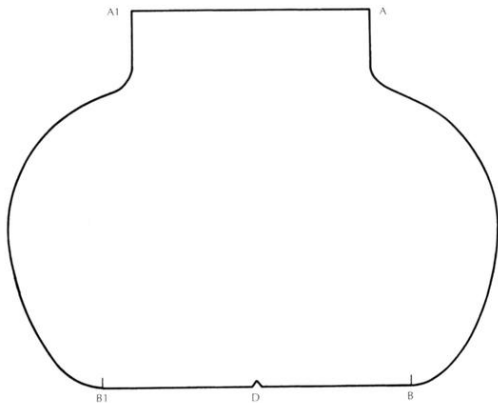
Fig 41a Making-patterns: cutting main body.
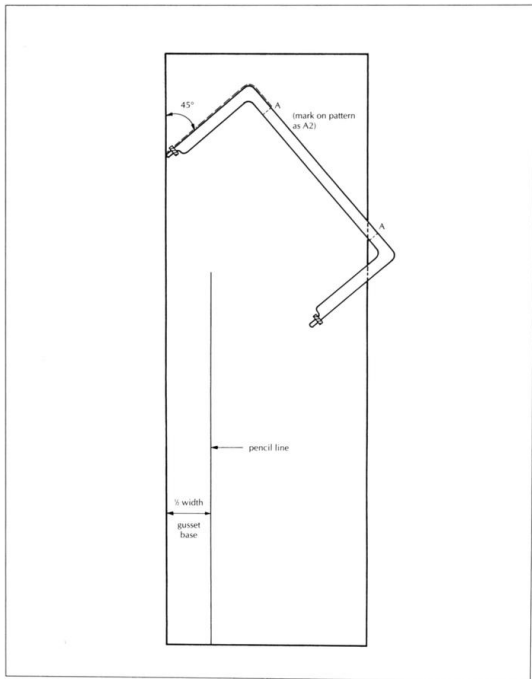
Fig 41b Making-patterns: main body panel markings.

Fig 41c Making-patterns: gusset.

Gusset Pattern (Two-part)
1. Place the frame on squared double paper as shown, at a 45-degree angle. Draw around the outside of the frame from the hinge to A. Mark A on the paper as A2. Remove frame.
2. Draw a line parallel with the paper's fold, half the width of the

gusset base.
3. Place the body pattern on the paper and swivel it so that A and A2 line up and so does B with the gusset line. Draw around the body pattern.
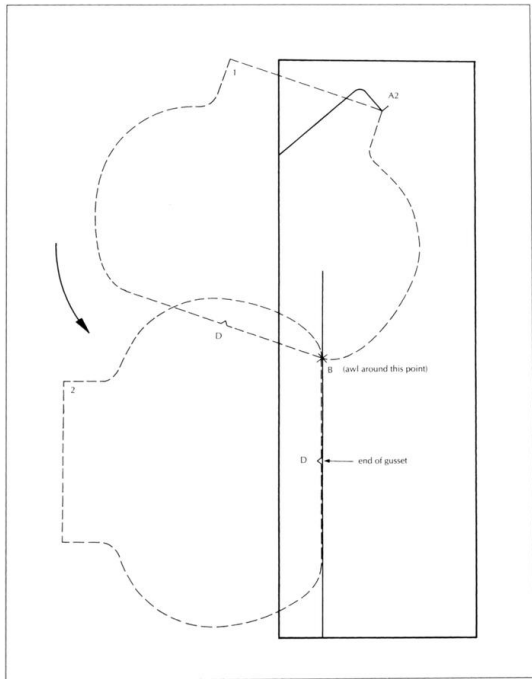

Fig 41d Making-patterns: awling around body pattern to ascertain gusset length.
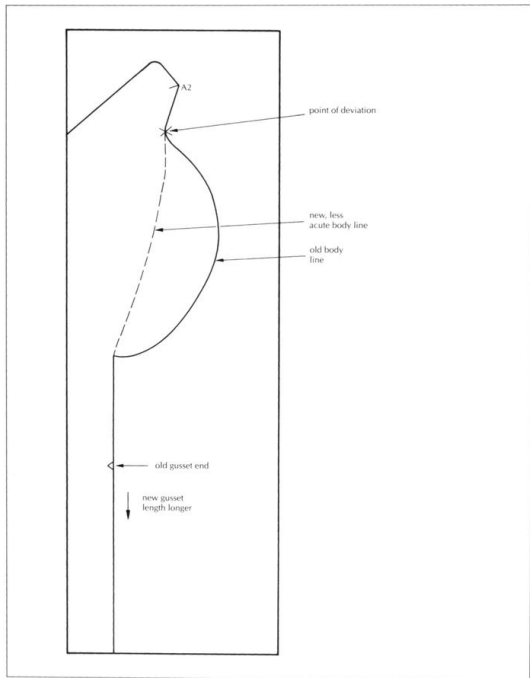
Fig 42a Making-patterns: decreasing the acuteness of the gusset curve.

4. Pivoting the body pattern on B, awl and swivel the body pattern around, keeping the body base line against the gusset line. Mark the centre of the body pattern's base (D) on the gusset line. This establishes the length of half the gusset. Because it is a two-part gusset, two pieces this size (plus seam allowance) are to be cut.
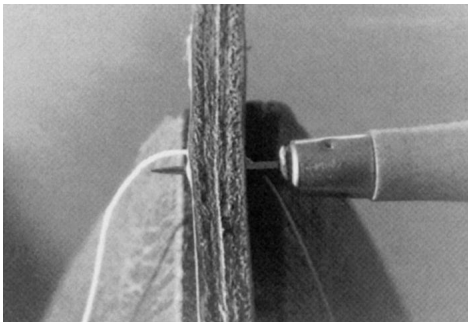
Fig 46 Making a hole for stitching.

Decreasing Acuteness of the Gusset Curve
It is often wise to decrease the acuteness of a gusset curve: draw a less acute line, as shown dotted opposite, then awl around the body pattern from the point of deviation from the original to establish the new, longer, gusset length.
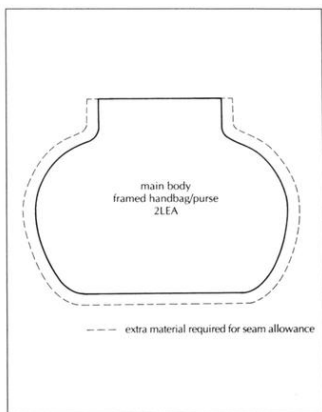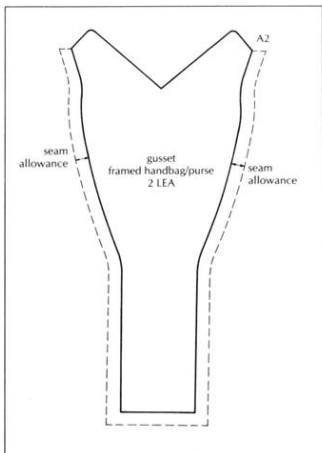
Fig 42b & c Cutting-patterns for gusset and main body.

CUTTING-PATTERNS

With each making-pattern placed on a larger, squared piece of folded paper, use dividers to add on the requisite 9mm (⅜in) seam allowances wherever they occur, and transfer the other lines. Awl around the new body cutting-pattern to establish the new length of the gusset cutting-pattern in the same way as for the making-pattern, so as to double-check the new measurement.

HAND STITCHING AND SKIVING

HAND STITCHING

Saddle-stitch is the type of hand stitch most frequently used, and the other methods of stitching are variations on this. One length of waxed thread has a needle attached to each end. After making a hole with the stitching awl (with a diamond-shaped blade), one needle is passed through this, and the thread centralized. Then both (blunt) needles pass through the next hole from either side, and the procedure is repeated for subsequent holes so as to create a series of loops that are pulled up tight as they form. The exact position, and angle, of the awl's entry for each hole is precisely marked beforehand by means of a pricking iron, or stitch-marking wheel.

TOOLS

- Awl.
- Pricking iron and hide hammer, or stitch-marking wheel (pricking wheel).
- Two needles.
- Linen thread.
- Clam.
- Beeswax.
- Dividers or adjustable creaser (for marking).
- Stitching groover (for heavy leathers only).

PRICKING OUT

Mark a line approximately 3mm (⅛in) from the edge of the leather, using an adjustable creaser (unheated) or the dividers. For heavy leather, it may be advisable to carve a shallow groove for the stitches, in which case an adjustable stitching groover should be used. Place the work on a firm surface and position the pricking

iron upright on this line at one end and strike it with the hide hammer so as to form a row of slanting marks that coincide with the angled teeth (marks only – do not hammer hard enough to pierce the leather). Reposition the iron, overlapping two or three of its teeth with the previously marked indents and strike again with the hammer. Continue doing this all along the intended row of stitching. At corners or curves, angle the iron so that only one or two (maybe three) of the end teeth contact the leather surface. Alternatively, use a stitch-marking wheel to mark the stitches, taking care not to veer away from the marked line, especially at corners or curves.

PREPARING NEEDLES AND THREAD

Cut a length of thread approximately four times the length of the proposed line of stitching. For long seams, the thread will have to be joined, so never cut more than can be held comfortably between the hands, with arms slightly outstretched. Holding the thread at its centre, pull one half through the block of beeswax several times; repeat for the other half. Then pull all of the thread between the thumb and forefinger, so as to spread the wax coating evenly. The waxed thread should feel smooth and slightly stiffened, and it should look shiny.
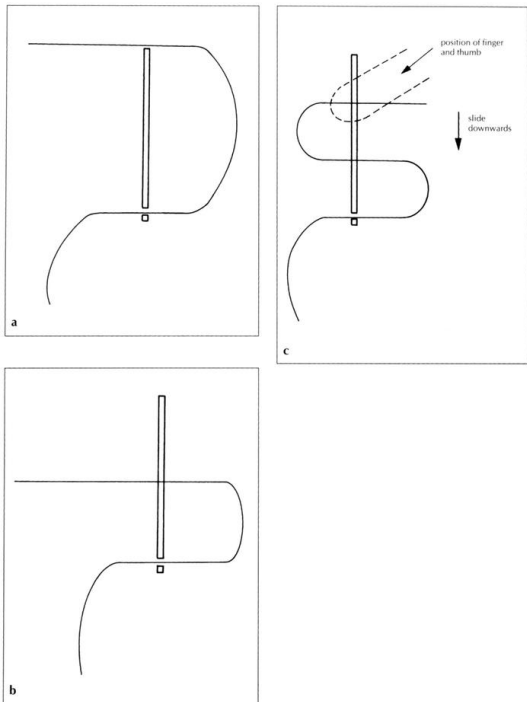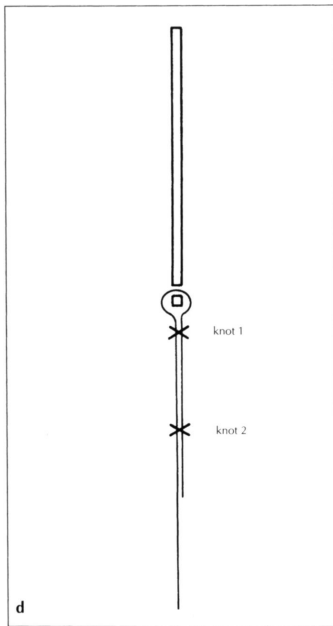
To attach the needles:

position of finger
and thumb

slide
downwards

*Fig 43a, b, c & d **Hand stitching.** Four stages of attaching needle to thread.*

d

1. Thread a needle, pulling approximately 125mm (5in) through the needle's eye. Any difficulties in passing the thread through the needle's eye can often be overcome by pulling the thread end through the wax again and slicing the end to a sharp angle. Often a slightly flattened thread end is easier to insert.
2. Flatten a small part of the pulled-through length on a firm surface with a fingernail: this point should be about a needle's length beyond the eye. Stab through the *centre* of the thread with the needle's blunt end, then slide the spliced thread half-

way down the needle's shank.

3. Repeat Step 2, this time stabbing the thread about an inch closer to its end, and pulling the spliced part only a quarter of the distance down the needle's shank. An 'S' shape will thus be formed.

4. Holding the needle at its tip (above the spliced thread) with one hand, hold the upper spliced area between finger and thumb and slide the thread downwards, to below the needle's eye and beyond. Two knots will be formed along the main length, one above the other.

5. Pull the main part of the thread up tight until all the slack is removed: the top knot slides upwards until it is held against the bottom of the needle's eye.

6. Cut off the tail of excess thread and smooth the double thickness of thread below the needle's eye between fingertips to ensure that the wax is spread evenly.

7. Repeat the process to attach another needle at the other end.

SADDLE STITCHING (RIGHT-HANDED)

1. Place the work in the clam so that the stitch-marks are slightly above the clam's jaws, and on the right-hand side. Arrange the project so that the first hole to be stabbed is furthest from the body, and the stitch-line will progress towards the body.

2. Stab a first hole with the awl held in the palm of the right hand, taking care to match the shape of the awl's blade to the angle of the prick-mark: slanting. With the handle of the awl flattened to coincide with the widest part of the blade, as shown in Chapter 1, the correct angle for insertion can be easily judged from above. Stab the blade in to the hilt, not rotating or twisting the awl at all during entry. Withdraw the blade.

3. Push one of the needles through the hole and out of the other side and then pull the thread along until there is an equal amount of thread on both sides of the work. Ensure that the thread is centred by holding the two needles together above the work and pulling upwards to take up the slack.

4. Hold needle A in your left hand, between thumb and forefinger, and hold the awl in the palm of the right hand. When using the

awl, hold needle B between the first and second finger of the right hand, or between the first and second bend of the second finger. Keep the awl in the right hand throughout stitching. When manipulating the needle, hold the awl in the palm, as shown in Fig 47.
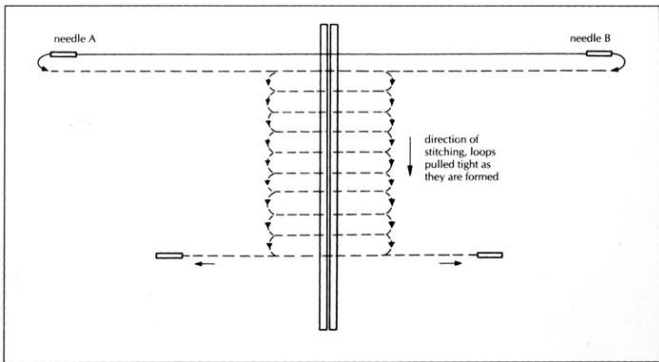

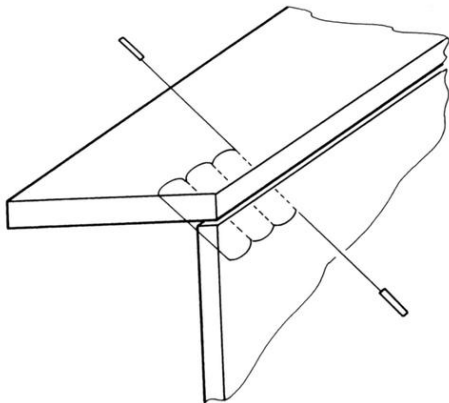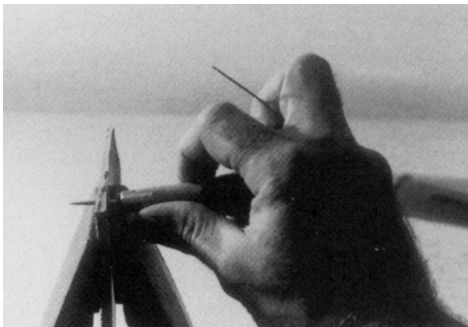*Fig 44a Saddle stitch – bird's-eye view.*

Fig 44b Box stitch – part cross-sectional view.

Fig 44c Butt stitch – cross-sectional view.

5. Stab the second hole.

*Fig 45 **Hand stitching**. Using the awl to make initial hole, while holding needle B in the bend of the second finger.*

6. Withdraw the awl. Just as the awl is leaving the hole, insert needle A with your left hand – the disappearing awl tip position helps to locate the hole precisely. Push the needle until it is three-quarters of the way through hole, and no further.
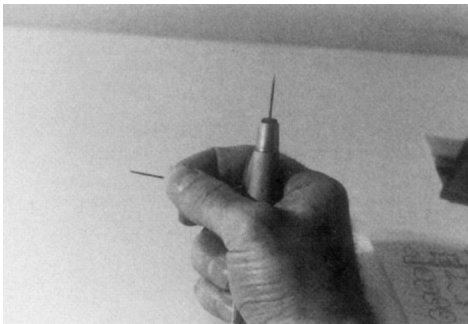
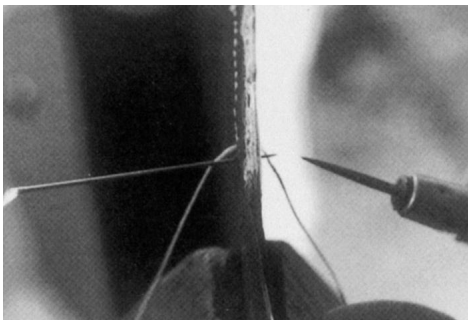*Fig 47 The way to hold the awl while inserting the needle.*

Fig 48 Inserting needle A (left hand) as awl is withdrawn.

7. Still holding the awl in the palm of your right hand, but now sticking upright, out of the way, place needle B *under* needle A at right angles, forming a cross. With your right hand, hold the two needles together at their junction point, between thumb and forefinger.
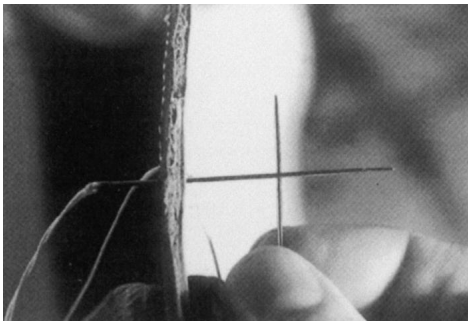
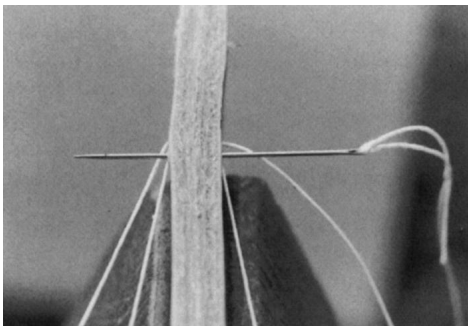*Fig 49 Needle B held under needle A to make a cross.*

Fig 50 Pushing needle B in front of thread into recently vacated hole. Needles should still be held in cross formation at this stage, but in the interests of clarity this is not shown here.

8. Drag needle A out of the hole, pulling both needles together, still in cross formation. Pull the thread about 50mm (2in) beyond the

hole.

Fig 51 Pulling two needles together, as a cross, to the right, drawing thread along.

9. Rotate right hand anticlockwise so that needle B is *on top.*
10. Push needle B into the recently vacated hole, *in front* of the thread that is already lying there, at the same time pulling the slack thread to the left and right of the hole, flat, backwards and tightly against the leather. Use the thumb and forefinger of the left hand, and the tip of the third finger of the right hand to do this. It is important to avoid splitting the captured thread with the point of needle B as it passes beside it, and the above procedure minimizes this risk. Push until half the needle is through the hole.
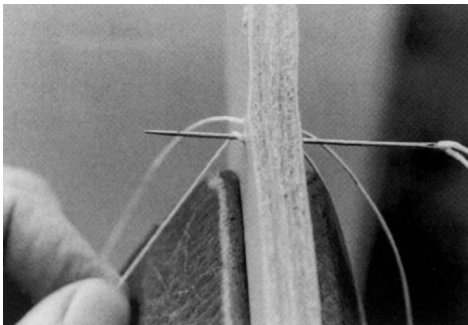
Fig 52 Casting thread over needle B. (N.B. Needles should still be held as a cross, not as shown.)

11. Lift the loose thread with your left forefinger and pass it over the top of the emerging needle B. This is known as 'casting'.
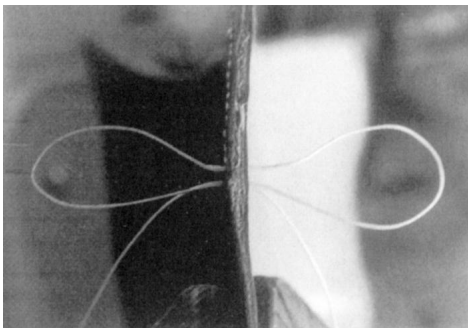

Fig 53 Threads partially pulled through holes to show stitch formation.

12. Slide right-hand thumb and forefinger from needle cross and onto needle A, at the same time pulling needle B completely through the hole with your left hand.
13. Pull both needles up fairly tight, in order to pull up the loops both sides.
14. Should it become necessary to continue stitching after the length of thread runs out, simply prepare a new length and start three holes from the end of the previous stitching, ignoring the stitches already in place. This overlap will effectively join the line of stitching, and the extra thickness of thread should ultimately be undetectable.
15. Complete stitching by sewing backwards for three threads.

SADDLE-STITCHING (LEFT-HANDED)

Those who are left-handed may easily find that the method for right-handed stitching is perfectly acceptable, since neither hand is particularly dominant. However, if the right-handed technique is awkward, you can make the following adjustments:

1. After pricking out, insert the work into the clam with stitching marks to the left-hand side.
2. Hold the awl in the palm of your left hand, needle A also in the left hand; hold needle B in your right hand.
3. Proceed as explained for right-handed, except when rotating the crossed needles: rotate them clockwise.

All the other principles remain the same as for right-handed stitching.

BACKSTITCH

Here, one side of the stitching tends to sit on the material's surface rather than being pulled into, and possibly cutting, soft material; for this reason it is useful for making repairs and when attaching thin leather or fabrics to stronger leather panels. As with saddle-stitch, slight adjustments can be made for left-handed stitching.

Neat stitching: pre-awling leather
Neat stitching in an area that will be subject to critical scrutiny, such as a bag front flap, can be difficult to achieve at first. A good idea is to place the stitch-marked panel in the clam on its own, then stab all the holes with the awl. This ensures that the holes will be correctly pierced at the assigned marked point and at exactly the right angle – something that can be harder to achieve when manipulating partially joined panels and piercing two or more thicknesses of leather at once in the normal way. When the item is stitched against its partner, the awl will travel easily through the second panel, guided by the first, correctly positioned, pre-stabbed hole.

1. Prick-mark the leather on the side of the stronger material: this will be the side that the stitches 'bite' into.
2. Place the work in the clam, with the prick-marks on the right-hand side.
3. Cut thread three times the length of the line of stitching. Wax thread and attach needle to *one end only.*
4. Stab through the first two marks with the awl: holes 1 and 2, number 1 being the furthest away.
5. Pass needle through hole 2 from the *left-hand* side. Pull thread through until 75mm (3in) of it remains protruding on the left-hand side: this will be caught in the stitch-line as work progresses.
6. Pass needle through hole 1 from the *right-hand* side. Pull thread up tight.
7. Stab hole 3 from right-hand side.
8. Pass needle through hole 3 from left.
9. Pull the thread through a short distance with the right hand, at the same time extending the thumb of left hand through the loop as it forms at the left of the work.
10. Pass needle back through hole 2 (previous hole) from *right.* Push the needle under the loop created by left thumb. Pull thread a short distance.
11. With the right hand, pull the newly formed loop of thread up

tight.
2. With the left hand, pull needle and drag the loose thread tight.
3. Stab hole 4. Insert needle from left and make a loop with the left thumb, then proceed as before, backstitching into hole 3.
4. Continue to the end of the work, over-stitching the last three stitches backwards.

BOX STITCH

This is used for making rigid, box-like structures, for instance an attaché case or bag. In essence, it involves the same stitching technique as saddle stitch, but the stitches are angled across a corner, as shown in the diagram. Box stitching can only be used when joining thick or well-reinforced leather.

BUTT STITCHING

Butt stitching is a way of joining leather by butting pieces together, stabbing holes at a sharp angle in each, and drawing the two together by means of saddle-stitching across with the thread passing from the top surface and out of the edge of each. If this method of stitching is used, all the holes need to be carefully pierced with the awl beforehand.

SKIVING

Skiving, or paring, is the process of reducing the thickness of leather on the flesh-side, normally along a pre-measured line from an edge to that edge. The aim is to cut evenly through the leather's thickness at an acutely sharp angle, culminating in a blade-thin edge. Cross-sectionally, the leather should angle from full thickness to nothing, as a triangle. Bad skiving is caused either by angling the blade too sharply, in which case the material is cut completely through before the actual edge, or by not angling the blade enough, in which case insufficient material is removed.

The skiving (or paring) knife needs regular sharpening on the strop during use. Anyone doing a sizeable amount of work may consider it worthwhile to aquire a skiving machine: this is basically a blade mounted in a frame, with a fully adjustable depth of cut.

Splitting machines are used for reducing the overall thickness of complete areas of leather. Hand-skiving should be done on a stone, ideally a litho-stone, or a piece of marble, since constant friction against a wooden cutting board will soon blunt the knife's fine edge. If such a stone is difficult to acquire, a wooden block is adequate, but remember that more frequent knife sharpening will be necessary.

Principal purposes of skiving
- To allow thick leather (over 2.5mm/^{3}/$_{32}$in) to bend, for example when fixing buckles to straps, or attaching D-rings by way of a leather loop.
- To reduce double thickness where two leather edges meet.
- To avoid bulkiness in turned-over-edge work: the outermost layer of thin leather needs to be skived at the edges before being turned over the other layers.

HAND-SKIVING THIN SKINS FOR TURNED-OVER-EDGE WORK

In this case, a thin skin is deemed to be less than 1.5mm (^{1}/$_{16}$in).

1. Using a black pen, mark the proposed fold-line on the leather's flesh-side, 10mm (⅜in) from the edge and parallel to it.
2. Lay the leather flat on the cutting area, holding it down with one hand. Then place the skiving knife blade 3mm (⅛in) behind the fold-line at the left-hand side of the leather in order to work towards the right (unless you are left-handed, in which case start at the right and work towards the left). Angle the blade to an extremely sharp angle, as shown.
3. Slide the blade forwards gently. If the blade is the requisite sharpness, it should glide through the material.
4. Move one blade's width along to the right and repeat the process, matching the previous angle of cut as closely as possible. Repeat as many times as required to produce the desired result.
5. If a neat edge is required, or it is necessary to remove loose

fibres after completion of the skiving, slice 1mm ($^1/_{16}$in) back from the edge, this time tilting the knife to a 45-degree angle in order to slice straight across.
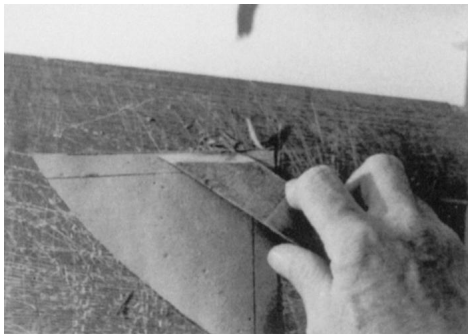

Fig 54 Skiving leather

For thicker skins, less accuracy is required, and often areas to be skived can be judged by eye rather than measured. A slight 'sawing' action from left to right at the same time as pushing forward can often be helpful.

BUILT-UP WORK

This is the composite term for items made from thin leather (skiver) or rexine that is stuck to various thicknesses of card, plywood or thin MDF, or strawboard (a kind of very thick cardboard).

GENERAL GUIDELINES

Stitching is not normally used for small items: they are usually held together by PVA adhesive, which is strong enough for all applications using thin material and card. This water-based adhesive effectively penetrates the cloth backing of the rexine, or the pores of the skiver leather, as well as the surface of the card. Attempting to dismantle an assembled piece will prove how firm the bond becomes: the card will rip apart before the adhesive bond breaks down. More complex items like briefcases and hat-boxes do, however, require stitching.

Before describing the techniques of built-up work, it is worth outlining a few important points and guidelines.

- Neatness at corners and curves is important, and the bone folder is an extremely useful tool for tapping down corners or smoothing along curves.
- Silk is easily stained by the adhesive, and bonding is usually done by folding a silk overlap behind the card and sticking this. On the plus side, PVA can easily be removed from the glossy or grain side of rexine and leathers, thus allowing an excess to be used at corners for added strength.
- The thickness of both the card and the thin rexine or skiver has to be taken into account when ascertaining fold-lines and measurements generally.
- When making boxes or cases, make the raw unit first, complete with hinges and catches, but during initial planning always bear in mind the extra thickness of material to be added.
- When sticking with PVA adhesive it can sometimes be helpful to

apply a layer to both surfaces and allow it to dry slightly before sticking. This allows the materials to grip better instantly. Some formulations of PVA work just as well without waiting for the glue to begin drying; materials and glues vary, so experimentation with scrap pieces is advisable.
- Use a brush to apply the adhesive, and thin it with water if it is too viscous or treacle-like.
- Do not mark the exterior of rexine with a pen, as the ink will be practically impossible to remove successfully. Ink marking on the inside, however, will not show through.
- PVA will bond the exterior surface of rexine, without the need for removing the glossy surface (scratching), as with leather. Splashes can easily be removed from the exterior surface with a damp cloth, but are harder to remove once dry.

The techniques of built-up work are best illustrated by describing a couple of projects, which utilize most of the operational techniques required.

SMALL TRIPLE-FOLDING PHOTO FRAMES

DESCRIPTION

Folding photo frame with three windows and a fastening strap that tucks into a retaining band. The outer frames are oval, the central one square. The three joined sections fold at two points, where the rexine (or leather) and silk act as hinges.

The frame is made up of a back section – a long piece of rexine folded around three pieces of card, with a strap, and concealing and retaining bands attached to it; and a front section – a long piece of silk attached to three pieces of card, in front of which are fixed three separate, rexine-covered cards with display holes cut into them.

MATERIALS

- Rexine (example made in red colour) or very thin (skiver) leather.
- 1mm thick card.

- 1.5mm thick card.
- Silk.
- Clear acetate film.

TOOLS

- Clicker knife.
- Skiving knife.
- Scissors.
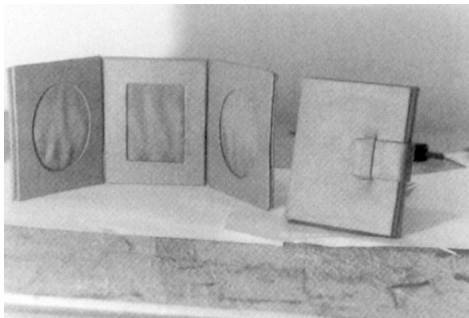- PVA adhesive and brush.
- Bone folder.
- Ruler.
- Fine emery paper.

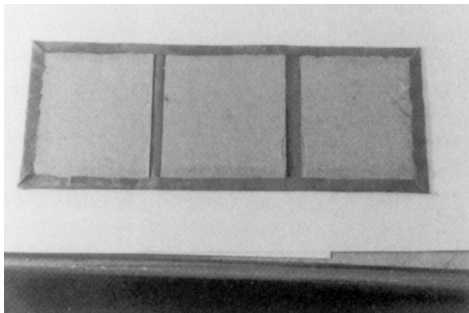

Fig 55 Small triple photo frame.

BACK SECTION

1. From 1mm ($^1/_{32}$in) thick card, cut three pieces 115×90mm (4½×3½in). Cut a piece of rexine, 315×135mm (12⅜×5$^5/_{16}$in).
2. Measure and mark with a pen the correct position of the cards, and stick them onto the back of the rexine as shown. It is important to maintain the 12mm (½in) gap between sections A and B,

and the 17mm ($1^1/_{16}$in) gap between B and C. The size of the
rexine allows for an approximate 10mm (⅜in) overlap around the
edges.

3. Paint adhesive along the edges of the card and also the overlapping underside of the rexine. Turn over the edges, afterwards trimming off the excess material at the corners with scissors, as described in Chapter 2.

CLOSURE STRAP

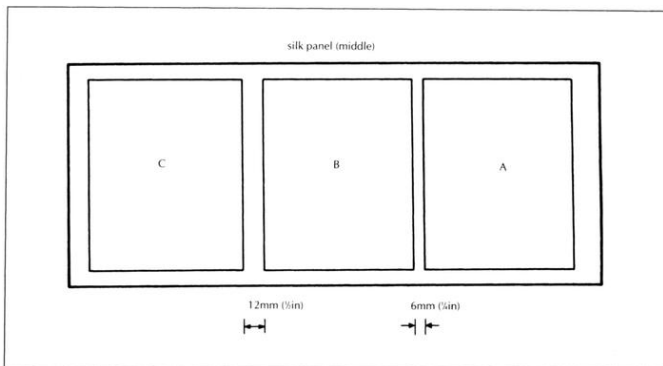*Fig 56* **Small triple photo frame**. *Back (rexine) section bonded to card panels.*

silk panel (middle)

C

B

A

12mm (½in)

6mm (¼in)

Fig 57a **Triple photo frame construction**. *Plan of middle (silk)* panel.

Rexine panel (back)

10mm (⅜in)

left

A

B

C

Right
135mm
5⅜in

10mm (⅜in)

BASE

10mm (⅜in)   16mm (⅝in)   12mm (½in)   315mm (12⅜in)   10mm (⅜in)
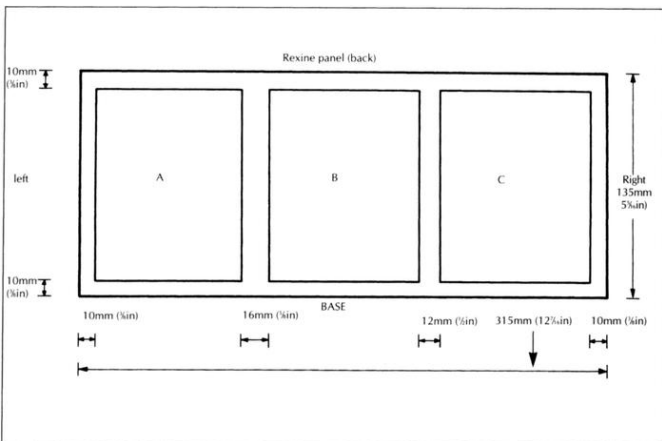
Fig 57b Plan of back (rexine) panel.

1. From 1mm ($^1/_{32}$in) thick card cut one piece 140×28mm (5½×1⅛in). Cut one piece of rexine 150×40mm (6×1⅛in), and one piece 140×30mm (5½×1$^3/_{16}$in).
2. Round off the card's corners at one end: the front end.
3. Stick the card onto the back of the larger rexine piece, ensuring that there are 6mm (¼in) of overlap all around the card's edge. Round off the front edge to follow the card's profile, while still allowing an overlap.
4. Stick down the turnover on the front end and two long sides, taking care to fit the rexine snugly around the rounded front end corners (trim them further if necessary). The rear end does not need to be turned over and, after the sides are turned, excess material can be trimmed up to the edge of the card.
5. Bond the smaller piece of rexine onto the uncovered face of the strap to cover the turned-over edges and completely enclose the card.
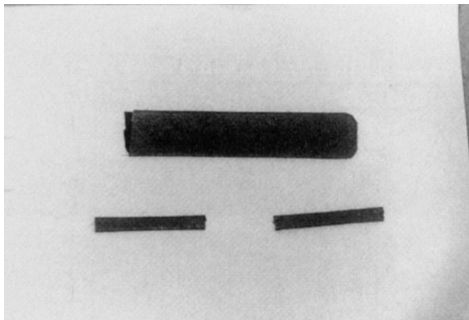
Fig 58 Closure strap and bands.

STRAP BANDS

1. From 1mm (^{1}/32in) thick card, cut two pieces 55×7mm (2^3/16×¼in). Cut two pieces of rexine, 55×14mm (2^3/16×^{9}/16in).
2. Stick the card onto the rexine pieces, leaving an equal overlap along both long sides with the ends flush with the card.
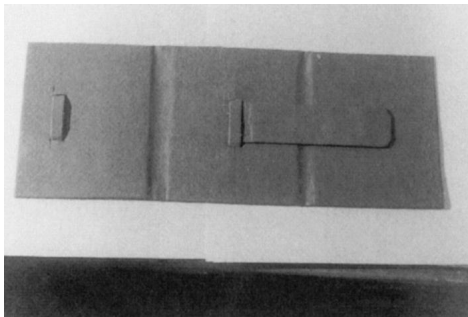3. Turn over the overlapping long edges and stick them down.

Fig 59 Closure strap and bands fixed to back panel.

FIXING STRAP AND BANDS TO BACK PANEL

1. From the outside surface, make a slit in the central panel, 30mm ($1^3/_{16}$in) long, centred, for the strap to slot into.
2. Using the bone folder to open up the slot, insert the strap into the slot as above, allowing 110mm (4⅜in) to remain projecting outside. Make sure that the best surface (unbroken rexine) is uppermost.
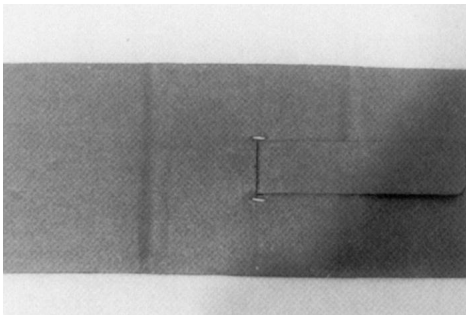
Fig 60 Back panel to show slits for concealing band strap.

3. Turn over the assembly and stick down the tongue of the strap that projects inside along the cardboard. Before doing so, slice away the bonded rexine covering the cardboard so as to allow the material to stick more easily: a skiving knife is useful for this.
4. Turn the assembly over again and make slits 2 and 3 (for concealment band) fractionally above and below and at right angles to slit 1. These should be 7mm (¼in) wide, their central line being that of slit 1, so that when the band is inserted it will conceal the strap's slit entry.
5. Insert one band, tucking the ends through the slots so that the strap is covered up. Turn over the assembly again and stick down the ends of the band, first removing the shiny bonded rexine layers, as in Step 3.
6. In the same way make slits 4 and 5 for the closure sheath band. These should be in line with slits 2 and 3 and the same width. The ends of the slits should be 22mm (1⅞in) away from the left-hand edge of the assembly.
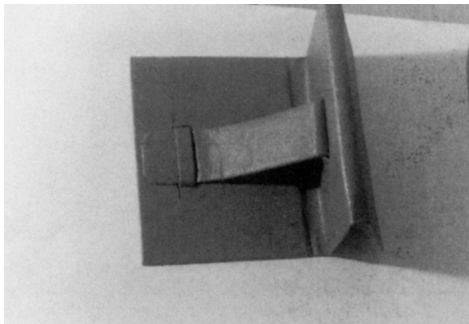
Fig 61 Determining positions to fix closure sheath band.

7. Insert the final band as in Step 5. Before sticking the ends down on the reverse side, fold up the middle section and insert the strap underneath the loop (*see* photograph). Turn over the assembly and stick the band in this position; thus adequate room will be allowed for insertion of the strap.

MIDDLE SILK SECTION

1. From 1mm ($^1/_{32}$in) thick card, cut three pieces, each 115×90mm (4½×3½in). Cut piece of silk 340×160mm (13½×6½in).
2. Paint a very thin line of PVA onto the edges of card A (too much PVA will stain the silk). Stick it approximately 10mm (⅜in) away from the right-hand edge of the silk panel. Align its bottom edge with a line approximately 10mm (⅜in) away from and parallel to, the silk's outside edge.
3. Measure and draw a line on the silk, 6mm (¼in) away from the left-hand edge of card A, and place a 305mm (12in) ruler against the bottom edge of this card. Using the ruler's edge and the drawn line as outside parameters, stick card B in place, again applying only a very thin line of PVA to the card's edge.
4. Similarly affix card C, this time leaving a gap of 12mm (½in)

between its right-hand edge and card B's left-hand edge. The ruler should ensure that the bottom edge is straight, thereby keeping all the cards at the correct angle and relative position to each other and the silk.

5. Turn over the assembly, and paint PVA onto the card panels. Turn over the silk overlap and stick it down all around the edges. Begin by trimming the silk overlap at the corners to a 45-degree angle: there is no need to worry about neat corner folds, as all the corners will be covered up later.
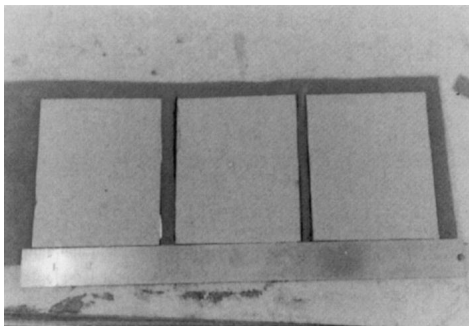

Fig 62 Bonding card to silk panel.

INDIVIDUAL FRAME PANELS

From 1.5mm ($^1/_{16}$in) thick card, cut three pieces each 115×90mm (4½×3½in). Cut three pieces of rexine, each 135×110mm ($5^5/_{16}$×4⅜in).

Cutting Picture Holes

This is a tricky operation, as the slightest bump or unevenness will show. Unless a suitably shaped object can be utilized as a template, the best method is to:

1. Cut a piece of paper to exactly the same rectangular size as the card. Fold the paper from top to bottom so that shortest sides meet, and the fold is at the top.
2. Fold the paper again centrally, at right angles to the first fold, taking the right-hand half over to the left. Make sure all corners meet when the paper is folded. Four layers are thus formed, with one fold-line at the right-hand side and two at the top.
3. Using scissors, cut a quarter of an oval out of the top right-hand section of the paper.
4. Unfold the paper and judge the oval shape. If dissatisfied, refold it and cut again, or else repeat complete procedure until an oval shape with approximately 15mm (⅝in) border at the sides and 20mm (¾in) border at the top and bottom is formed.
5. When satisfied with the shape produced, place the paper over one of the card pieces and draw the shape through the hole in the paper.
6. Begin cutting with a sharp knife, barely scratching the surface of the marked line, and turning the cardboard as you cut. Repeat the process many times, cutting progressively deeper until the oval shape is cut through.
7. Even after extreme care, there may still be slightly uneven 'un-rounded' parts of the internal curve. Run a piece of fine emery paper around the edge of the curve to remove these and produce a smooth, even oval.
8. Repeat the procedure for another of the card pieces, using the first as a template to draw the shape of the oval cutout.
9. For the third card, cut out a square hole by measurement, leaving 23mm (⅞in) at the top and bottom edges and 19mm (¾in) at the sides.

Covering Cards with Rexine
For the oval-holed cards:
1. Stick the card onto the rexine panel, then cut out the central part of the rexine covering the hole, leaving a 10mm (⅜in) border of rexine extending inside the cut cardboard edge.
2. Make cuts in the rexine border at right angles to the cardboard edge, approximately 3mm (⅛in) apart, beginning each one 2mm

($^1/_{16}$in) away from the cardboard, cutting across to the inner edge. This uncut rexine distance represents the thickness of the card against which the slitted material is to be folded.
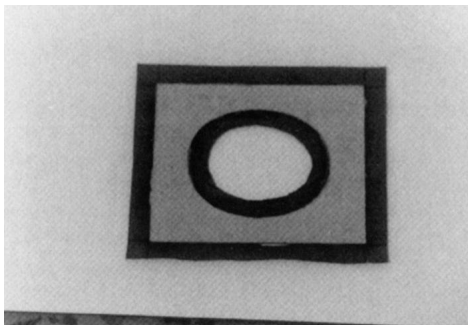

Fig 63 Card bonded to rexine, with central oval shape removed, leaving a 10mm (⅜in) border for the turned-over edge.

3. Paint a PVA adhesive border, approximately 8–10mm (¼–⅜in) wide, onto the cardboard oval's edge. Then use a thumb to lift the strips of rexine up and fold them back against the adhesive to stick them down. Smooth along the inside edge of the oval (using bone folder or fingers), to eradicate any folds, lumps or pools of adhesive.
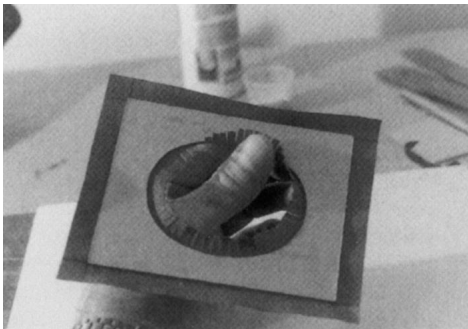
Fig 64 Using thumb to stick down slashed rexine border to internal oval.

For square-holed card:

1. Proceed as for ovals: stick the card onto the rexine, then trim out a rectangle from within the rectangular hole, leaving a 10mm (⅜in) fringe of rexine extending beyond the card's edge.
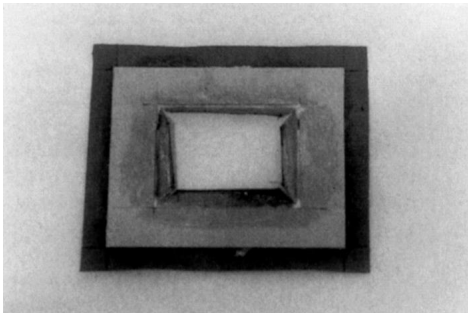

Fig 65 Cutting rexine for square-hole turnover.

2. Slit the four corners of the rexine fringe on a diagonal line towards the outermost corners. Cut right up to the cardboard inner corner: do not leave a 2mm margin. As above, apply adhesive to the card's border and loose rexine. Fold the overlaps up and over and glue them down.
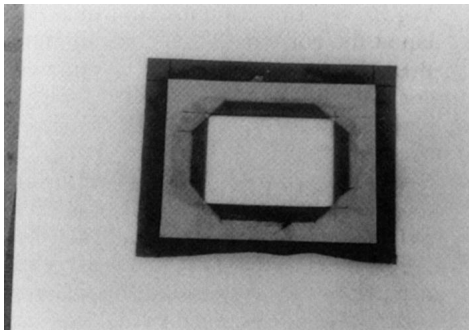

Fig 66 Internal turned-over edge completed for square hole.

Finishing the Frames
1. For the oval frames, fold round and stick down one long overlapping side only. Do not trim the corners across first.
2. For the square frame, which will be the central one, stick down both long rexine side overlaps.
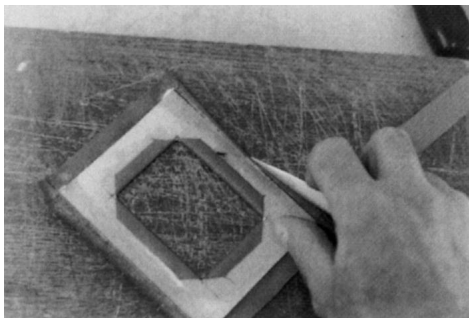
Fig 67 Sticking down two long rexine sides of square panel.

FIXING FRAMES TO SILK PANEL

1. Place one of the oval frames onto one end of the silk assembly, on top of its corresponding card under the silk.
2. Holding the frame in the above position, turn the complete assembly over and fold down the short rexine overlaps and stick these against the silk and card. Then stick down the long overlapping rexine side. Do not trim away any material at the corners.
3. Repeat at other end with the other oval frame.
4. Fix the square frame on top of the central card on top of the silk in the same way, then fold and stick down only the short overlapping rexine sides (the long ones have already been stuck down).

FINAL ASSEMBLY

1. Use the skiving knife to slice away some of the card and rexine where the bands and the strap ends are stuck to the back panel. These areas will inevitably be slightly raised, but lumps should be kept to a minimum.
2. Ensuring that the panels are correctly aligned – that the narrow

and wide silk gaps correspond with those beneath – stick the right-hand section of the top panel to the corresponding panel of the silk assembly.

3. Fold the second section of the silk assembly so that the square and the oval frame are face to face. Apply adhesive to the cardboard back of the central panel and also to the central panel of the back assembly, then fold down the back assembly and stick the two together.

4. Turn over the unit and fold the final silk section so that the oval face is against the back of the first (right-hand) panel. Apply adhesive to the final adjacent card panels, fold down the back panel and stick it down. Ensure that the strap easily inserts under the band and effects an adequate fastening.
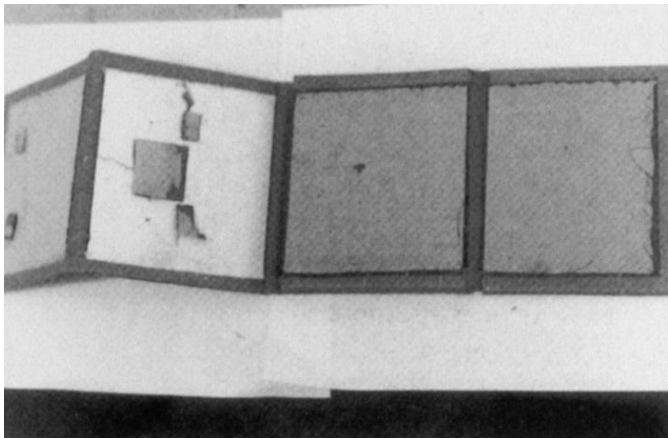

Fig 68 Right-hand sections of panels stuck together; middle panel folded, ready for central panels to he stuck.

Difficulty in closing
If difficulty is encountered when closing the final panel, open it up again and slide the newly stuck panels against each other to allow more 'give' to the hinged material areas. Several millimetres can be gained at the front end (first to be stuck), as the back panel can be slid fractionally away from the right-hand edge of the frame panel. If the hinged areas have been adjusted in this way, the right-hand edge of the final panel to be bonded will end up slightly behind the edge of the corresponding frame panel. This does not show and will not matter.

Finishing Off
Cut pieces of clear acetate to size, and then insert them into the frame cavities.

LARGE SINGLE PICTURE FRAME

DESCRIPTION

A square-holed picture frame, lined with silk, made from rexine-covered cardboard. Spacer lozenges allow for the insertion of a reasonably thick picture. An angled support is held against the back by a strip of ribbon, and folds flat when not in use. An oval hole could be cut instead of a square one, but the attendant difficulties when cutting ovals must be borne in mind (for the method of cutting an oval, *see* triple photo frame). Colours of the example are red for the outer frame, blue for the backing silk, and blue for the backing panel.
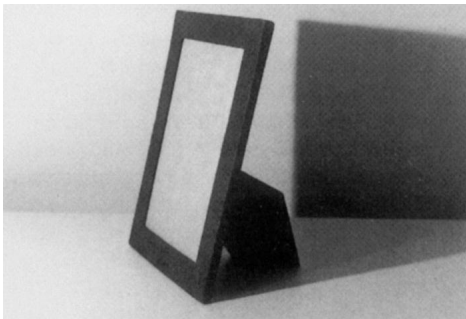
Fig 69 Large photo frame.

Reasonably simple construction, comprising an outer frame unit – silk-covered backing panel covered by rexine-covered frame unit; and a backing panel – single sheet of rexine-covered card with a folding support leg attached.
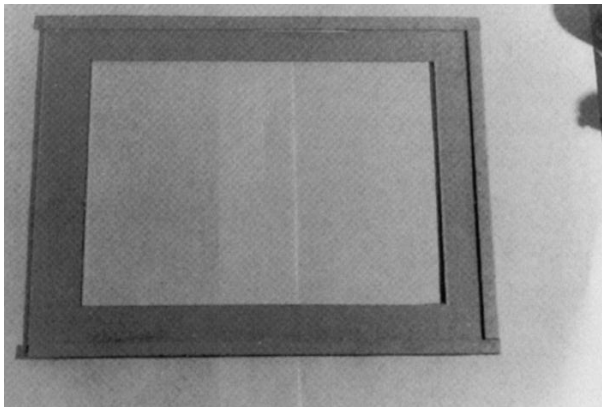
*Fig 70 **Large photo frame**. Strips of card bonded onto main panel.*

MATERIALS

- 1.5mm ($^1/_{16}$in) thick card.
- 2mm ($^3/_{32}$in) thick card.
- Rexine or thin leather (skiver).
- Silk.
- Small length of 30mm ($1^3/_{16}$in)-wide ribbon (colour to match chosen colour for backing panel).

TOOLS

As for the triple photo frame.

OUTER FRAME UNIT

1. From the 1.5mm ($^1/_{16}$in) thick card cut: one piece 242×190mm (9½×7½in); three strips, 7mm (¼in) wide, two of these 242mm (9½in) long, and one 190mm (7½in) long.

2. From the rectangular piece, cut out a central rectangle to leave a four-sided frame with sides 26mm (1in) wide.

3. Stick the two long strips along each side edge, then trim the shorter and stick it along the bottom edge.

4. Cut a piece of rexine, 288×240mm (11⅜×9⁷/₁₆in). Stick the card onto the reverse side of this, equalizing the overlap at the sides, and allowing no more than 20mm (¾in) overlap at the top.

5. Trim out a rectangle within the central hole, allowing a rexine overlap of 17mm (1¹/₁₆in) all around the edges. Cut diagonal lines from the corners of this rectangle to the internal corners of the frame hole, then fold back and stick these overlaps, as described for the triple photo frame.
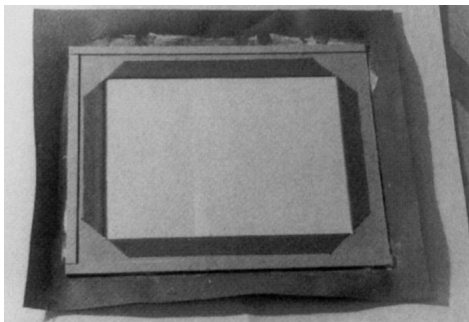
Fig 71 Rexine bonded to main panel and internal edges turned over and stuck down.

6. Fold down and stick the overlap at the top, using the bone folder to glue the material tight up against the corners of the cardboard strips. Do not trim off the corners first, just turn the edge and stick it down flat as it is.

7. Cut a piece of 2mm (³/₃₂in) thick card, 242×190mm (9½×7½in). Then some silk, approximately 25mm (1in) larger than this all round (292×240mm/ 11½×9½in).
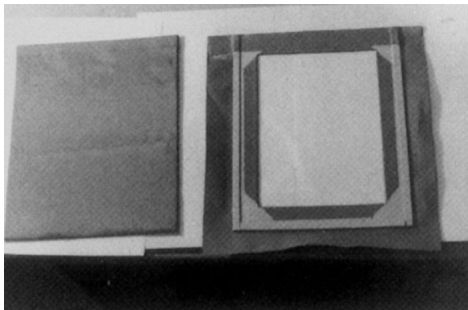
Fig 72 Large panel: rexine top edge stuck down (right).
Silk panel, with rexine bonded to top edge (left).

8. Place the silk onto a clean work surface, then the card on top. Trim off the silk corner overlaps to an angle, then paint the edges of the card with adhesive and lift up the silk overlap and stick it down on all four sides.

9. Tip the top edge of the silk panel with rexine by taking a piece of rexine, 190×44mm (7½×1¾in), and drawing a pen line on its reverse side, 19mm (¾in) from one long edge, and parallel to it. Paint the rexine's reverse side with glue, lay it (glue side upwards) on a clean work surface and then place the silk/card panel against it, the top edge against the 19mm (¾in) width line, allowing only the 19mm (¾in) width below to bond to the silk's surface. Fold the rexine back and stick it down onto the cardboard back of the silk-covered card panel.
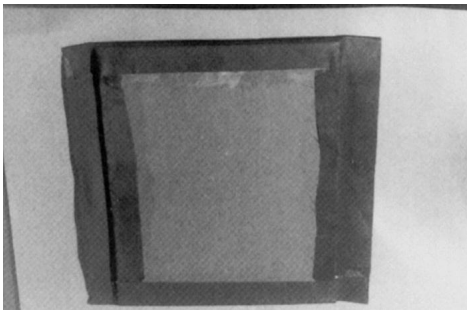
Fig 73 Main panel and silk panel in position to be bonded together by rexine overlaps.

10. Place the frame assembly on the work surface, top side down. Then put the silk panel on top (also top side down), lining up the cardboard edges. Apply adhesive to the rexine overlaps and the corresponding cardboard edges at the bottom and the sides. Do not trim the corners at all. Fold up the bottom rexine overlap and stick it against the back of the cardboard of the silk panel. Repeat procedure with the side rexine overlaps, folding and sticking these against the already bonded bottom rexine overlap.

Fig 74 Single photo frame construction. Diagram of pentagonal support (card).
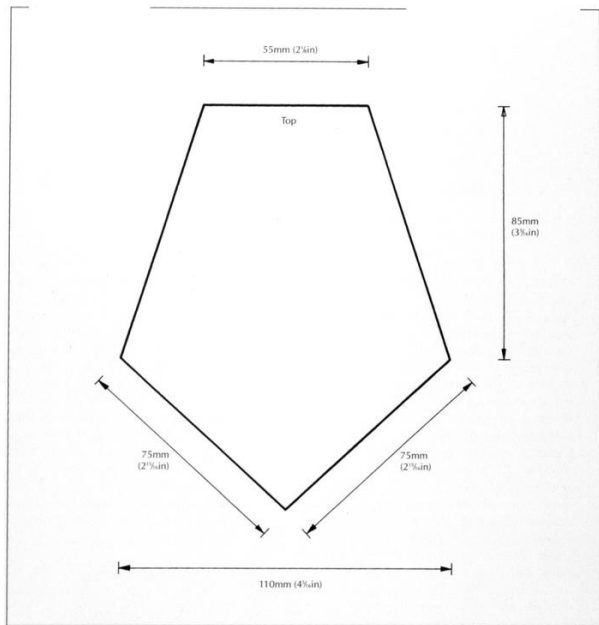
BACK PANEL AND FOLDING SUPPORT

1. From 2mm (^{3}/$_{32}$in) thick card, cut one piece 242×190mm (9½7½in). Cut some rexine 20mm (¾in) larger – 282×230mm (11⅛×9^1/$_{16}$in).
2. Stick the card onto the rexine, leaving an equal overlap around the edges. Cut the corner overlaps at an angle for the turnover

(as shown previously); the angled line should be 2mm ($^3/_{32}$in) away from the corner of the card, so as to allow for complete coverage of the corner.
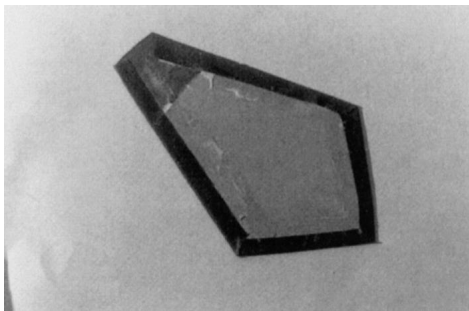

Fig 75 Rexine bonded and overlapped onto pentagon support to leave rexine hinge at the top.

3. Turn over the overlaps and stick them down, ensuring that the corners are covered completely.
4. Cut the pentagon-shaped support panel as shown, out of 2mm ($^3/_{32}$in) thick card. Then cut the two pieces of rexine.
5. Stick the card onto the larger piece of rexine, allowing for an overlap all around. Trim the rexine to allow a small (9mm/⅜in) overlap around four sides, but 20mm (¾in) overlap at the top (hinge) end. This extra length of rexine is to be left oversize in order for it to act as a hinge later.
6. Stick down the overlap. With corners of differing angles it is easiest to fold down the material either side and trim excess material away with scissors (see Chapter 2).
7. Cut a 100mm (4in) length of 30mm ($1^3/_{16}$in)-wide ribbon. Make a slit in the other piece of rexine in the position as shown in the photograph and insert 20mm (¾in) of the ribbon from the outside. Stick this end onto the rexine side of the rexine.

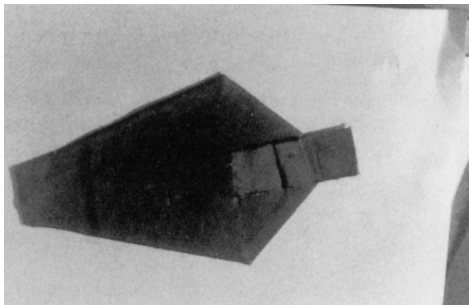*Fig 76 Ribbon attached to rexine panel of pentagon support.*

8. Stick the rexine and ribbon onto the back of the support to cover up any bare card and to overlap the turned-over edge of the other piece (as for retaining strap for triple folding frame).
9. Hold the support against the outside surface of the back panel with the right-angled sides lined up with the panel's bottom left-hand corner.
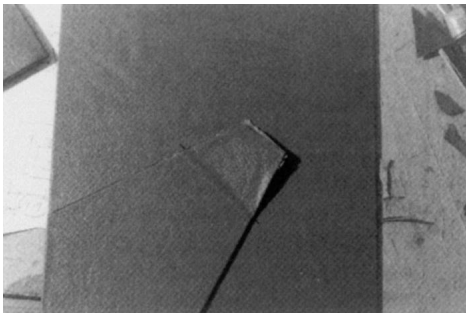
Fig 77 Marking back panel for making slit for support hinge entry.

10. Mark on the back panel the top of the support panel, where the top of the inner card ends. In the photograph, a pen mark was used for clarity, but do not mark the outside of the rexine with a pen like this (it is hard to remove). Instead, delineate the ends of the card within the support by puncturing the panel's surface with the scratch awl at each end.
11. Cut a slit between these two marked points, then insert the un-stiffened rexine that extends beyond the top end of the support (use the bone folder to open up the card slot and gain entry). Pull the loose material through until the support card's edge meets the panel. Fold the support flat against the panel to release sufficient slack for the hinge. Turn the panel over and stick down the loose material.
12. Open the support and mark a slit in the same relative position as the slit on the support out of which the trailing ribbon protrudes.
13. Cut this slit right through the panel, then push the unattached end of the ribbon through it and pull it up tight.
14. Open the support until 40mm (1⅝in) of taut ribbon is visible in the gap. Trim off the ribbon to leave 25mm (1in), and stick this down onto the cardboard of the back panel.

FINISHING OFF

Stick the back panel to the front frame assembly, making sure that the two firmly adhere all around the edges. It may be advisable to press the panels together under a heavy weight (uniformly applied) for a period. Trim some clear acetate to size and insert it from the top.

CARVING

Producing a three-dimensional design on leather's grain surface normally involves a combination of carving and stamping. The design is prepared as an original drawing, or selected from a book or magazine; subjects like leaves, flowers, trees and animals are often associated with leather, but anything is possible. Pictures made up of simple lines are easier, but representing animal fur or grass is quite straightforward once the skill of carving has been mastered. The chosen pattern is copied onto tracing paper, and is then transferred to the grain side of the leather. The lines are then carved with the swivel knife, and the remainder of the surface stamped with various tools in order to create different, but very specific effects. After this, some areas may be dyed, after which the whole surface is sealed to 'lock' the decoration permanently in place. Only vegetable-tanned leather, sold as suitable for tooling, can ever be carved and stamped successfully. Chrome-tanned leather is treated to repel water, and the essence of carving and stamping is to allow moisture to enter the fibres in order to allow these to become malleable.

Offcuts of tooling leather can sometimes be bought from leather dealers, and these are ideal for practice: practise on scrap pieces before tackling an actual project, as mistakes are inevitable. A piece approximately 150mm (6in) square is a convenient size to begin with.

CASING LEATHER

Casing (dampening) the leather allows the fibres to become spongy and malleable, and the correct amount of moisture is crucial to success. Use a damp (not dripping wet) sponge to wet the flesh-side evenly, then the grain side, of the leather. The surface will darken considerably, but will dry quickly. Once the original (dry) colour begins to return, the material is ready for carving or stamping. If it is too dry, carving will be difficult, but if it is too damp, the cut

surface will immediately close up – cuts should remain open. Experience will quickly allow the leatherworker to judge the optimum level of dampness for any particular operation.

Staining leather with water
Water that has been in contact with metal can cause irremovable stains on leather, so always store water for casing in a non-metallic container.

Never allow single spots of water to fall onto leather's dry, or only partially damp, grain surface, as permanent stains are likely to result when the spots dry out. If splashes occur, immediately wet the entire surface, thus matching the rest of the area to the spot's moisture content; only in this way will the spots be eradicated.

TRANSFERRING THE PATTERN

Having traced the design onto tracing paper, case the leather and place the tracing – right side up – over the damp grain surface. Fix it in place with masking tape (avoid sticking the tape to the leather surface – stick it on the table or board that is beneath the work). Go over the tracing with the pointed end of a stylus or similar blunt-pointed tool. Remove the tracing, lifting a corner first to check that no lines have been missed out. The lines will have been transferred clearly to the leather's surface.

Marring cased leather surface
Always have clean hands and do not allow dirt to contact the damp leather, otherwise the grime may be very difficult, sometimes impossible, to remove.

THE SWIVEL KNIFE

This is a sensitive, small device that is used in an entirely different way to either the clicker knife or the skiving knife. Whereas the

previous two are used in a precise, professional way, with exact and predictable results, the swivel knife is more a vehicle for artistic flair and manual dexterity. Correct control is the key to successful carving with this tool, and control is obtained by keeping contact with the leather surface with the little finger and side of the hand, exerting the right pressure from above, while at the same time rotating (swivelling) the barrel with the second and third fingers and thumb as necessary for twists and turns, and moving the tool across the leather's surface.

Blades are interchangeable, held in position in the barrel by a small screw. The regular blades are 12mm (½in), 9mm (⅜in) and 6mm (¼in) in width. Also available also are **angle** blades (a slight angle), **filigree** blades (a sharper angle, for cutting out background areas and fine detail in inaccessible areas), **hair** blade (for drawing hair on animals), and the **double-line** blade (for cutting parallel borders).

In addition to the blade, the swivel knife is made up of the yoke, which forms a cradle to support the index finger; the adjusting nut, which allows for height adjustment according to the size of the user's hand; and the barrel, which has a textured surface for easy grip between second and third fingers (one side) and thumb (the other side).

SHARPENING THE BLADE(S)

Sharpening of the blades is required regularly, and stropping is normally done repeatedly during use for optimum performance. Sharpen the blade on the oilstone (fine surface) using oil as usual, maintaining the blade line centrally, with the angles at approximately 30 degrees. Move the blade from side to side or forwards and backwards. When stropping, always pull the blade, maintaining the 30-degree angle, and never push.
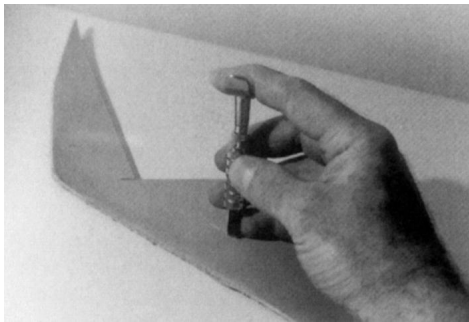
Fig 78 Holding the swivel knife.

HOLDING THE SWIVEL KNIFE

- Rest the index finger on the yoke, fractionally in front of the first joint, or wherever seems most comfortable.
- Place second and third fingers on the right side of the barrel (left side for left-handed people).
- Place the thumb opposite second and third fingers.
- Rest the fourth finger against the blade's side, and also on the leather surface, to act as a guide and pivot only.

CUTTING

With the knife tilted slightly forwards, but not tilting in the other plane to either right or left, and the front corner of the blade against the leather's surface, drag the knife towards the body. Try to get the feel of the tool so that it can be used in a similar manner to that employed by an artist sketching with a pencil. Since the hand covers the area of the cut, the field has to be viewed from the left side (right side for left-handers), and good light is important. Practise many times until the tool feels natural and slides easily through the leather. Always use the other hand to manipulate the leather as the cut progresses. Pressure on the yoke from the index

finger controls the depth of the cut, which should be approximately half the thickness of the leather.

> **Undercutting**
> This fault is caused when the knife is tilted to right or left, allowing the blade to cut at an angle, which mars the design's appearance and makes subsequent stamping difficult. Also, an unsightly lip is formed to one side of the undercut. Make it a habit always to maintain the flat of the blade at a perpendicular angle to the work, even though the knife is tipped forwards slightly in the other plane, so as to allow the corner of the blade to cut.

Cutting Curves and Circles
Having practised cutting straight lines, try curves, maintaining an even pressure on the yoke while at the same time rotating the barrel between fingers and thumb and altering the sweep of the hand and rotating the leather with the other hand. Try gentle curves and then progress to tighter and tighter curves, always aiming to maintain a constant depth. Circles are cut in two semicircles, as follows.

Top left-hand quarter:
1. Start at the top, with the blade at right angles to its usual position and the fourth finger against the edge of the blade instead of the flat, as well as against the leather's surface.
2. Tilt the blade (and the hand) to the right and begin cutting the curve on the left side, simultaneously rotating the barrel, as with curves, and gradually allowing the side of the fourth finger to transfer pressure from the edge to the side of the blade during the action, using this finger to maintain an even flow of cut. To maintain the angle of cut, gradually return the hand during cutting to an upright position by the time the first quarter is cut.

Bottom left-hand quarter:
3. Now begin to tilt the hand to the left while revolving the barrel and cutting, so that by the time the base point is reached, the hand is tilted to the left. Stop at the bottom of the curve, with the

fourth finger now against the edge of blade, as in Step 1.
Top right-hand quarter:
4. Start again at the top, joining the cut line at the first incision point. Hold knife as in Step 1, but this time tilt the blade to the left, fourth finger against the upraised heel of the blade. Continue down half-way, eventually resting the fourth finger against the side of the blade, as above.
Bottom right-hand quarter:
5. Cut the remainder, rotating the hand as before and intersecting the other line at the base. As before, maintain contact between the side of the fourth finger, blade and leather all the time.

If you are left-handed, follow the procedure above, but cut top to bottom on the right side first, blade tilted to the left. Conclude by cutting the left-side semicircle.

Decorative Cuts
Normally done after all carving and stamping has been completed, these are created in a similar way to circles and curves, the difference being that after the initial incision the cuts turn sharply, diminishing in depth progressively so that the end of the cut is extraordinarily faint.
　　They are usually done in a series, each successively shorter than its neighbour. The aim is to produce a number of lines that, if continued beyond their end point, would actually culminate at the same hypothetical centre.

Scrolls
The scroll is normally begun in the centre, and the cut becomes progressively shallower towards the end, when it is almost a hairline.

Dos and Don'ts
• Sit comfortably, at the correct height.
• Avoid undercutting – keep the cutting edge of the knife

blade at right angles to the work.
- Never go over a cut again; cut only once.
- Always cut towards the body.
- Strop the knife regularly during use to maintain cutting efficiency.
- Keep dampening the leather as soon as it dries out to sustain its optimum moisture content.
- Cut to approximately half the depth of the leather.
- For curves and circles, manipulate the work with the other hand. Use the tip of the fourth finger as a pivotal point against the leather, and also as a support for the blade. Learn to use it as a help and support for the second and third fingers and thumb as they swivel the barrel for curves.
- Keep the side of the fourth finger (and side of the hand) firmly in contact with the work surface to help maintain good control.
- Use strong lighting to counteract shadows that may be caused by the carver's hand.
- Change blades as and when appropriate (e.g. small angled blade for fine detail).
- Practise on scrap leather before working on an actual project.
- Aim for a smooth, flowing action rather than jerky stops and starts.
- Be careful not to 'overshoot' the line – if intersecting another line do not cut beyond it.

STAMPING

Stamping leather is totally different from either hammering a nail or chiselling wood, in that, more often than not, each leatherwork tool is struck many times as it is rapidly repositioned along the leather's surface in precise lines of movement, so as to establish rows of stamped marks as a continuous, seamless impression. Often, the stamping lines follow a previously carved line, and sometimes they are within a precisely delineated area. Each tool is selected for a specific effect. What is more, each tool can be categorized within a definite group (e.g. camouflage tools and bevellers), and there is a wide variety to choose from even within these broad groupings.

> **Moisture content of leather when stamping**
> Some stamping tools require damper conditions for success than others, and trial and error is the only method by which you can become accustomed to what is required in each case. If the leather is too damp to use 'background' tools, for instance, it will be impossible to eradicate the 'footprint' effect of the small tool, and the impressions will be like a bird's footprint in snow – separate impressions, not a unified, consistent pattern as it should be.

GENERAL GUIDELINES

- Practise on pieces of scrap to ascertain the likely results for each tool.
- Different kinds of tool within the broad bands vary widely, so only general rules apply.
- Leather is called 'spongy' when water oozes out as the surface is pushed. This is too wet, and it should be allowed to dry naturally, or exposed to gradual heat (from a hair-drier, for example) for a

short period, before work begins.

- When leather is too dry, the surface will not accept an impression at all. Carefully dampen it all over its surface with the sponge.
- If stamping impressions are initially acceptable, but the leather surface swells back to 'swallow up' former impressions, the leather is too wet.
- Tools that are especially temperamental as regards moisture content are: pear shaders, bevellers and background tools, all of which prefer slightly drier leather. Seeders like even drier surfaces for stamping.

USING THE HIDE HAMMER

The stamping tools are struck gently and rhythmically, and to do so successfully the hammer must be held in the fingers rather than in the palm, fairly loosely at the mid-point, using the fingers as a pivot, with an elbow on the work surface. Harder stamping requires the handle to be held more firmly, and further towards its end, the wrist acting as a pivot (elbow off the work surface). Rhythmic stamping is analogous to professional typing, in that a steady rhythm is essential for accuracy.

THE STAMPING TOOLS

All stamping tools should be held in the same way: fingers should be placed along one side of the textured shaft, with the thumb opposite them and in the most comfortable position for revolving the shaft as required. The side of the hand and the arm should rest on the work surface.

BASIC RULES

- Always hold the stamping tools upright, except when angling for specific effects.
- Strike once only for each desired position of impression.
- Never strike metal tools with a metal hammer – always use the hide mallet

- Hold the hammer loosely in the fingers (not in the palm), around the centre of its handle.
- Let the fingers act as a pivot for normal hammering.
- Let the wrist act as a pivot for heavy (occasional) hammering.
- Try to establish a rhythm.
- Stamp impressions away from the body, not towards it: this allows better visibility.

Each tool is designed for a specific purpose, and the different categories of tools are always used in the same order. Within these broad fields, a wide choice of sizes is available.

Order of using stamping tools

1. Camouflage tools.
2. Shaders (i.e. pear shaders).
3. Bevellers.
4. Veiners.
5. Seeders.
6. Background tools.

CAMOUFLAGE TOOLS (CAMS)

Description
Half-moon shaped, rounded serrated face sloping down towards heel (mid-point of outer circumference). Two sharp corners at the front edges.

Applications
To texture certain areas, make border designs, decorate scrolls, make flower centres, decorate petals.
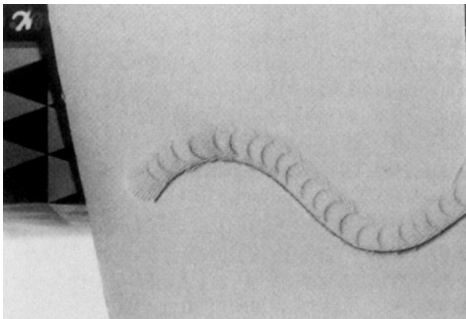
Fig 79 Use of camouflage tool to decorate and accentuate a flowing pattern.

Ways of Using

Left and right corner impressions are achieved by tilting the tool sideways in the relevant direction. Hold tool tightly before striking it with the mallet. Teeth impressions on the side tilted away from the favoured direction should progressively fade in prominence. It is useful for stamping areas which vary in width: use only part of the tool when a leaf stem or branch narrows, and tilt less and less as the width broadens out. It is also useful to accentuate contours and flow patterns, when the tool is leaned to produce a heavier impression beside a curve.

A **full impression** is achieved by holding the tool upright in the usual way.

A **heel impression** is achieved by tilting the tool backwards onto its heel, so as to avoid sharp corner imprints. Amongst other things, flower petals and flower stems can be made in this way. Do not strike tool too sharply.

Curves
To create life-like curves with the camouflage tool: when following the edge of the cut line fractionally rotate the tool for each impression in order to make the serrations parallel to the flow of the main curve line.
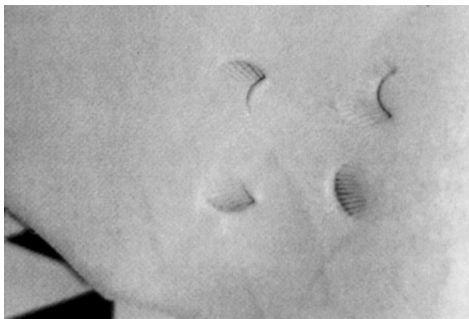

Fig 80 Camouflage impressions: (top left) *right tilt;* (bottom left) *left tilt;* (top right) *full impression;* (bottom right) *heel impression.*

PEAR SHADERS

Description
Pear-shaped. Various sizes. Smooth-surfaced for most applications, but they can also be lined, ribbed or checked. The toe is the broader end, the heel the narrower. Rounded face, with no sharp edges.

Applications
To give shape and texture to a design by depressing certain areas, thus shading or contouring parts that have been outlined by the carved lines. The pear shader burnishes the leather to a darker, contrasting colour from the rest. Useful for flower petals and also

sometimes for backgrounds.

Ways of Using
Tilt towards the toe (wide part) for shading small rounded areas too short for using the full length of the tool. Tilt towards the heel (narrow part) for shading small and pointed areas otherwise too cramped for using the tool in the normal way. When a wider area needs shading, turn the shaft to create a wider shading surface.
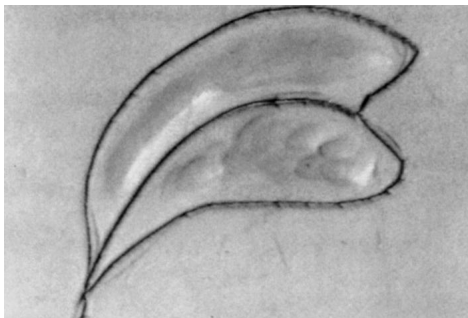

Fig 81 Using pear shader: (top) correct; (bottom) incorrect.

Walking the Pear Shader
Because the tool is intended for smoothly shaping and moulding the leather surface, the idea is for each successive strike to merge with the next, eradicating separate impressions and blending all into a smooth, uniform depression. To successfully achieve this, the knack of 'walking' the shader has to be mastered.

Strike the shader and at the moment it recoils after the blow, move it fractionally along the line, then repeat the process. Aim to blend the hitting and moving into one smooth process so that the impression is not one of a series of delineated separate marks. Decrease the strength of mallet blows towards the end of the

shading so as to fade out the effect gradually. Deepest shading should be at the outer edge of the design, fading to shallower shading towards the interior.

BEVELLERS

Description
The wedge-shaped head slopes backwards from the front (toe, or bevelling edge) to the back, or heel. The most common type is smooth-faced, with no sharp edges, but bevellers are also available with checked, lined and diagonal-lined surfaces, as well as with a pointed or triangular-shaped toe, and in many sizes. The front part of the head, parallel with the shaft, is the face.

Applications
To bevel down one side of a swivel-knife cut, so that the shape of the design stands out markedly from the background. The tool effectively crushes down one side of the cut leather at a 45-degree angle, creating the illusion that the other (non-sloping) line of the cut – the surround to the carved shape – is raised higher than the background. It also erases the effects of any camouflage-tool impressions that may have accidentally strayed over the line.

Ways of Using
The tool should be held upright, with the sharpest edge (toe) inserted into the cut, the heel next to the background areas and the face against the cut-line. The face should also be directed towards the leather-worker's body, and the leather turned to keep the tool in this position. Hit less hard towards the end of the cuts so that the effect fades as the cut grows shallower. As with the pear shader, the tool has to be 'walked', so that the smoothness and continuity of impressions give a blended rather than disjointed overall effect. Bevel the parts of the design that are closest (on top) first.
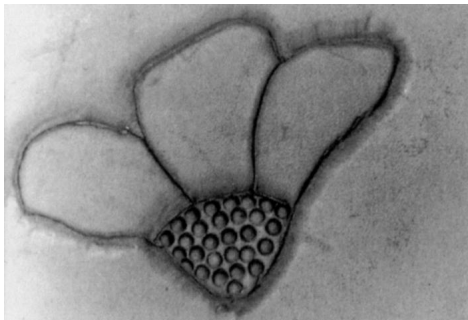
Fig 82 Bevelling: (right) *correct;* (left) *incorrect.*

Which Side to Bevel the Leather?
Decide which areas are to appear raised, then bevel the adjacent lines, leaving the external lines of the object (for instance a leaf) at 90 degrees.

It is not a hard and fast rule that only one side of the cut is bevelled. For instance when a rope has to appear to change direction, bevelling might be done on both sides of the same line at different points. In certain cases both sides of the cut-line are bevelled.

Bevelling in the scroll
- Begin in the centre, hammering lightly.
- Gradually increase the strength of hammering until nearing the end of the cut.
- Decrease the force of hammering as the cut becomes shallower and continue fractionally beyond the end of the cut.

VEINERS

Description
Half-moon shaped with sharp corners. The surface of veiners can be smooth, serrated or lined. Their shape can be scalloped, lined or wriggled.

Applications
Principally used for adding veins to leaves, but also for decorating scrolls and many other background effects.
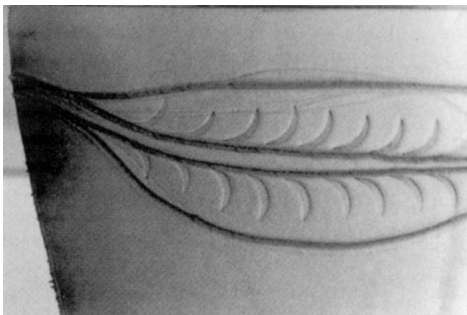
Fig 83 Veining along a leaf.

Ways of Using
For leaf veining, aim to angle the tool towards the tip of the leaf, rather than at right angles to the central rib of the leaf. The size of an impression can be controlled by the angle at which the tool is held, so the tool is most often held at a slight angle; completely up-right impressions are rarely used when veining leaves, and the length of impression varies according to leaf width. Only the tip of the tool is used in small hard-to-reach areas.

SEEDERS

Description
Usually circular to represent seedpods in a flower centre. The surface may be smooth, serrated (narrow), serrated (wide), pin-wheel, tri-seed and elongated. They are available in various sizes.

Applications
Principally for making seedpods in the centres of flowers, but also for decorative borders along the central rib of leaves, and for bush and foliage effects.

Ways of Using
The tool is normally held upright, but if only half an impression is required the tool should be held at a sharp angle to achieve this.

Take care not to strike the tool too hard, as the sharpness and small diameter can cause the tool to cut right through the leather completely. Practise on a scrap piece to find the correct force to use.

BACKGROUNDERS

Description
Small head, with sharply stippled surface teeth. There are various shapes and sizes, but the most generally useful is small and pointed at one end for reaching inaccessible areas.

Fig 84 Using backgrounder tools: (right) *correct;* (left) *incorrect*

Applications
To be used after all other stamping and carving operations in order to push down the background and impart an attractively stippled finish to these less important areas so that the main parts of the design stand out more effectively.

Ways of Using
The backgrounder is usually held upright, but when it is necessary to reach an inaccessible corner the tool may be tilted towards the point. Uniformity of depth of impression is important, and this is controlled by the force of hammer blows. It must be 'walked', as with the pear shader, but it is important to revolve the shaft at the same time so as to prevent impressions of the shape of the tool's head from being noticeable. The tool can be walked sideways to cover a broad area.

MODELLERS

Description
Otherwise called a stylus, with an angle-pointed (stylus) end and

various types of shaped end (often spoon shapes) at the other.

Applications
For transferring traced designs onto the surface of cased leather, prior to carving a design (stylus). Shaping intricate parts of a pattern, e.g. an animal's eye, bark on a tree, and so on (spoon). Smoothing out bad areas of bevelling and overlapping border-line tool marks.

Other Types of Stamping Tool
Stops
Serrated or smooth. Very small. Used to terminate a line on a design and for creating different effects.
Mulefoot
U-shaped stamps of various sizes and designs.
Decorative-cut stamps
These can be easier to use than the swivel knife.
Basket and geometrical stamps
For various pattern effects.
Border tools
Many designs to delineate and decorate borders (e.g. rope tool).
Flowers and leaves
Various styles and types.

THONGING

Otherwise known as lacing, this is a decorative means of joining together panels of <u>leather</u> when assembling a project. Normally unsuitable for thinner leathers, it is usually used for thick tooling leathers, for making handbags or sometimes belts, moccasins, or anything that will benefit from an attractive edge binding of plaited <u>leather</u>, often of a contrasting <u>leather</u> colour.

Thong, or lace, is normally sold as a continuous piece of <u>leather</u> of flat profile (*see* <u>Chapter 1</u> for colours and sizes), but can also be round or square. Single-length thongs might be suitable for very small projects, but for assembling a handbag a continuous reel is required, lengths of which are used and joined as required. A dark colour contrasts well with light-coloured <u>leather</u>.

In most cases, the edges of the adjoining <u>leather</u> panels are completely concealed by the thonging, eliminating the need to dye <u>leather</u> edges, but in others (whip stitch, buckstitch and the running stitch) the <u>leather</u> edges can be seen, and therefore need to be dyed in the usual way.

Thonging is always done after all carving, staining and sealing has been completed: it would be very difficult to treat a <u>leather</u> surface that is partially concealed by the thonging <u>leather</u>.

THONGING TOOLS

Clam
Just as for hand stitching, the two panels need to be held together allowing both hands to be free, and the clam is normally adequate. Anyone wishing to do a great deal of thonging may wish to use a **lacing pony**, which has a floor support, and whose jaws are made to open wider than the clam; these jaws do not rely on the tension of sprung timber to grip, for their jaws are manually adjusted. A **stitching horse** combines a bench-type seat with a foot-powered means of adjusting the jaws' tension.

Thonging Chisels
These have wedge-shaped teeth (1, 3, 4, 6 or 8), spaced at equal intervals. A single thonging chisel is used to go around corners. Angled thong chisels are also available, and their teeth are angled at 45 degrees for specific thonging effects.

Hole-punches
These make circular holes at specified intervals, in the same way as the thonging chisels, except that the holes are circular instead of flat.

Punch-pliers
These can be used to make circular holes, but the intervals have to be pre-marked, using a marking wheel.

AUXILIARY TOOLS

Rawhide Mallet
This is used for hammering the chisels, and punches.

Stylus
As well as being useful for tracing designs from tracing paper onto the wet [leather](), the pointed end of the stylus is invaluable for inserting under a thonging loop to disassemble or loosen a thread.

Pliers
These may occasionally be required for pulling a recalcitrant needle through holes that are not precisely aligned.

Lacing fid
This is a hand tool for enlarging holes when necessary.

Dividers or Adjustable Creaser
Either one of these can be used for marking.

Wooden Support
It is essential to place a wooden support beneath the leather to be

punched. The support must be of firm but soft wood so that on penetrating the leather completely the sharp punching chisels can enter a receptive, non-blunting bed.

Needles
These should be two-pronged needles or those with an internal screw thread, as described in Chapter 1.

PUNCHING HOLES

Using thonging chisels or hole-punches:
1. Cut off all sharp right-angle corners, so as to form a more gentle (45-degree) angle; this makes thonging around corners easier.
2. Use dividers or a cold adjustable creaser to mark a line 3mm (⅛in) in from the edges of the panel.
3. Place the panel on a soft wooden support block, then use the single punch to make the first holes in the corners; these will be at a slant, 3mm (⅛in) in from the angled edge. Hold the punch upright and strike it firmly with the mallet, so that the chisel cuts right through the leather's thickness and out the other side.
4. Continue punching around the project with the multi-pronged chisel, placing the beginning end of the chisel in the final hole of the previously punched row, in order to maintain the correct gap. Where the chisel approaches a corner hole to leave a final, uneven gap, punch the final group of holes with the single prong chisel, estimating an even gap between holes: one uneven gap will always be noticed after final assembly is complete, but several slightly different gaps will not be detected.

REVOLVING PUNCH-PLIERS

Proceed as Steps 1 and 2 above, then mark holes along the line, using dividers set to a suitable gap and 'walking' them along the line, or else by measuring and then marking incision sites with the point of a scratch awl. The smallest punch size available is most often the correct one for thonging. Note that round holes are unsuitable for the buckstitch: holes for this must be made with a thonging chisel with wedge-shaped teeth.

THREADING THE NEEDLE

Flat thonging is the kind most often used for constructional thonging. Techniques for threading the needle for round or square thonging are basically the same, with the proviso that one of the two types of needle is likely to be more suitable than the other for each of these.

THONG NEEDLE WITH JAWS

Serviceable needles should always snap tightly shut on their own, otherwise they will not grip the leather thong sufficiently tightly.

1. Cut approximately 1.5m (5ft) of thonging, or less than this if the project is small. Much longer lengths than this will be impractical to manipulate and will become frayed from repeated passage through the leather layers.
2. Skive from the flesh-side, starting at about 12mm (½in) from the end, thinning down in this direction.
3. Trim the skived end to a point, slicing an angle from each side.
4. Carefully snap open the needle's jaws. (Take care not to permanently bend the jaws, which would invalidate the deliberately designed tension in the metal, intended for grip.)
5. Insert the skived thonging end into the needle's jaws, with the grain (darker, shiny) side against the longer jaw (the one with the prongs attached to it) and allow the jaws to close.
6. Gently squeeze the jaws closed over the encased thong using pliers, then pull gently on the thong, to ensure that the angled prong(s) have pierced the grain side of the leather and are catching firmly.

NEEDLE WITH INTERNAL SCREW THREAD

1. Repeat Steps 1, 2 and 3 as above, but in Step 3 trim the leather to a noticeably sharp point.
2. Insert the pointed end into the threaded hole in the needle end, then rotate the needle clockwise, at the same time gently pushing the thread into the hole.

3. Continue rotating the needle for as long as possible, until it will not turn any more.

Occasionally you may think that the needle has been threaded correctly, only to find it does not catch sufficiently tightly and pulls off as soon as resistance occurs. The reason is that the needle has not been wound tightly enough onto the leather.

At first it is surprising to discover how far it is possible to wind the needle onto the thread before resistance is felt. When properly attached, the needle's grip is incredibly secure. Analogous to a screw's thread gripping in timber, the needle must be revolved far enough onto the lace (thonging) until it grips firmly, and will not wind any more, firm resistance being felt. If the needle will not grip in this way, unscrew the needle, trim off the end of the thong, re-skive it and start again. Normally it is a quick and simple operation.

- Take care not to tear off the thonging from the internal screw thread needle, as dislodging the piece caught in the thread can be difficult: probing cautiously with a pin is the best way if this should happen. To remove the needle simply grip the thonging and twist the needle anticlockwise.

RULES FOR THONGING

- Position the work in the clam or lacing pony, with the front side of the project facing the lacer.
- Work from left to right if right-handed. Left-handed people may find right to left easier.
- Pay careful attention to which side the grain (shiny side) of the leather thonging should be in any specific instruction: it is easy to rotate the needle by mistake during thonging, even to turn it twice. This problem can be overcome by running the full length of the flat thread through the fingers to the needle end (smoothing it out) before each new insertion in the leather.
- It can be helpful to use the stylus or lacing fid to enlarge all holes

before inserting the needle – the chisels may pierce the leather, but not necessarily sufficiently well to accommodate the needle's girth.
- Go slowly until the relevant stitch type is mastered. Very soon the sequence will become automatic.
- If in doubt about which stitch to use, test out several on scrap pieces of leather first before deciding.
- Thonging lightweight leathers may cause the edges to curl upwards if the thonging is pulled up too tightly, thus squeezing the material. Take care to keep the leather flat at the edges during the process.
- At the conclusion of thonging, tap the threaded areas with a hide mallet to smooth out any uneven spots.

WHIP STITCH

This is a straightforward, partially edge-covering stitch, suited to application to one or two thicknesses of leather. Ideal for thinner tooling leathers.

1. Thread the needle and cut a slit in the end of the thong, approximately 6mm (¼in) long, and parallel with its length.
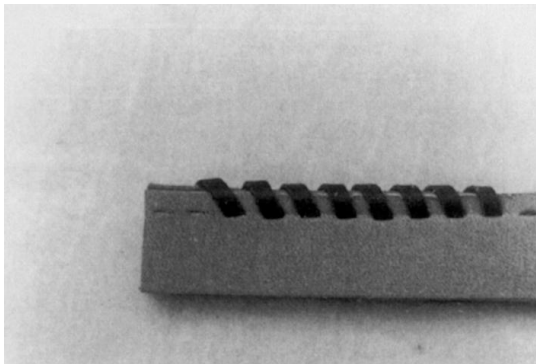
Fig 85 Whip stitch.

2. Open up the two leather panels, then insert the needle into the back panel and pull the thong through until all but 12mm (½in) is protruding. The flesh-side of this tail end of lacing should be uppermost.
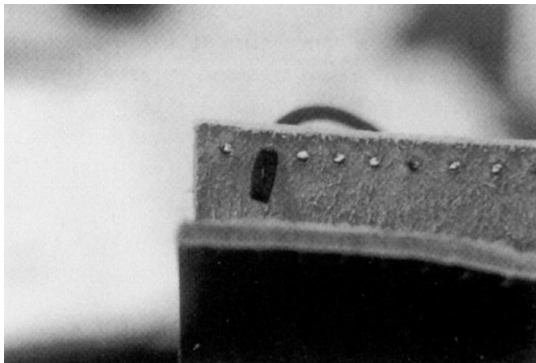
*Fig 86 **Whip stitch**. Tail end of thonging has slit cut in it, parallel to its length.*

3. Insert the needle into the second hole (one space to the right) of the front panel, then pass it through the slit in the thong end, then through the opposite hole in the back panel. Ensure that the flesh-side of the thong is uppermost as the needle enters the front panel, and that there are no twists in the thong.
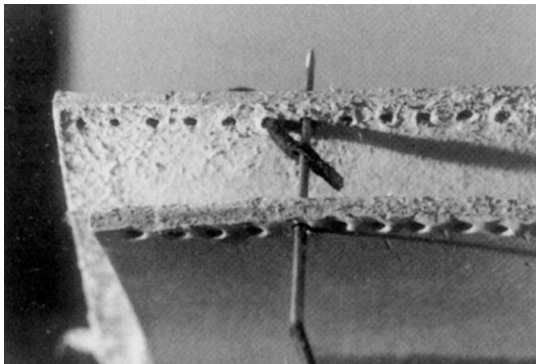
Fig 87 Passing needle through slit in thong and out through the back panel.

4. Pull the needle through the holes, then pull the stitch up tight. Insert the needle through both panels one space to the right and repeat the process for the remainder of the stitches. The stitching will be attractively slanted all the way along the edge.
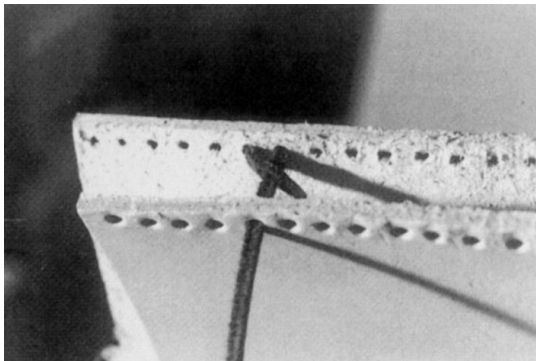
Fig 88 Pulling thread through holes.
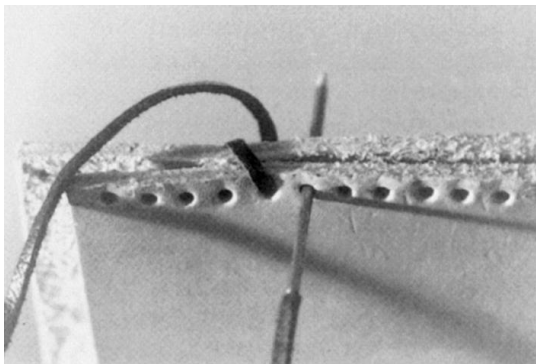
Fig 89 Pulling thread tight.

Finishing Off Neatly

1. Continue until there is only one unthonged hole in the front pan-
   el left before the initial stitch loop. Leave this penultimate stitch
   loop loose.
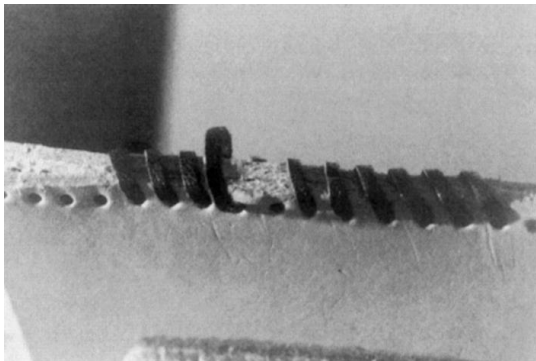
Fig 90 Penultimate stitch left loose.

2. Push the needle through the front panel, then prize apart the
   panels and angle the needle upwards so that it pokes up between
   the panels; then pass it under the loose loop.
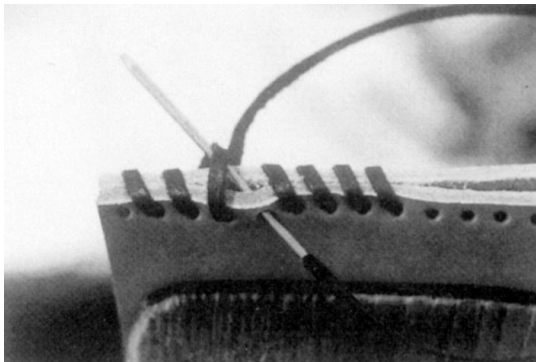
Fig 91 Finishing off.

3. Pull through the needle and thonging, then tighten the loops, if necessary using the stylus to manipulate the loops one at a time.
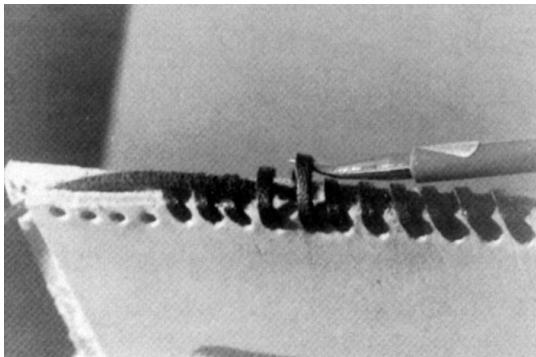
Fig 92 Tightening loops.

4. Cut off the lacing where it protrudes from between the leather panels.
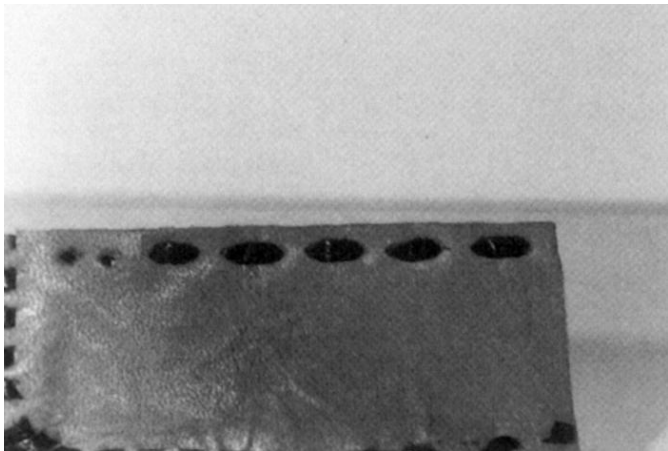
Fig 93 Running stitch.

RUNNING STITCH

The thong is visible as loops on either side of the assembled article, leather edges uncovered. The front side on the panel shows the grain side of the thong, while the back side shows the flesh face of the thonging. As with the whip stitch, this is more suited to thinner leathers than to thicker ones.
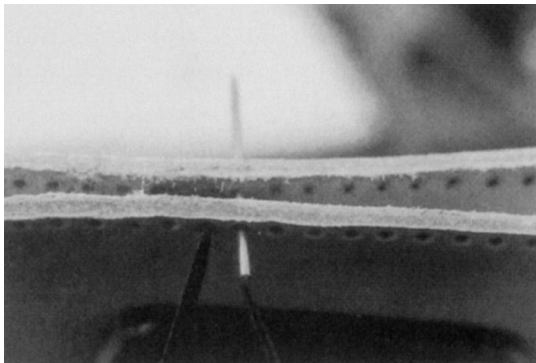
Fig 94 **Running stitch**. *Back side view of beginning of second stitch.*

1. Repeat Steps 1 and 2 for the whip stitch.
2. Open up the leather panels and insert the needle from the back into the adjacent hole (right) in the back panel. The thonging is being done sideways, as opposed to round and round as with the whip stitch; and the flesh-side of the thong must be uppermost in the loop on the back panel, in order for the grain side to be uppermost in ensuing front loops.
3. Pass the needle through the slit in the tail end of the thonging, then out through the opposite hole in the front panel. Pull stitch tight.
4. Insert the needle into the next right adjacent hole (from front) and pull stitch up tight, ensuring that the grain side of the thonging is uppermost. Continue lacing until only one hole is unoccupied, and leave this penultimate loop loose.
5. Insert the needle through the final hole of both leather panels, from the front. Pull up the thong, leaving another loose loop.
6. Insert needle from the back into the previous hole, alongside the thonging already present. Prize panels apart and angle needle

upwards to exit between the panels.
7. Pull needle through leathers and tighten up all loose loops.
8. Trim away excess thonging.

Fig 95 Excess thonging to be trimmed off.

BUCKSTITCH
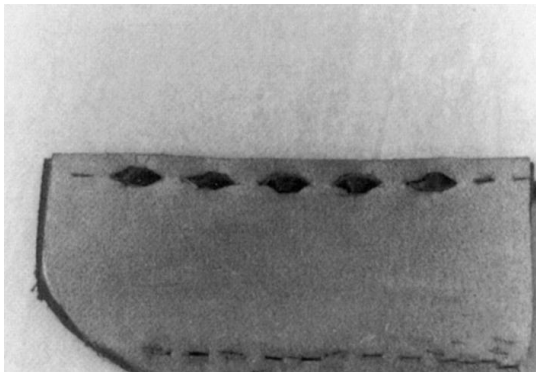
Fig 96 Buckstitch.

Similar to the running stitch, the buckstitch leaves an attractively twisted diamond-style loop visible, rather than a flat plane of leather; this twist is created because the holes are slits not circles, and they must be punched with a flat chisel, rather than with a circular-hole-punch or revolving hole-punch. Edges are unaffected, and this stitch is suitable for thinner leathers rather than thick.

1. Repeat Steps 1 and 2 as for the whip stitch, leaving a slitted thong end projecting between the panels.
2. Insert needle from the back of the back panel into left adjacent hole, and out through the opposite hole in the front panel. The flesh-side of the thong should be uppermost on the back panel side loop, and the grain side should be uppermost as the thong is pulled through both panels.
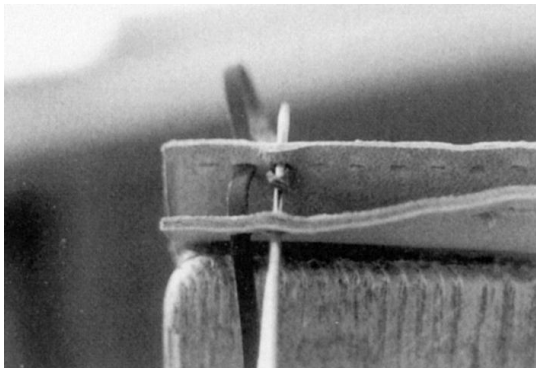
Fig 98 Second stitch, needle passing through slit in thong tab end. (For clarity, the first loop has not been pulled tight here.)

3. Pull loop tight. Insert needle from the front into the front panel through the right adjacent hole, then through the slit in the thong end and out through the opposite hole that is already occupied by thonging from Step 1. Pull stitch tight, ensuring that the grain side is uppermost on the front panel.
4. Re-enter needle from the back panel into the next right adjacent holes, turning it so that the grain side is also uppermost on back side loop, just as it is in the front side loop.
5. Continue around the project and through the final slit. Pass needle from the back into the previous hole (already occupied), part the leather panels, and push it up between the leathers, then pull all stitches tight. Trim away ends.

*Fig 97 **Buckstitch**. First stitch loop firom front.*
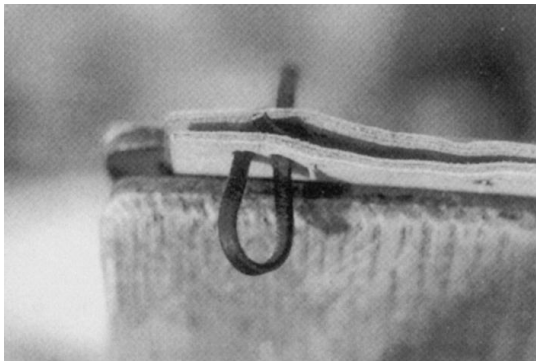
Fig 99 Third stitch: front view of needle entering from back.
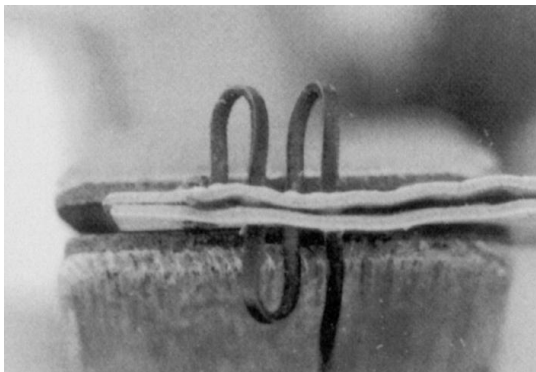
Fig 100 Loops of stitch.

SINGLE LOOP, DOUBLE LOOP AND TRIPLE LOOP

These forms of thonging completely cover the leather's edges. As their names imply, progressively thick layers of thong are possible to allow for varying thicknesses of joint: for instance single loop is fine for thin leathers, but would not be acceptable for heavier ones. For heavier leathers, or for joining more than two panels, considerably more thong area is required for adequate coverage. The three types can be 'stepped up' to double or triple, or stepped down to single, as appropriate, to accommodate different thicknesses of joint (one, two or three thicknesses of leather), all within the same project.
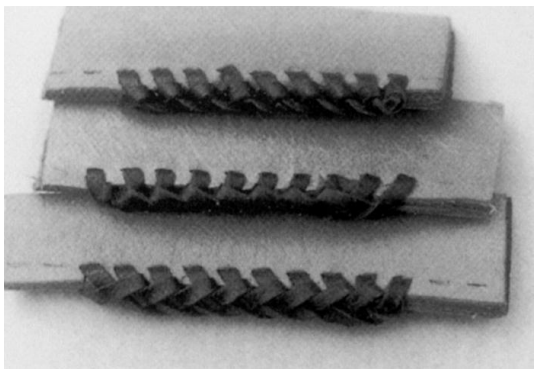
Fig 101 Single loop, double loop and triple loop stitches.

All three are similar in concept, in that the design is formed by threading through holes in the usual way, the difference being that for the double and triple the thonging passes under a progressively larger 'knot' (or 'bight'), in turn creating an accordingly larger finished pattern.

Note
For all these thonging stitches, it is usually necessary to join new lengths on to old, as considerable amounts of lacing are needed for a complete project: see splicing instructions below for method.

SINGLE LOOP STITCH

1. Insert needle from the front, leaving an end tab of about an inch sticking out. The flesh-side of this tab is uppermost.
2. Using non-needle hand (left if you are right-handed, right if you are left-handed), fold up the tab end of the thong, so that the grain side is facing the leatherworker, and in line with the facing panel. With the other hand, take the thong from behind the panels, and back to the front, to the right of the filled hole. Pass the thong around in front of the tab, then around the back, so that the tab is caught.
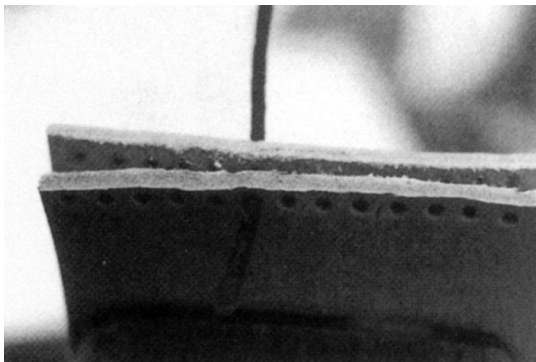
*Fig 102 **Single loop stitch.** First thong entry (front view) leaving tab.*

3. Bring the thong back to the front, then pass needle through the second hole. Ensure throughout Steps 2 and 3, that the grain side is uppermost at all times. Pull thread tight.
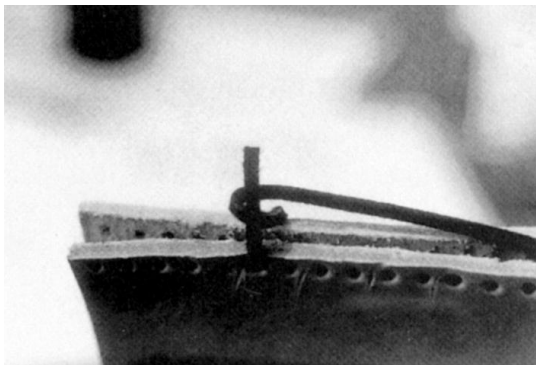
Fig 103 Catching tab end.

4. Bring needle around from the back to the front again, then pass it under the loop, just to the right of the caught tab. Note that the needle, as it passes under thonging, has the flesh-side of the leather uppermost so that when drawn up tight the grain side will be on top. Draw thread up, but not too tightly.
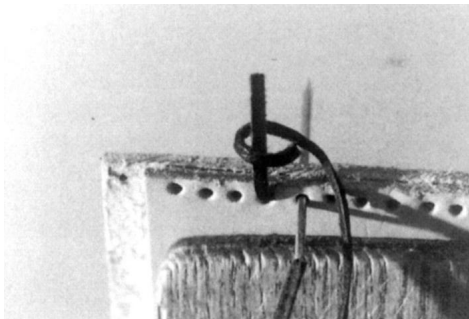
Fig 104 Second stitch.

5. Repeat Steps 3 and 4 around the project. Thong through corner holes three times.
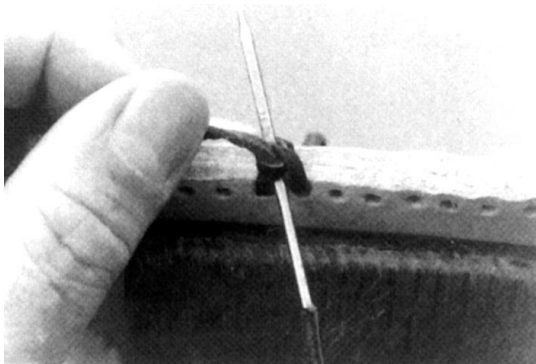
Fig 105 Passing needle under loop.

Twisting
If thonging accidentally becomes twisted while pulling it through work, twist it to the correct position on either side, close up to the project, and pull it backwards and forwards until it lies correctly. Even a double twist can normally be straightened out in this way.

Joining End to Start Point
1. When the final hole is filled, pass needle under the final edge loop in the usual way, to leave excess thonging. Use the stylus to prize tab of lace out of its captive loop. Push a nail through this initial loop so as to preserve it.
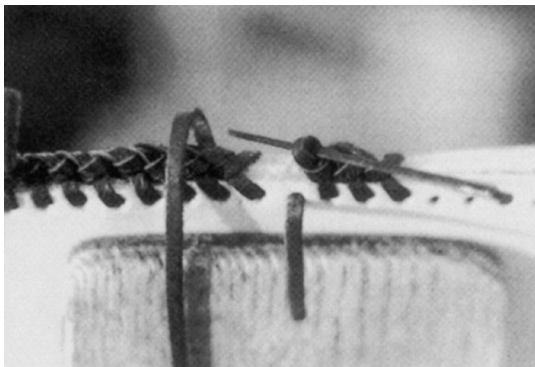
Fig 106 Joining end to start point. Loose tab pulled out of loop; loop preserved with spare needle.

2. Again using the stylus, pull the tab end from between the two layers, and then out from one of the layers and upwards so that it pokes out from between the layers.
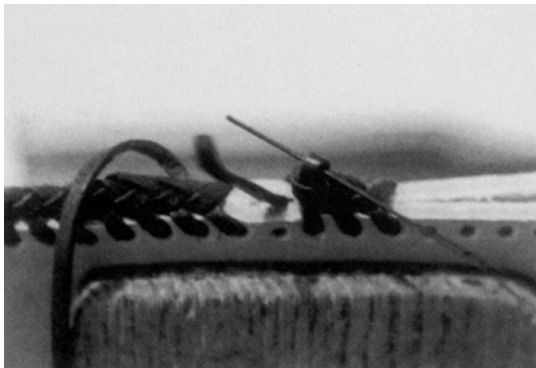
Fig 107 Joining end to start point. Tab end pulled from between layers.

3. Pass the needle down through this initial loop (after removing the loop-preserving nail).
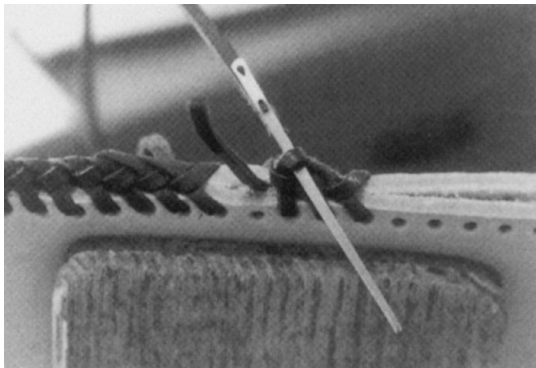
Fig 108 Joining end to start point. Passing needle down through initial loop.

4. Insert needle through the vacant hole in the front layer of the leather, then angle it upwards so it emerges between the layers. Ensure the grain side, not the flesh-side, of the thong is visible on the outer surface of the project at all times.
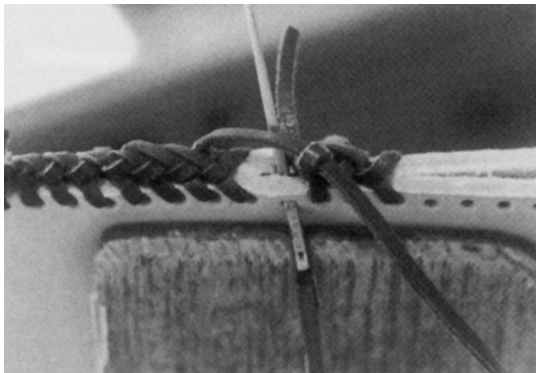
Fig 109 Joining end to start point. Inserting needle through front panel and up between leather panels.

5. Pull thong up between leathers.
6. Manipulate local stitches so as to even them out, using stylus and fingers as necessary.
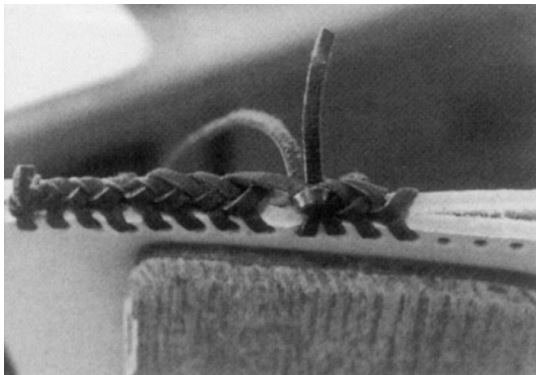
Fig 110 Joining end to start point. Thong pulled up between leathers.

7. Cut off the end of tab and excess length of thonging.

DOUBLE LOOP STITCH

Similar to the single loop stitch, the encircling thonging threads are passed under a slightly larger knot (bight), covering the edges with a consequently larger mass of thong material.
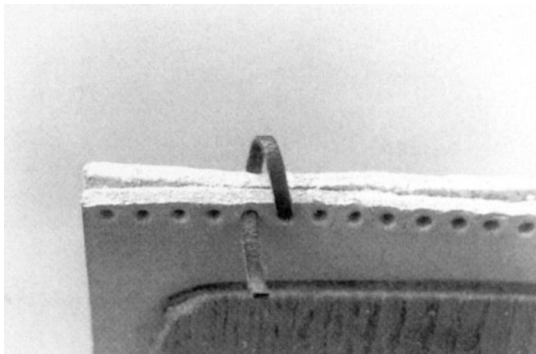
*Fig 111 **Double loop stitch.** Second stitch (front view).*

1. As in the single loop, insert needle through both panels from the front, leaving a 2.5cm (1in) tab projecting at the end. Then bring thonging back round to the front and pass it through the next hole to the right (both leathers), to form the first loop.
2. Push the end tab under this loop and pull tight, thus trapping it. This is the first bight.
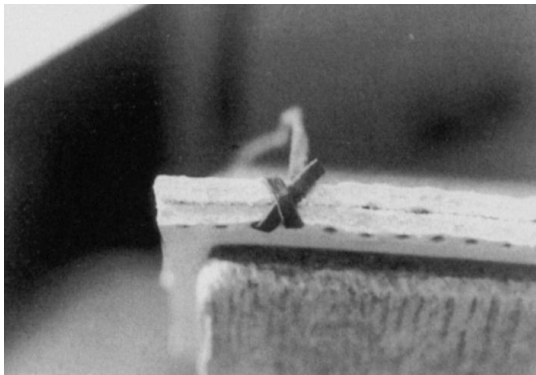
Fig 112 Forming first bight.

3. Hold down the end of thonging with a finger and bring thonging around from the back. Pass needle under this bight and pull up thonging – do not pull up too tightly.
4. Insert needle through the next hole, then under the bight, repeating the process around the project. Thong through corner holes three times.
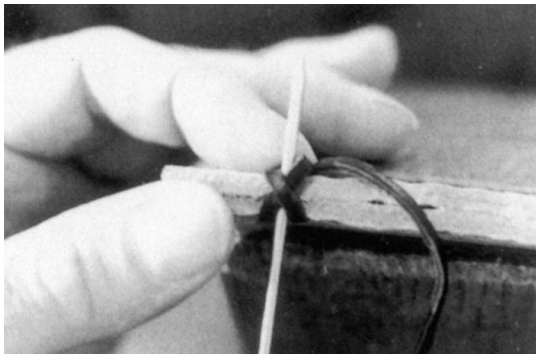
Fig 113 Passing needle under first bight.

5. Finish by filling final vacant hole, followed by threading under the bight as usual.

Joining End to Start Point

Stage 1 – removing tab end to vacate initial loop:
1. Using stylus, pull trapped tab end free from under the stitches.
2. Pull thong end through and out from the back side of the back panel.
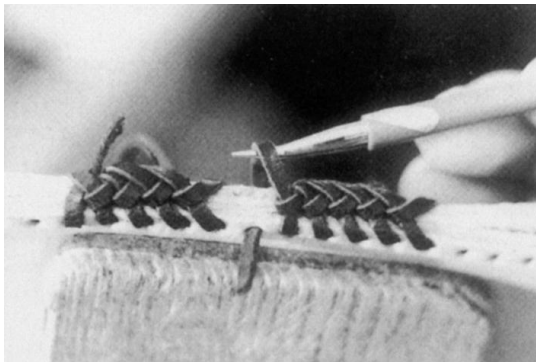
Fig 114 Joining end to start point. Pulling thong tab end out from back side of the back panel.

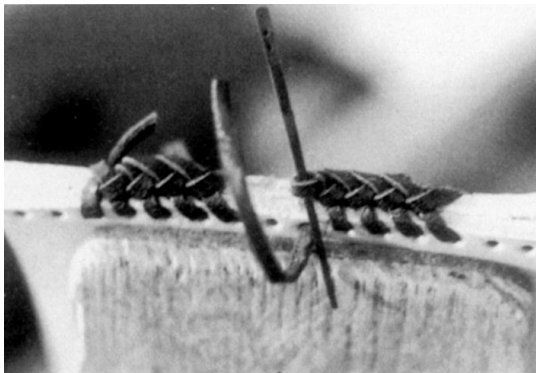3. Remove tab end from initial loop, replacing it with a nail or stylus to preserve the loop.

Fig 115 Joining end to start point. Preserving loop and pulling tab from between layers.

4. Part panels and fish tab end out from between them, pulling it out.

Stage 2 – marrying finish to start:
There will be two vacant holes on the front panel, one vacant hole on the back panel.

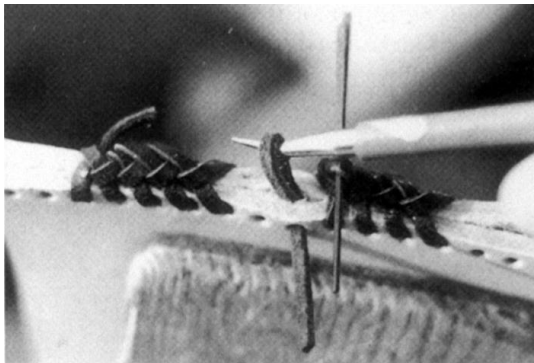1. Cut off the end of the tab thonging, and push tail back down between the panels.

Fig 116 Joining end to start point. Pulling thong from between leather panels.

2. Pass needle through the next hole and then under the bight in the usual way.
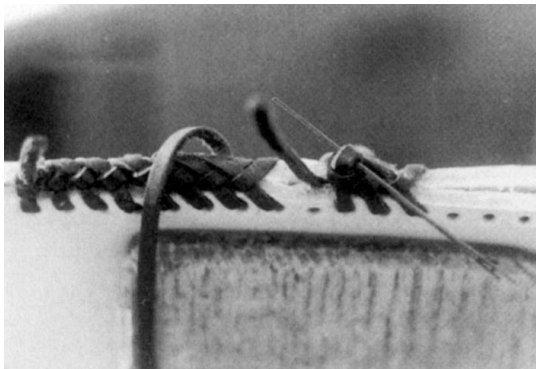
Fig 117 Joining end to start point. Filling penultimate hole and passing under bight (end of tab should be cut off, not left as in photo).

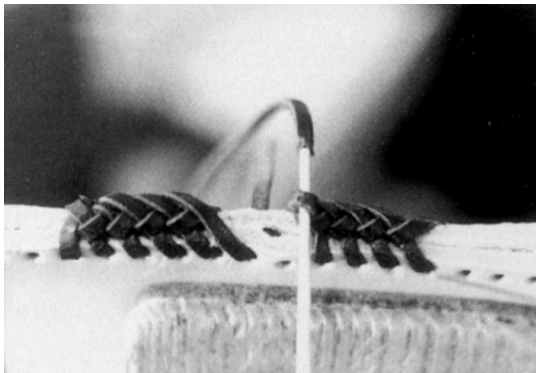3. From back, pass needle *up* through the recently vacated initial loop.

Fig 118 Joining end to start point. Needle passing from back up through the initial – now vacant – loop.

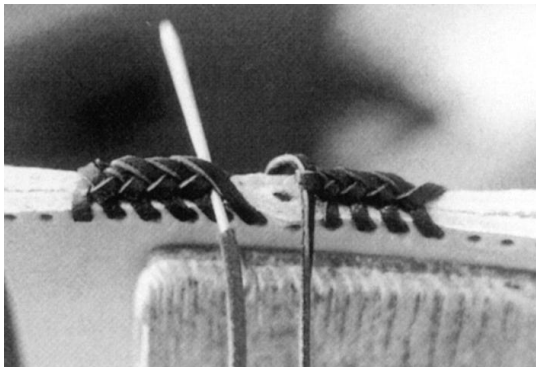4. Needle goes under last bight, not pulling stitch tight yet.

Fig 119 Needle going under bight.

5. Needle comes back from going under bight, then down through initial loop, alongside previous thonging thickness.
6. Pull up tight and adjust all stitches for evenness. It may be necessary to ease some of the thonging through using the stylus, when adjusting up slack is necessary.
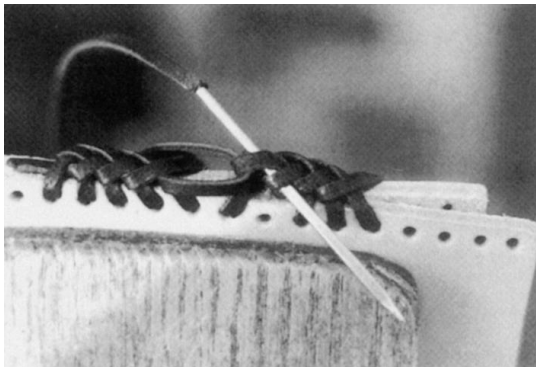
Fig 120 Joining end to start point. Needle going down through initial loop, beside previous thonging.

7. When the stitching looks even, put needle through the front panel, angling it upwards and between the leathers, and pull up thonging.
8. Cut off excess thonging.

TRIPLE LOOP STITCH

This is similar to the double loop stitch, except that the bight is somewhat larger, formed in the initial stages, when a stitch is stepped back deliberately.
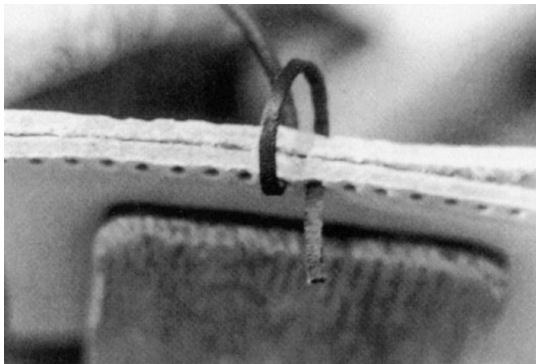
*Fig 121 **Triple loop stitch.** Starting the stitch. After leaving a tab, needle goes in from front, one hole to left.*

1. Begin in the usual way, front to back, leaving a tab. Then pull the thong round from the back and go in from the front one stitch to the *left.*
2. Trapping tab under bight, pass needle through next hole to the right, from front, and pull up.
3. Pass needle under bight. N.B. insert needle under bight from front panel, counting two stitches along. Needle emerges on the back panel, with only one stitch to its right. This principle of two stitches on the front panel, one on the back applies throughout all subsequent stitching for the triple loop stitch.
4. Continue in this way, thonging to the right. At corners, thong through holes three times. Continue to the start point, joining as necessary, leaving the final hole vacant.
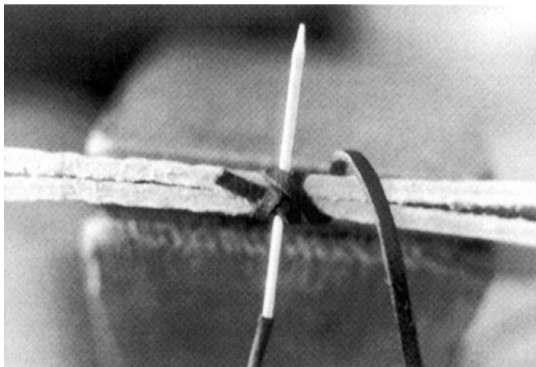
Fig 122 Passing needle under bight.

Joining End to Start Point
Stage 1 – removing tab end and establishing two vacant loops:
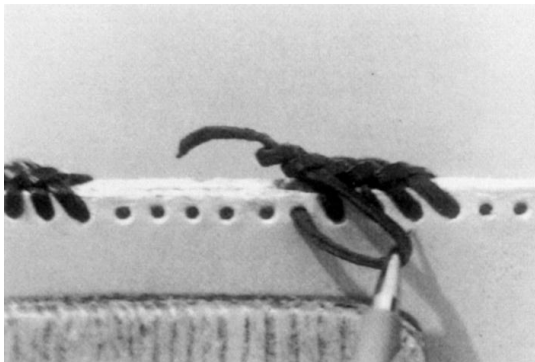
Fig 123 Joining end to start point. Pulling tab end from under bight.

1. Pull tab end from under first bight, from front panel, second hole.
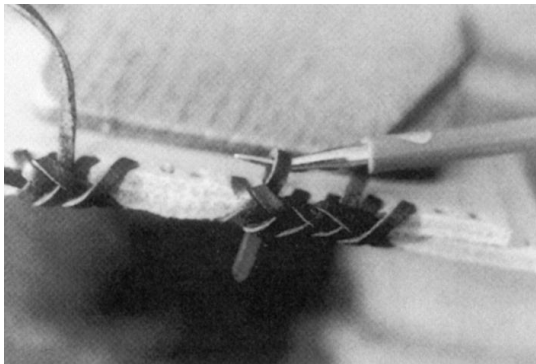
Fig 124 Joining end to start point. Pulling tab from back of project.

2. From back panel, pull tab out of the project (second hole along).
3. Pull tab out from under bight from front.
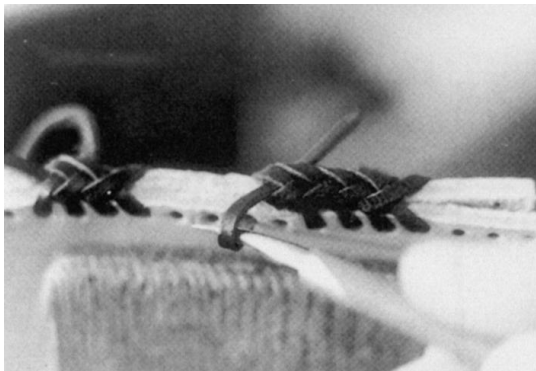
Fig 125 Joining end to start point. Pulling tab out from under bight, at front.

4. Withdraw tab from back panel.
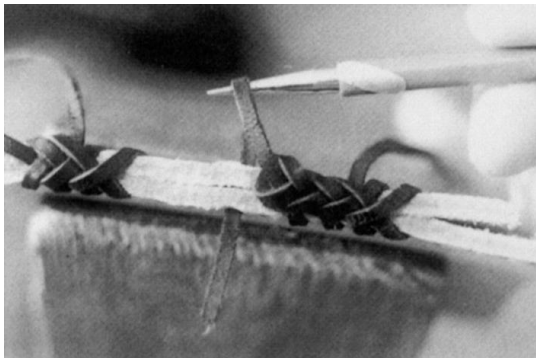
Fig 126 Joining end to start point. Withdrawing tab from back panel.

5. After prizing panels apart for access between them, pull thonging tab through the two loops from front, immediately inserting a nail or needle to preserve these.

Stage 2 – joining:
1. Open up panels, fish tab end out, pull it up between the leathers, trim it off, and push it back down and away.
2. Continue thonging until there are two vacant holes on the front panel, one vacant hole at the back.
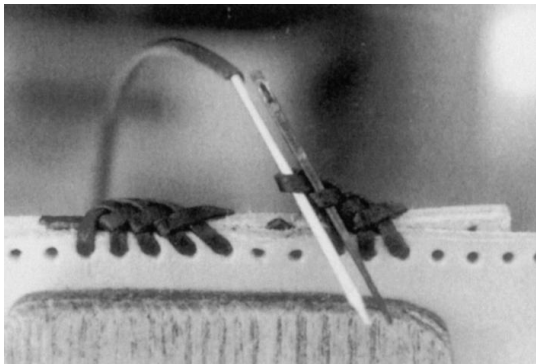
Fig 127 Joining end to start point. Stitching down through first loop.

3. After stitching under the bight, pass needle down through the first loop.
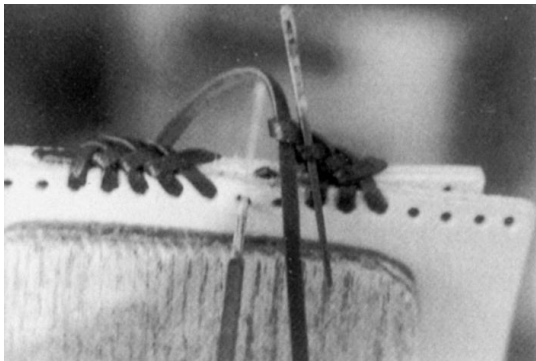
Fig 128 Joining end to start point. Needle going through second to last hole (front view).

4. Then through second loop to last hole (front to back).
5. Then up through first loop from back, adjacent to thonging already through this.
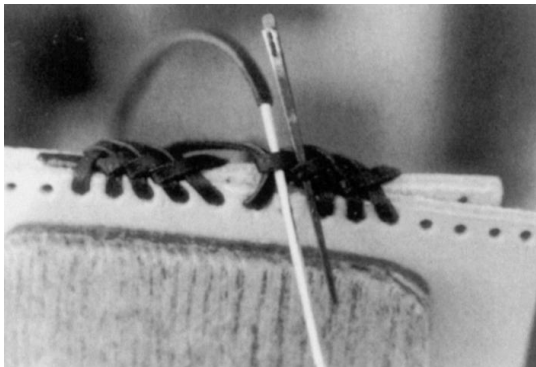
Fig 129 Joining end to start point. Needle going up through first loop (back view).

6. Push needle under bight, behind just one stitch at the front this time.
7. Then, from back, down through both loops.
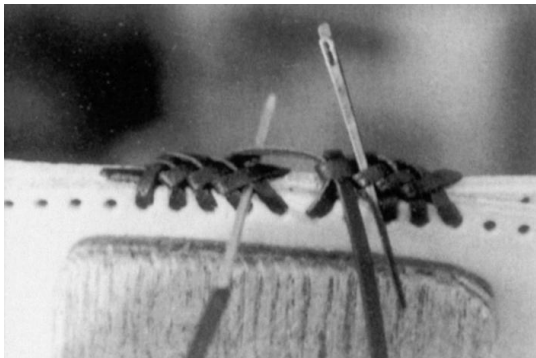
Fig 130 Joining end to start point. Needle going under bight.

8. Readjust stitching, pulling up loose stitches, and pulling up slack as necessary.
9. From front, insert needle through final hole (single panel only) then upwards and out between the two panels. Trim off waste.
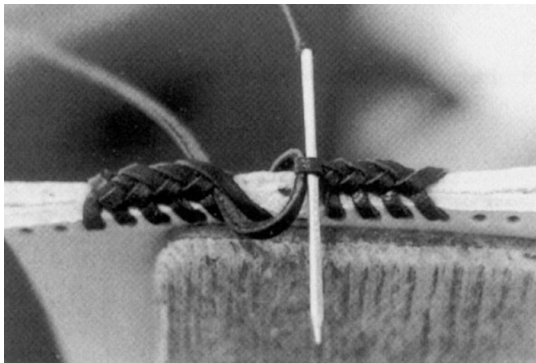
Fig 131 Joining end to start point. Needle coming from back down through the first loop. At this point the needle should be partially withdrawn and passed through the second loop as well.

SPLICING

The splicing of new lengths of thong to old is often required for single, double and triple loop stitching: the procedure is the same for all three:

1. Thong with the old length until it about 200mm (8in) long. Then open up the panels and insert the new length of thong in the back panel, from the inside, leaving a tail of about 2.5cm (1in) to push back along inside the leathers and out of the way.
2. Continue thonging in the usual way with old thong until the hole on the front panel that is one hole beyond the inhabited hole in the back panel is reached (old thonging alongside the new thonging that is already secured in place in the back panel).
3. Then thread through just the front panel of this hole, angling needle upwards. Pull up thread and cut off waste, leaving approximately 2.5cm (1in). Cut this tail off at an angle and push it down along between the panels, so it is trapped.

4. Continued thonging will automatically lock the end of the old thonging in place.

LIGHT LEATHER PROJECTS

KEY-CASE

This is a simple, straightforward project that can be completed fairly quickly. Of the light leather projects described in this chapter, it is the only one to be of cut-edge construction; the others are turned-over-edge.

It illustrates a useful technique for when sticking two leather panels together, flesh-side to flesh-side. Either cut one of the panels larger, stick them together, and trim the larger one to size afterwards. Or in some cases it can be advisable to cut both panels oversize, stick them, then use the pattern to cut through both thickness. This ensures a neat edge all round.

DESCRIPTION

Cut-edge construction. Press-stud closure; triple folding, incorporating small pocket.

MATERIALS

- Thick leather
- Thin leather.
- Two press-studs.
- Thread.
- Key-case fitting.
- Rivets.
- Paper and thick card for patterns.
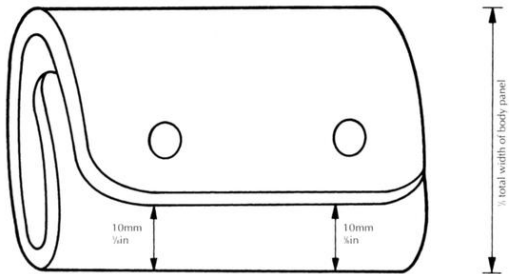
*Fig 132 **Key-case**. External view to show measurements.*

TOOLS

key
fitting
panel
1 LEA

90mm
(3⅟₂in)

50mm (2in)
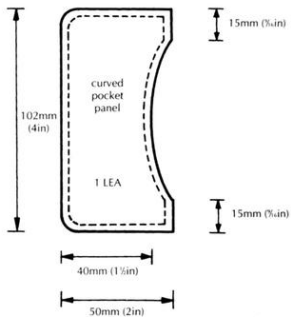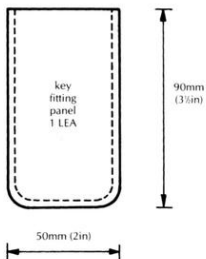
- - - - - edges to be stained & creased

curved
pocket
panel

1 LEA

15mm (⅝in)

102mm
(4in)

15mm (⅝in)

40mm (1⅟₂in)

50mm (2in)
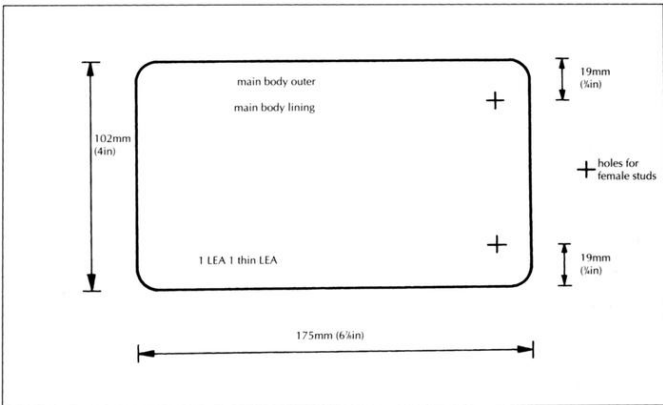
Fig 133 Cutting-patterns.

- Clicker knife.
- Stitching awl.
- Clam.
- Needles.
- 305mm (12in) ruler.
- Scratch awl.
- Pricking iron or stitch-marking wheel (eight or nine stitches to the inch).
- Tools for fitting press-studs and rivets (hammer or pliers type).
- Punch for making press-stud holes.

METHOD

1. Cut paper patterns, then card patterns. Then cut component parts, cutting the thin leather panel oversize.
2. Stick main section leather pieces together, flesh to flesh. Trim the oversize thin leather to the exact size of the thicker.

3. Using the main section pattern, mark through the press-stud position holes onto the main section (grain side). Remove pattern and punch these holes.

4. Fit the female press-stud parts, with receptor face on the thin (inside) leather surface.

5. Making a crease-line approximately a third of the way along panel, lift up left-hand edge of main body and press it down flat on to the remainder. Then fold the right-hand edge on top of this so that the newly positioned right-hand edge is 10mm (⅜in) away from the left edge of the folded case. Adjust the two folds to facilitate this.

6. Press hard on the back of the press-studs, so as to mark the lower leather surface with the indentation of the receptor face of the female press-studs.

7. Open up panel, punch a hole in the centre of the newly marked circles and fix male press-studs in place. Refold panel as in Step 5 and fasten press-studs to check that the overlapping edge looks straight. Open up the key-case.

8. Position key-case fitting on key-fob panel and mark positions for the rivets. Rivet fitting into place.

9. Stain and crease the edges of key-fob panel and curved pocket, as shown.

10. Scratch the grain surface of the leather where necessary and stick the curved pocket on the left side of the inner panel and the top edge of key-case fob panel in the centre.

11. Prick out all around the outside edge of the main panel, 3mm (⅛in) in from the edge. Stitch around the edges. Stain the edges and burnish them.

WALLET

DESCRIPTION

Turned-over-edge construction. Six large pockets; three smaller pockets; one window pocket.
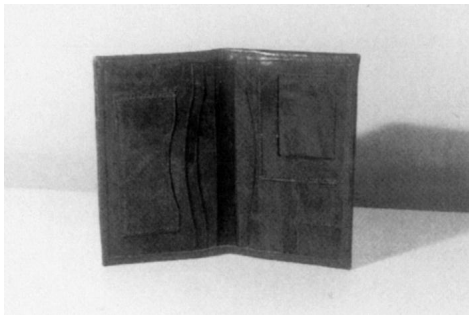
Fig 134 Completed wallet.

MATERIALS

- Thin chrome-tanned leather.
- Silk.
- Thread.
- Acetate.
- Adhesive (latex-based).
- Paper and thick card for making patterns.
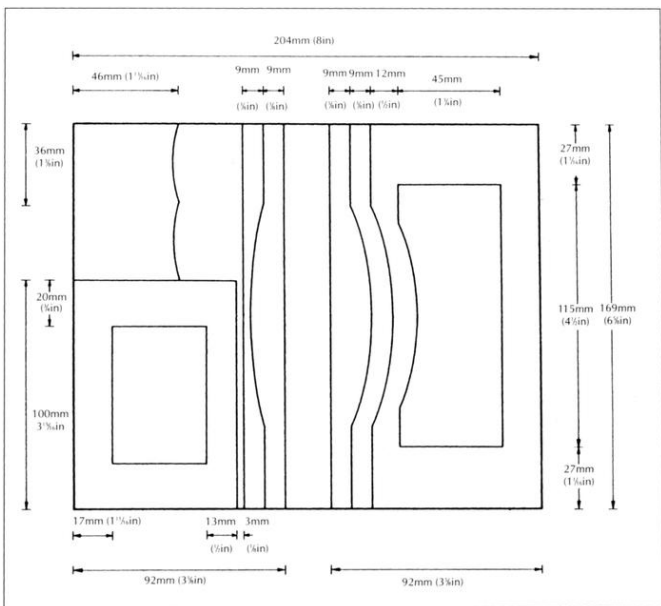
*Fig 135 **Wallet**. Plan to show dimensions.*

TOOLS

- Clicker knife.
- Awl.
- Bone folder.
- Step and/or adjustable creaser with
- blowlamp or spirit lamp for heating.
- Clam.
- Dividers.

- Needles.
- 305mm (12in) ruler and small thin ruler.
- Scratch awl.
- Pricking iron or stitch-marking wheel (8 or 9 stitches to the inch).

MAIN BODY SECTION

1. Cut patterns from thick paper, as detailed in <u>Chapter 3</u>. Transfer these to thick card and use these to cut the materials.
2. Stain and crease the relevant edges, as shown. Use step creaser, or adjustable creaser set very close to the edge (*see* <u>Chapter 2</u> for method).

main body lining
1 silk

165mm
(6½in)

202mm (7⅞in)

a
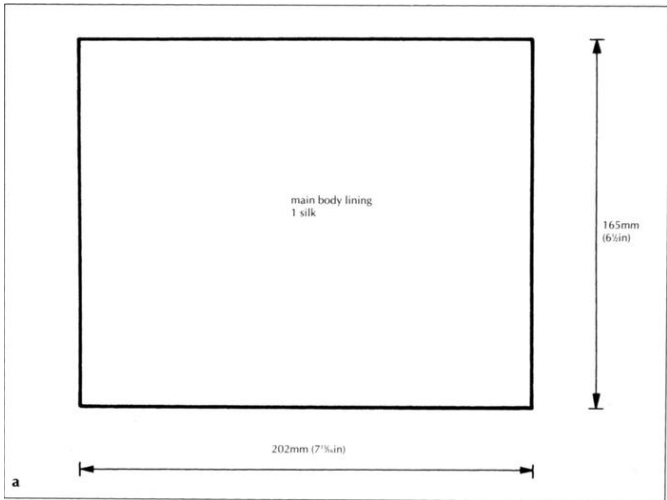
Fig 136a-e Cutting-patterns.

b

stamp pocket 1 LEA

45mm (1¾in)

42mm (1⅝in)

36mm (1⅜in)   36mm (1⅜in)

72mm (2⅞in)

c

30mm (1⅛in)   30mm (1⅛in)

13mm (½in)

65mm (2½in)

main pocket (curved) 1 LEA

72mm (2⅞in)

165mm (6½in)

main pocket (straight) 1 LEA

72mm (2⅞in)

165mm (6½in)

30mm (1⅛in)   30mm (1⅛in)

9mm (⅜in)

curved pocket tips 2 LEA

34mm (1⅜in)

165mm (6½in)

straight pocket tips 2 LEA

34mm (1⅜in)

165mm (6½in)
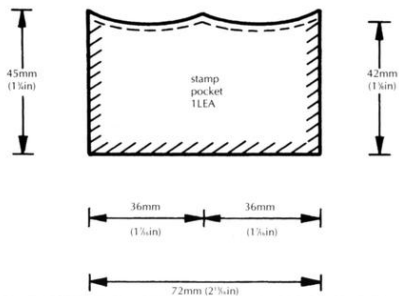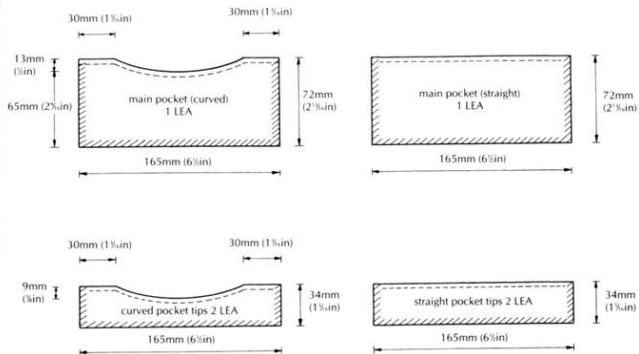
– – – – edges to be edge-stained and creased

/////// flesh side of edge to be skived approx 9mm (⅜in) in

pocket panels
4 silk

70mm
(2¾in)

180mm (7⅛in)

100mm (3¹¹⁄₁₆in)

13mm
(½in)

window pocket

71mm
(2¾in)

16mm
(⅝in)

1 LEA

20mm (¾in)

16mm (⅝in)

d

25mm (1in) 25mm (1in)

6mm (¼in)

small curved pocket
1 LEA

45mm (1¾in)

115mm (4½in)

20mm (¾in)

main body
1 LEA

20mm (¾in)

205mm (8¼in)

areas to
be skived

242mm (9½in)

e
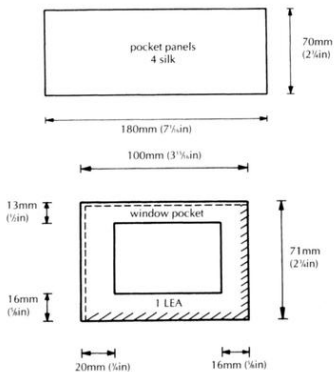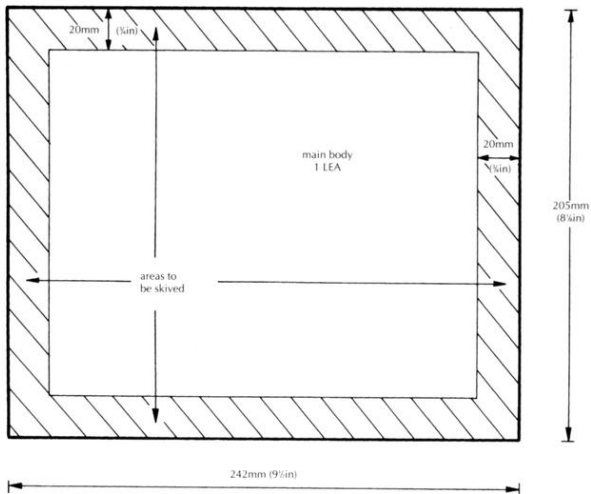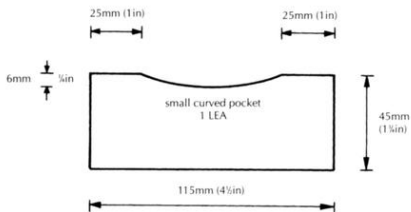
3. Skive edges as shown in diagram (*see* Chapter 4 for method).
   Mark a line 9mm (⅜in) back from edges and begin skiving a little
   behind this.
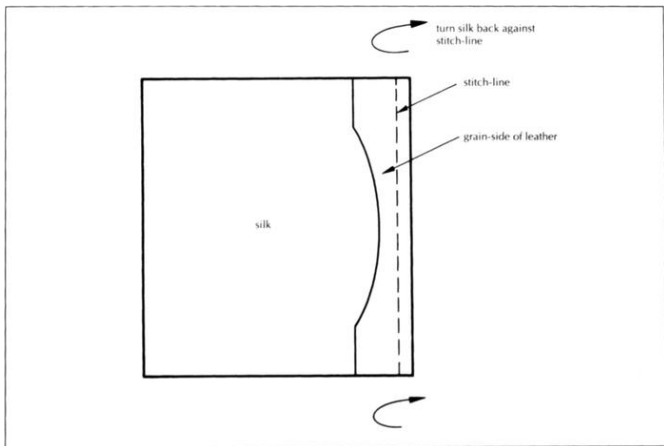
Fig 137 Method of fixing pocket tip to pocket silk.

4. Using dividers, mark a line 6mm (¼in) away and parallel to the
   unmarked long edges of the four pocket tip pieces. Stitch-mark
   along these lines (*see* Chapter 4 for method).
5. Stick the oversize silk pieces onto tips as shown above using PVA
   or latex adhesive. Stitch along the lines to fix them in place. Fold
   the silk back against the stitch line and glue down flat. This 'silk
   against silk' bonding avoids leaving edges that may fray.

LEFT POCKET ASSEMBLY (LPA)

1. Cover the curved main pocket leather with its pattern and, using
   the scratch awl, mark through the holes that identify the position

of the top corners of the small pocket. Holding the small pocket against these, mark round the perimeter of the two sides and base with the bone folder, then remove the small pocket.

2. Using the clicker-knife blade, scratch away the shiny leather coating from an area 3mm (⅛in) inside this line, taking care not to scratch beyond it: always err on the side of caution, and only scratch where the surface will be covered, i.e. the scored area must all be *underneath* where the small pocket will be.

3. Using either the adjustable creaser (cold) or dividers, mark a line 3mm (⅛in) in from the three straight edges of the small pocket (the stitching line). Prick out along this line to mark the stitches.

Note

When sticking anything to the grain surface of chrome-tanned leather, it is always necessary to remove the shiny layer to allow the glue to penetrate: the glue cannot bond to the shiny surface, whereas the porous flesh side will readily accept adhesive. Take extra care when scratching the surface in this way, as it is easy to scratch beyond the anticipated line. Stop scratching *behind* the marked line so as to avoid this possibility.
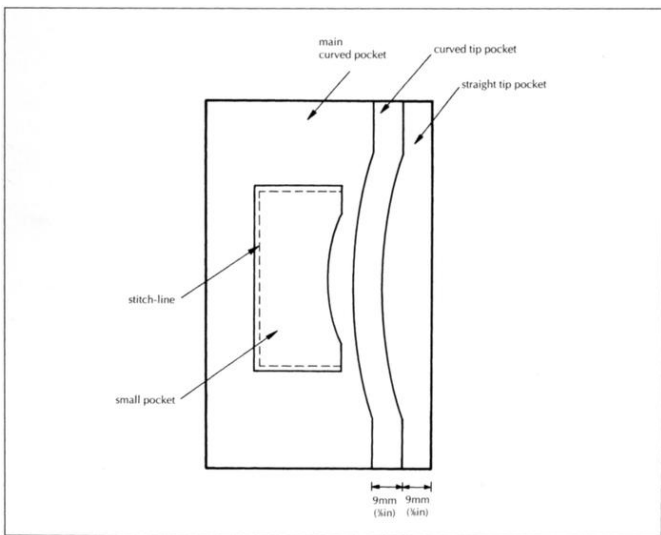
Fig 138 Left pocket assembly (LPA).

4. Use latex adhesive to stick the small pocket into position on the main curved pocket. Apply it to both surfaces, allow to dry, position small pocket and then stick it in place.

5. Stitch the small pocket to the main pocket. Begin stitching with one stitch through the single layer of the curved main pocket to ensure secure attachment.

6. On the grain surface, measure and mark with the scratch awl 9mm (⅜in) back from the front curved edge of one curved-tip pocket, at each end. Scratch the shiny surface below this point at each end.

7. Repeat the procedure for the straight-tip pocket.

8. Stick the curved-tip pocket to the straight-tip pocket, aligning the awl marks with the top edges of the curved tip pocket.
9. Stick main curved pocket assembly to curved tip pocket, lining up main pocket's top edge with the awl mark on the curved-tip pocket, as opposite.
10. Trim silk at the side and bottom edges.

RIGHT POCKET ASSEMBLY (RPA)

1. Place the stamp pocket on the main pocket, with left-hand edges aligned. Using the bone folder, mark around top and right-side edges of the stamp pocket.

Fig 139 Right pocket assembly (RPA).

2. Leaving the stamp pocket in place, put the window pocket in position, its right-hand edge aligned with that of the main pocket,

left-hand edge on top of the stamp pocket's right-hand edge. Mark its left-hand edge position on the main pocket, using the bone folder. Also mark the line along stamp pocket where it overlaps.

3. Scratch the main pocket leather surface wherever it is to join the stamp and window pockets: along left-hand edge and central stitching line of stamp pocket, and left-and right-hand edges of the window pocket. Also scratch a line along the right-hand edge of the stamp pocket, where the window pocket overlaps it. As before, take care not to scratch beyond the lines.
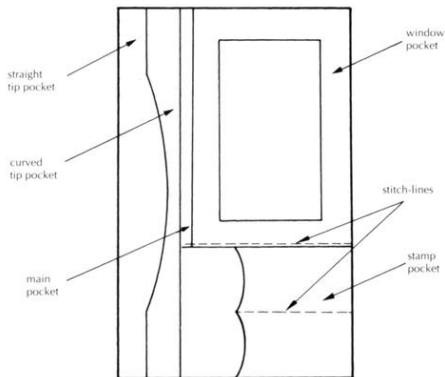
4. Prick out a stitching line 3mm (⅛in) in from the left-hand edge of the window pocket, and another line along the centre of the stamp pocket.

5. Stick stamp pocket in position on the main pocket, then the window pocket, overlapping the right-hand edge of the stamp pocket.

6. Sew along the central line of the stamp pocket to main pocket, and through left-hand edge of window pocket, stamp pocket and main pocket. Begin stitching one stitch beyond where double layer of leather begins, as for LPA.

7. Repeat the procedure for fixing the curved and straight tip pockets (as done with LPA, Steps 6–10).

8. Trim away excess silk at the side and bottom edges.

FIXING LPA AND RPA TO MAIN BODY

1. On the flesh-side of main body, mark lines 20mm (¾in) in from all four edges. Skive from just behind these lines to the edges for the turnover. Ensure that the skived area extends to just beyond these lines, cautiously skiving these areas further if necessary.

Skiving accidents
When skiving for turned-over-edge work, take care to avoid reducing the material's thickness too much: it is easy to slide the knife right through the thickness and make holes. Remove very small amounts of material at a time to reduce this risk. Accidentally making holes close to the edge may be safe,

as some of the turnover is trimmed away later on.

2. Place LPA and RPA on main body as in Fig 133b, ensuring that the fold gap is 18mm ($1^1/_{16}$in) at the top and bottom, and the overlap around edges is even. The pocket assemblies may not fit exactly against the marked lines, but the 18mm ($1^1/_{16}$in) fold gap is important to establish.
3. Draw around the outer perimeters of the pocket assemblies on the main body to mark their exact positions, which may be slightly different from marked lines. Draw diagonal corner cut-lines, measuring a distance of 3mm (⅛in) from the point of each corner (*see* [Chapter 2](#) for method). This clearance is necessary in order to create a neat turned leather corner, with no gaps.
4. Remove pocket assemblies and slice across the corner cut-lines. Skive away a band behind this line about 9mm (⅜in) wide, to facilitate a neat corner. Then, using the newly marked lines denoting the outside edges of the pocket assemblies, skive away any additional material that may be necessary so that leather is thinned to just beyond this line (as in Step 1).
5. Trim the silk to fit just inside this line and stick it, applying adhesive only in a narrow line along the four edges, with none in the centre of panel. Stick silk along the top line first, then slowly along the two sides, lastly fixing the bottom line.

Sticking silk
Take care when sticking panels of silk: too much adhesive can cause the silk to pucker up or become discoloured. The tiniest spillage or seepage of adhesive can stain silk irrevocably. Use the minimum amount possible, and only apply adhesive to silk when the glued area of the silk will not be seen (i.e. underneath leather). When sticking along an edge, do not allow the band of adhesive to be wider than 2–3mm ($^1/_{16}$–⅛in), as the glue is apt to be squeezed outwards and stain. Remember, the glue is only to hold the panels temporarily and

stitching will ultimately provide the strength.

6. Stick LPA and RPA in position, again checking that the fold gap is correct.
7. Scratch glossy surface from pocket assemblies where the turned-over edge will bond, *no further than 5mm (^{3}/$_{16}$in) in from edge.*
8. Using dividers set to 15mm (^{9}/$_{16}$in), mark this distance away from the pocket assembly edges on the main skived area of the main body panel. Trim off the waste. Allowing for this 5mm (^{3}/$_{16}$in) wastage means that a perfectly even width of turned-over edge can be established around all four sides.
9. With the bone folder, lift up the turned-over-edge flanges and push the fold against the pocket panel edges tightly, to create a firm fold-line.
10. Stick the turnover down, using latex adhesive. Push along the newly stuck edges with the bone folder repeatedly, at the same time tapping along the side to ensure a snug fold-over. Tap the turned-over leather at the corners, encouraging a neat join-line and the concealment of corner points; use the point of the bone folder to push and drag the thinned leather to facilitate this.
11. Turn over the wallet. On the grain side of the main body, use dividers or the adjustable creaser (cold), to mark stitching lines 3mm (^{1}/$_8$in) in from all four outside edges. Prick out (stitch-mark) along these lines.
12. Stitch around the four sides of the wallet, overlapping the first three stitches with the final three.

Trimming the Overlap

The inside of the turned-over edge is likely to look uneven, because where extra thicknesses of leather are beneath, the overlap is fore-shortened, and where there is just one layer (e.g. along the fold gap), it is lengthened. Measure and mark, using dividers, a line along the overlap, 6mm (¼in) from the outer edges of the wallet. Prize up the overlap in front of the stitching and slide a small thin metal ruler underneath; then, cutting against a metal ruler from above, slice along this line to remove excess. Care must be taken to

ensure the guard ruler is actually underneath the cutting edge, so as to avoid cutting through layers underneath the turned-over edge.

Creasing Stitch-lines

Set the adjustable creaser to the same distance as the stitch-line on the wallet's outer surface, then heat it and crease on top of the stitches. Repeat the process for the stitching inside the wallet, using either a single creaser or one blade of the adjustable creaser held against a metal ruler.

FINISHING OFF

Clean all traces of adhesive from surfaces, then finish off using a liquid wax, or a similar type of leather polish.

CHEQUEBOOK HOLDER WITH POCKETS

DESCRIPTION

Turned-over-edge construction. Retaining band for chequebook; silk lined; one long pocket, two smaller pockets.

MATERIALS

- Thin chrome-tanned leather.
- Thin card.
- Silk.
- Thread.
- Acetate.
- Adhesive (latex-based).
- Paper and thick card for making cutting patterns.

small pocket

main pocket

small pocket

chequebook retaining band

107mm (4¼in)

107mm (4¼in)

55mm (2⅛in)

30mm (1⅛in)

214mm (8⅜in)

61mm (2⅜in)

80mm (3⅛in)

90mm (3½in)

192mm (7½in)
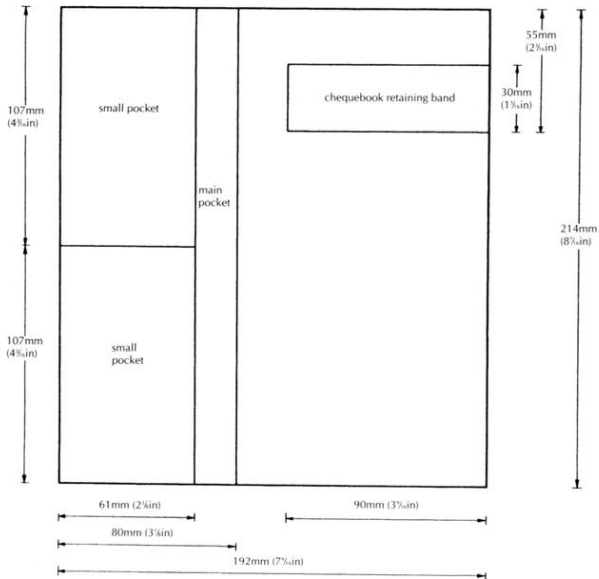
*Fig 140 **Chequebook holder.** Plan with dimensions.*

TOOLS

As for wallet.
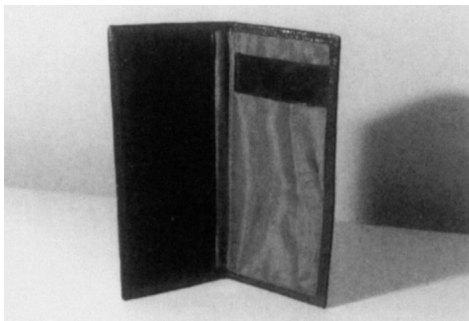
Fig 141 Completed chequebook holder.

METHOD

1. Cut patterns (paper and then card), and then cut relevant materials.
2. Skive, edge-stain and crease leather pieces as shown, always skiving the flesh-side of the leather.
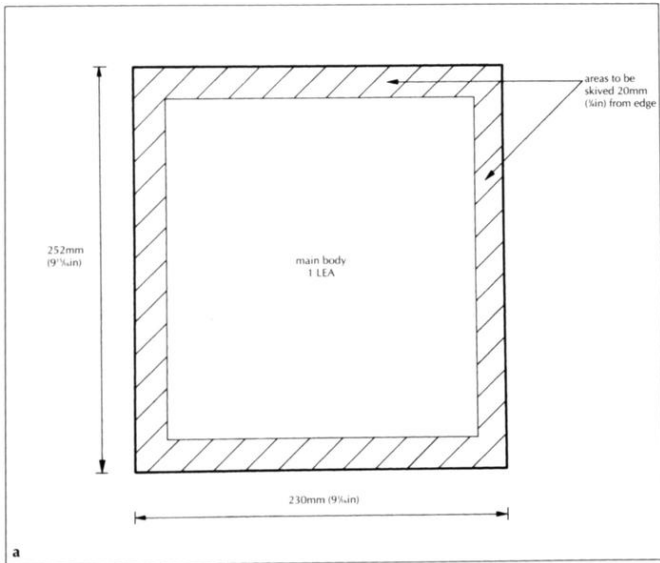
Fig 142a-c Cutting-patterns.

3. Carefully stick card pieces to the silk, applying a small amount of adhesive to only the extreme edges of the card, ensuring that it will not be squeezed out to stain the visible parts of the silk. Ensure the central gap is 9mm (⅜in) exactly at the top and bottom.

190mm (7½in)

212mm (8⅜in)

main body
lining
1 silk

b

small pockets 1LEA — 212mm (8⅜in) — 60mm (2⅜in)

stiffening panels 2 thin card — 212mm (8⅜in) — 90mm (3½in)

large pocket — 212mm (8⅜in) — 80mm (3⅛in)

retaining band 1LEA — 30mm (1⅛in) — 90mm (3½in)

c

4. Stitch-mark the retaining band, 3mm (⅛in) in from its left-hand shortest edge. Turn the silk and card panel over and stick retaining band in position on the silk, observing the usual safety precautions against staining the material. Stitch along this line, through the card, leather and silk, beginning and ending stitching through the silk and card alone.
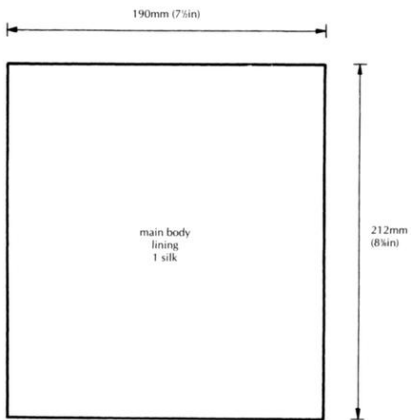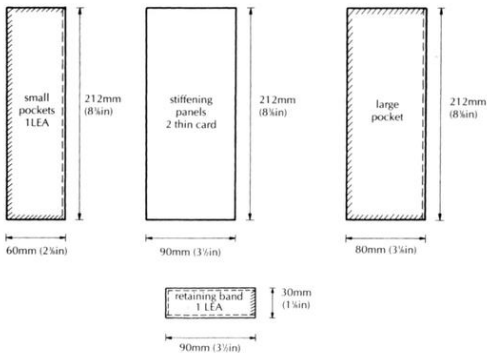5. Stitch-mark small pocket panel (SPP) along the central line. Stick SPP to main panel (MP), scratching the tanned surface on MP as necessary.
6. Stitch along the marked line, taking the first stitch through the single thickness of the leather, for strength.
7. Place the silk and card assembly onto the main body, so that the skived overlapping border is equal all around the edge. Mark in pen the outer perimeter of the silk, then remove the assembly.
8. If necessary, skive parts of the borders again, so that the skiving begins just behind this marked line. Cut off corners prior to turning over the edge, allowing a 3mm (⅛in) gap between the point of the corner and the cutting line. Skive the leather across this

new cutline.

9. Stick silk/card assembly onto main body. Apply adhesive around the outermost edges of card only, avoiding the silk altogether.

10. Stick pocket assembly onto left-hand area of silk, aligning the edges and corners and taking care not to stain the silk (*see* <u>Sticking Silk</u> box above).

11. Scratch away the shiny surface where necessary on the pocket assembly, no more than 3mm (⅛in) inside the edge.

12. Using dividers, measure and mark on the flesh-side of the leather overlap, lines 13mm (½in) away from the outermost lines of card edges. Trim away waste.

13. Turn over the edge and stick down (using latex adhesive) on the four sides, then stick down the corners (*see* <u>Chapter 2</u> for method).

14. Turn chequebook cover over and prick out around the four sides of the item, 3mm (⅛in) in from the edges, then stitch around the complete perimeter.

15. Crease along the top of the stitches, using single creaser or one blade of the adjustable creaser, held against a ruler.

16. Turn the completed article over, and trim away the excess turnover, using two rulers (*see* <u>wallet instructions</u> for method).

17. Finish off with a suitable polish.

WRITING CASE

DESCRIPTION

Retaining bands for large size writing pad and slot for pen (right side). Strap for envelopes, pocket for stamps and window for diary. Behind this, two large pockets, surrounded by a stiffened support gusset (left side). Press-studded closing strap.
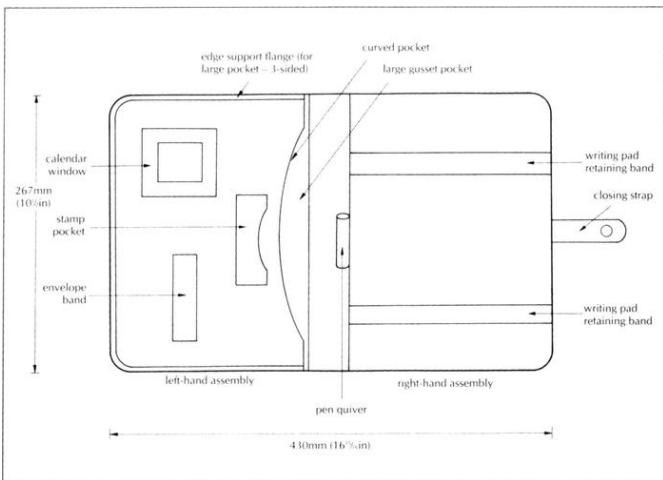
Fig 143 **Writing case**. *Plan with dimensions.*

TOOLS

As for wallet.

Fig 144 Completed writing case.

PREPARATION

Cut paper patterns, then card, then component parts (*see*).
Then skive, edge-stain and crease as for the other projects.

writing pad panel
1 LEA

265mm
(10⅜in)

210mm (8¼in)

divider pocket tip
1 LEA

64mm
(2½in)

248mm (9¾in)

main pocket gusset (2-part) 2 LEA

35mm
(1⅜in)

330mm (13in)
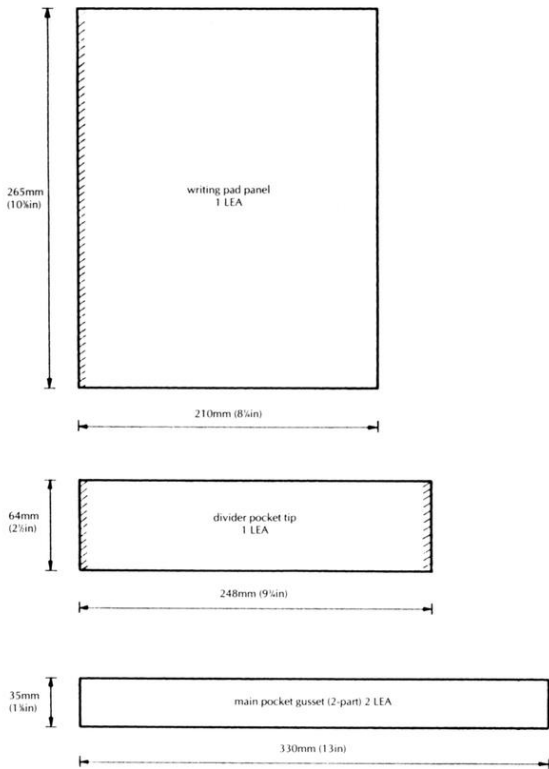
a

/////// = skived   _ _ _ = edge-stained and creased

Fig 145a-m Writing case cutting-patterns.

20mm (¾in) skived around

main body
1 LEA

307mm (12⅛in)

470mm (18½in)

b

left body main panel
1 LEA

182mm
(7¼in)

165mm
(6½in)

247mm (9¾in)

c

182mm
(7¼in)

divider panel stiffening
1 thin card

247mm (9⅝in)

d

e

170mm
(6¹¹⁄₁₆in)

divider pocket panel
2 silk

247mm (9¹¹⁄₁₆in)

f

265mm
(10⁷⁄₁₆in)

left-hand backing panel
1 silk

210mm (8¼in)

g

stamp pocket

10mm
(⅜in)

102mm
(4in)

1 LEA

10mm
(⅜in)

30mm (1³⁄₁₆in)

37mm (1⅜in)

265mm (10⅜in)

main body stiffening
2 thick card

200mm (7⅞in)

h

22mm (⅞in)

restraining bands 2 LEA

200mm (7⅞in)

i

edge support flange 1 thin card

17mm
(⅝in)

600mm (23⅝in)

j

edge support flange concealer 2LEA

55mm
(2⅛in)

330mm (13in)

k

centre cover strip 1 LEA

50mm
(2in)

265mm (10⅜in)

l

pen quiver strap

45mm (1¾in)

1 LEA

45mm (1¾in)

30mm (1⅛in)

closing strap 2 LEA

95mm (3¾in)

12mm (½in)   12mm (½in)

23mm (⅞in)

envelope band 1 LEA

120mm (4¾in)

73mm (2⅞in)

12mm (½in)

calendar window panel 1 LEA

12mm (½in)

92mm (2⅝in)

m

RIGHT-HAND ASSEMBLY

1. Stick writing pad panel leather to one of the two thick card stiffening sheets, with the skived overlap to the left side. Turn over the skived leather edge and stick this to the back of the card.
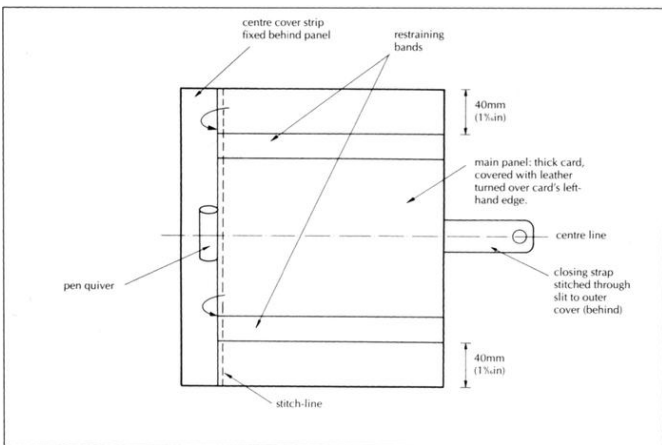
Fig 146 Plan of right-hand assembly (RHA).

2. Fold the pen-quiver strip around a pen, with the pen central to quiver's length. Stick flesh-side to flesh-side for the last 15mm ($^9/_{16}$in), leaving the pen in place, to allow for the correct sized loop. Scratching the grain surface as necessary, stick the ends of the pen-quiver strap behind the writing pad panel, centrally, making sure that the loop of leather will still hold the pen comfortably.

3. Stick restraining bands onto the pad panel's surface (scratching grain as necessary) at each end only. Bands should be 40mm ($1^5/_8$in) away from top and bottom edges and parallel to them.

4. Again scratching grain surface as necessary, stick centre cover strip behind assembled panel as below, overlapping by 10mm ($^3/_8$in).

5. Stitch-mark and then stitch a line along the left-hand edge of the panel, 3mm ($^1/_8$in) from the edge. The line of stitching will secure

the pen quiver, left sides of retaining bands and the turnover of leather onto the card.
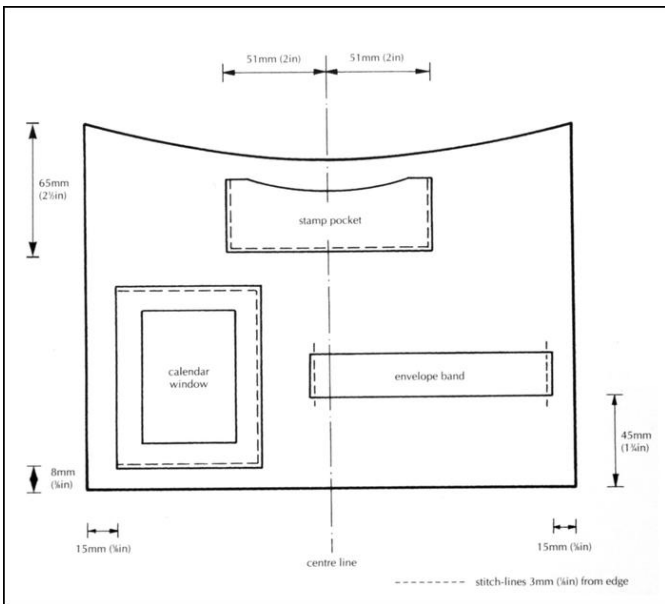
Fig 147 Plan and dimensions of left-hand assembly (LHA).

LEFT-HAND ASSEMBLY

1. Prick out around stamp pocket, envelope band and diary window, as shown for stitch-lines above.
2. Stick them in place on the left body panel, then stitch the lines to secure them.

3. Sandwich the divider pocket stiffening (thin card) between the two divider pocket panel silks. Stick together around the edges.
4. Fold the divider pocket tip centrally lengthways, flesh-side inwards, and stick this over the panel's long edge, so that the central fold-line forms the edge (*see* diagram).
5. Mark and stitch along the line, as shown.
6. Stitch the two parts of the gusset together to make a continuous length.
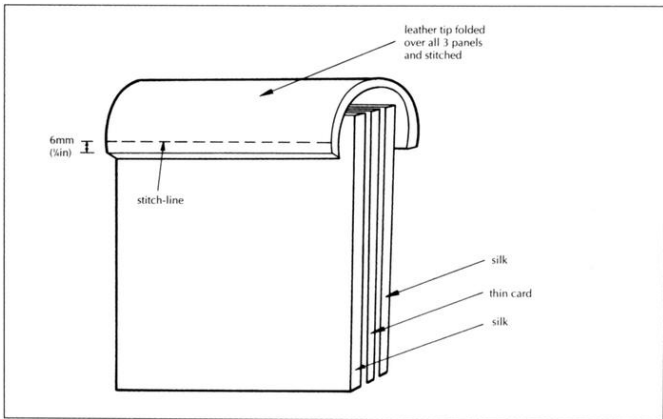
Fig 148 Left-hand panel: divider panel construction.
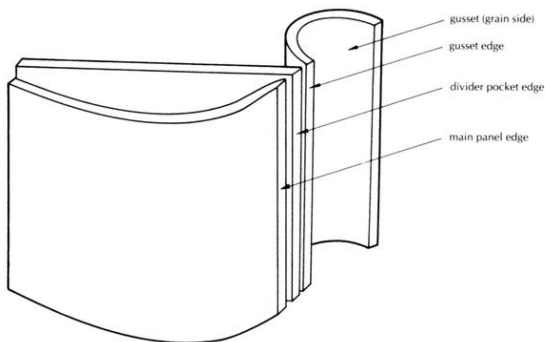
Fig 149 Left-hand panel: gusset attachment.

7. Prick out around three sides of the front panel, 3mm (⅛in) from the edge.

Fig 150 Left-hand panel: edge concealer construction

8. Stick the gusset edge (flesh-side) of pocket, and divider panel to the back of the front panel, as shown. Stitch around the marked lines to secure the assembly. Trim off excess gusset length.

9. Trim the newly sewn edges as necessary, then stain them. Crease along the stitch-lines.

10. Sew together the two parts of leather edge concealer.

11. Make the edge concealer by folding this around the edge concealer stiffening card, sticking and then stitching, as shown.
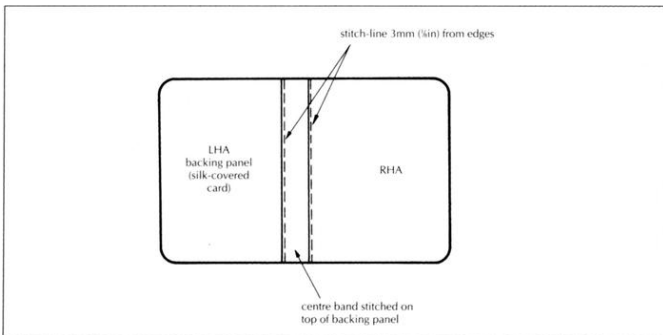
Fig 151 Bonding right-hand assembly to left-hand assembly panel, inside view.
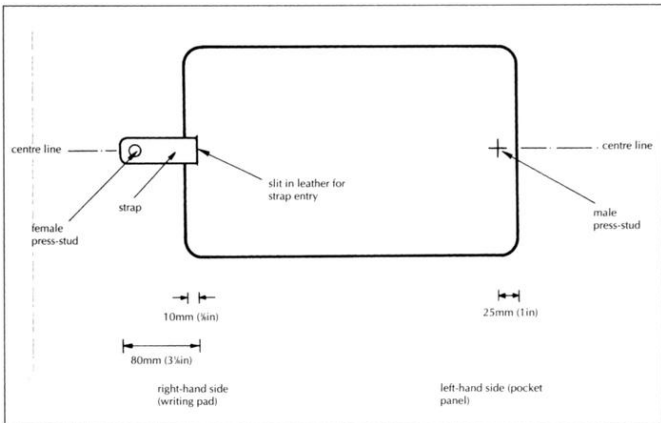
Fig 152 Closure strap attachment, outside view.

MAKING UP ARTICLE

1. Stick the oversize left-hand backing panel silk to the second main body stiffening card, by folding silk around edges of card, and sticking the overlaps to the back of the card.
2. Place RHA as in Fig 143, with central cover strip overlapping the silk-covered card. Ensure that the card panels are in line and that the gap between them is 25mm (1in) (card-edge to card-edge). Stick central cover strip to silk and card panel, then prick out and stitch along this line.
3. Place complete assembly onto main body panel and draw around the edges. Ensure that skiving extends to just beyond marked line. If not, complete extra skiving.
4. Stick the closing strap pieces together, flesh-side to flesh-side, then trim, stain and crease the edges. Prick out around the two long, and one unskived side and stitch together. Fix a female press-stud onto the strap, centrally to its width and 14mm

($^9/_{16}$in) from the end.

5. Remove main body assembly from the main body panel, and turn main body panel over. Measure a line centrally from top to bottom and 10mm (⅜in) back from the edge, and the same size as the width of the strap. Make a slit and insert the strap as shown, leaving 80mm (3⅛in) protruding. Prick out and sew along just behind the line to secure the strap.

Turning over curved corners
When turning over an edge that has curved corners, there is no need to trim the corner across, as with square corners. Simply cut away excess leather to follow the curve, allowing the same overlap as for the rest.

6. Fix male press-stud in position, as shown in Fig 152.
7. Turn over and stick main assembly to main body panel.
8. Stick gusset of left pocket assembly on top around the edge.
9. Stick concealing flange edge on top of the gusset. Trim off excess length of flange.
10. Turn over the edge and stick it down.
11. Prick out on the other side, and sew up all the way around.
12. Finish off with a suitable polish.

HEAVY LEATHER PROJECTS

For the projects in this chapter it will be assumed that the reader is right-handed. If you are left-handed, please reverse instructions when left or right hand is referred to. Left or right sides of a project/panel/object are as viewed from the front, head on.

The projects provide a useful means of practising the various techniques described so far. All can easily be adapted as to size or addition or subtraction of various features (*see* Chapter 3), methods of closure, and so on. However, there are a few important points that must especially be borne in mind when working with heavy leather:

• Sharp tools – knives and awl – are important.
• Because of the unyielding nature of thick leather, it is normally impossible to stick major component parts together prior to stitching, as can be done with light leather goods. This means that ingenuity and adaptability are required to hold relevant panels together in the clam whilst stitching. Occasionally it is impossible to hold parts together in the clam, and they must be held together without external support. Small parts, such as buckle-strap fixtures to gussets, can however be glued together before stitching.
• Thick leather projects cannot be made using turned-over-edge construction methods, unless the turnover is done using thinner leather. Normally the work is cut-edged and burnished either natural (gum or special burnishing liquid), or dyed dark, according to taste.

The projects presented here are finished with clear wax on un-dyed leather, to give a natural light-coloured smooth shiny finish. If a darker finish is preferred, the edges should be stained dark and a suitable dye or antique finish applied over all afterwards (*see* Chapter 1).

All the projects may be carved and stained (*see* relevant chapters) in whatever way desired, the proviso being only that if this is done, the carving and/or staining should be completed before the work is assembled. The small curved-fronted bag and key-case ([Chapter 11](#)) are shown with a detailed carved design to intimate what is possible for any project.

BELT

DESCRIPTION

Plain leather belt, with ordinary buckle. Creased, cut edges.

MATERIALS

- Natural vegetable-tanned leather 2–2.5mm (^{1}/$_{16}$–^{3}/$_{32}$in) thick, 33mm (1¼in) wide, 128cm (50in) long.
- Brass finish buckle: centre bar to accommodate 33mm (1¼in) width internally.
- White thread.
- Cardboard for pattern.

TOOLS

- Clicker knife.
- Skiving knife.
- Stitching awl.
- Needles.
- 305mm (12in) ruler.
- Scratch awl.
- Pricking iron or stitch-marking wheel (eight or nine stitches to the inch).
- Hole-punch.
- Edge-beveller.
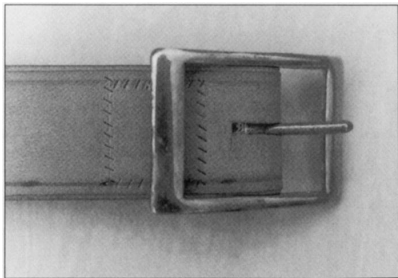
Fig 153 Belt: buckle end, showing stitch-marking.

METHOD

1. From thick card of the same width as the belt, cut a pointed shape to represent the tapered end of the belt.
2. Using this template, cut one end of the belt leather to the same shape (*see* 'cutting heavy leather', Chapter 2).
3. Measure and mark a central point on the grain side of the leather, 35mm (1⅜in) from the other end. Punch a 3mm (⅛in) diameter hole here.
4. Still following the central line of the belt, measure and mark a point 25mm (1in) away from this hole, and 60mm (2⅜in) from the end of the belt (i.e. 25mm/1in + 35mm/1⅜in). Punch another 3mm (⅛in) diameter hole here.
5. Join these holes to form a 3mm (⅛in) wide slit along the centre of the belt, which will be 25mm (1in) long.
6. Skive the leather on the flesh-side to approximately half thickness, from the end of the belt to the beginning of the slot.
7. Bevel all four edges of the leather with the edge-beveller. Burnish these edges (*see* Chapter 2).
8. Thread belt end through the buckle, push the prong through the slot, then thread the belt end under the buckle bar. Slide leather along until the prong is in the centre of the slot.
9. Fold the leather at the point where prong emerges (centre of

slot) back against the main belt and stick the two flesh-sides together, using latex adhesive.

10. Stitch-mark a square, 25 × 25mm (1×1in) as shown, on the grain side of the leather, the sides coinciding with the side crease-lines, the top side 3mm (⅛in) below the end of the slot, and the base-line corresponding with a line about 3mm (⅛in) from the folded-over end.

11. Begin stitching, going around all four sides of the square and overlapping the last two stitches with the first.

12. Punch 3mm (⅛in) diameter holes at desired positions, the first not being less than 90mm (3½in) from the pointed end.

13. Treat the finished belt with some kind of wax finishing preparation.

Fig 154 Small plain handbag.

210mm (8⅛in)

150mm (5¹⁵⁄₁₆in)

front panel 1 LEA

fastener position

centre V mark

35mm (1⅜in)

35mm (1⅜in)

35mm (1⅜in)

223mm (8⅞in)

111mm (4⅜in)

111mm (4⅜in)
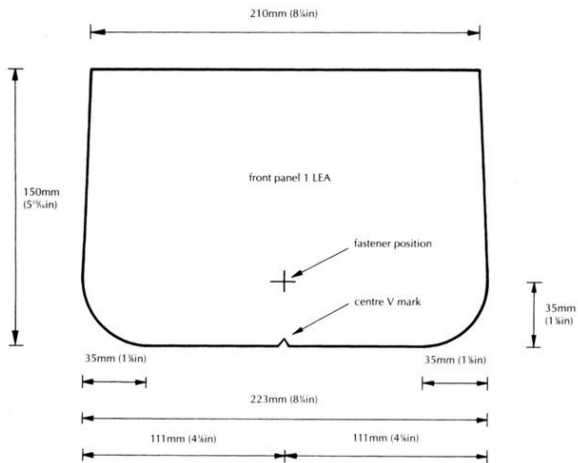
a
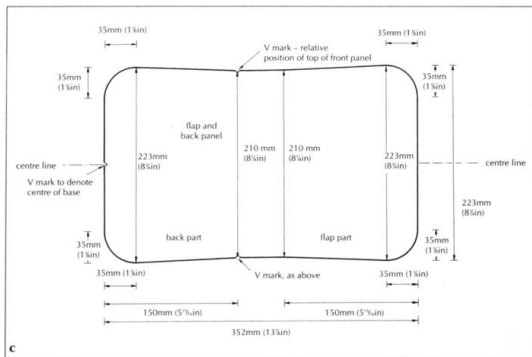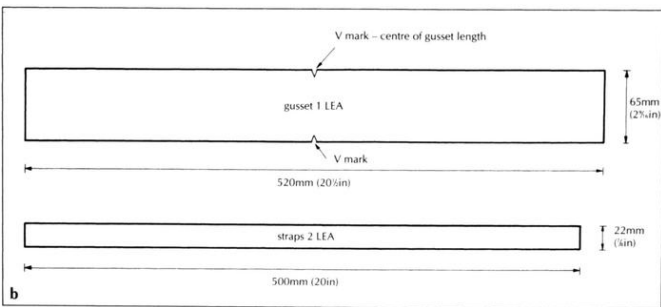
Fig 155a-c Small plain handbag. Cutting-patterns.

SMALL PLAIN HANDBAG

DESCRIPTION

Small flap-over handbag 220mm (8⅝in) wide×175mm (6⅞in) deep-×65mm (2⁹/₁₆in) thick at widest point (base) of gusset. One-piece

gusset, no pockets; sewn-on strap with buckle adjustment at its mid-point. Edges stained dark (burnished).

MATERIALS

- 2.5–3mm (^{3}/$_{32}$–⅛in) thick, natural vegetable-tanned leather.
- Rotating clasp fastening (brass-finish metal).
- White thread.
- 19mm (¾in) buckle (brass finish).
- Rivets (optional).

TOOLS

As for belt, plus stitching groover.

PREPARATION

Cut paper patterns, card patterns and then component parts (*see* Fig 155). Carefully cut tiny V marks from the patterns, transferring them to the *grain* side of the leather.

STITCHING FRONT PANEL TO GUSSET

1. With the scratch awl, mark the central point of the rotating clasp (male half) on the front panel from the pattern. Place the clasp in position with this mark centralized, and mark where the slots are required. Cut the slots and fix the clasp in place.
2. Aligning the central V marks of the gusset and front panel, position work in the clam and begin stitching from the centre towards the right top edge. When top edge is reached, if the front panel overlaps, trim an even strip from across the top of the panel so that this edge precisely aligns with the top of the gusset. Alternatively, if the gusset is too long (as in Fig 156) cut off the same amount each side.
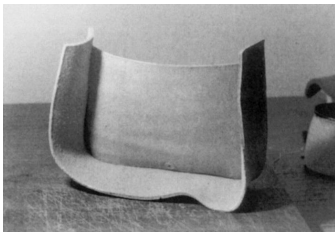
*Fig 156 **Small plain handbag**. Gusset sewn to front panel.*

3. Loop over the top stitch (*see* Stitching for Strength) and continue down two stitches to lock stitching in place.
4. Start stitching at the left-hand side of the bag, aligning top edge of gusset with the top edge of the panel, and stitch down and round to the start of the previous stitching, then stitch across a couple of stitches.
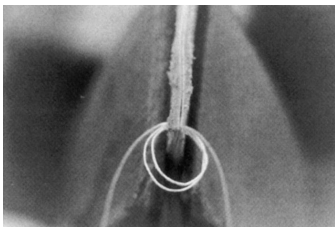
Fig 157 Stitching looping over the top of joint to add greater security.

Stitching for strength
When two panels meet at a corner, take the threads across the top of panels so as to form two loops on top (see Fig 158).

Having completed the final stitch, swap over needles to the other hand, then pass them through the previously vacated holes in the usual way. This forms a double loop on top for strength.

FIXING STRAP TO GUSSET

1. Crease lines 3mm (⅛in) from the edges of the two strap lengths, then bevel, stain and burnish the edges of these.
2. Stitch-mark around a four-sided area as shown in , at one end of each strap. This is the area to be stitched to the gusset, and the short straight stitch-marked line should be 30mm ($1^3/_{16}$in) from the end of the strap.

Fig 158 Awl insertion for stitching strap to gusset.

3. Fit a buckle to the other end of one of the straps, using the same method as for the belt, but making a suitably smaller-sized slot and fixing the overlapping leather flap either by stitching, as for the belt, or with a rivet. Punch appropriate holes in the other strap for fastening within this buckle.
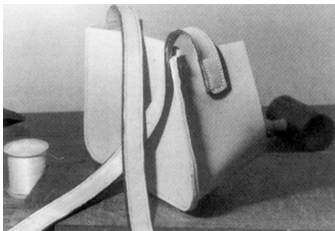
Fig 159 Strap attachment to gusset.

4. Scratching a small area from the grain side of the gusset top, stick the strap in place, as above, centrally on the gusset top. Stitch around the marked lines. Repeat for the other side.

FIXING FLAP AND BODY PANEL TO GUSSET

1. Groove all around the edge of the flap and body panel, 3mm (⅛in) from the edge, using the stitching groover. Stitch-mark in this groove.
2. Align the centre V marks on the gusset with centre V on the body panel base, then position the two panels in the clam and begin stitching, keeping the panels together all the time.
3. Continue stitching, taking care to bend the gusset leather as required to follow the panel's curve. For the tight curve it may be necessary to reposition the work every few stitches.
4. When the join of gusset and panel is reached (left top edge), reverse the stitching a couple of stitches, then go forward again, so that this stressed area is reinforced with extra stitches. Then continue around all three sides of the flap until the other end of the top of the gusset (right-hand side of bag) is reached.
5. Inspect the fixed side of the body panel to the gusset to ascertain where the V mark on the body panel is in relation to the top of the gusset. If the two points do not coincide exactly, measure the disparity, and note whether the gusset top is higher or lower than the V mark.
6. Measure and mark the same relative position on the other,

unattached, side of the bag, where the other (unfixed) side of the gusset top is. Holding the gusset against this point on the flap, continue with the stitching from the end of Step 4 to fix the gusset in place. As in Step 4, stitch two or three times over the point of stress, where the main flap begins.

FINISHING OFF

1. Rub a soft pencil over the projecting part of the male clasp on the front panel, then close the flap and press hard to transfer the graphite to the underside flap, to delineate positioning for female clasp.
2. Fit female clasp to front flap, ensuring that it is central.
3. Bevel all leather edges.
4. Burnish all leather edges, first applying a suitable edge finishing solution.
5. Crease over the stitches, using hot adjustable creaser.
6. If the bag is noticeably out of shape, reshape it by soaking (*see* method used for large plain handbag). This is unlikely to be necessary.
7. Polish bag with wax or other surface finish for a natural finish, or antique polish for a darker-hued shiny surface; or dye a darker colour and seal the surface (*see* Chapter 1).
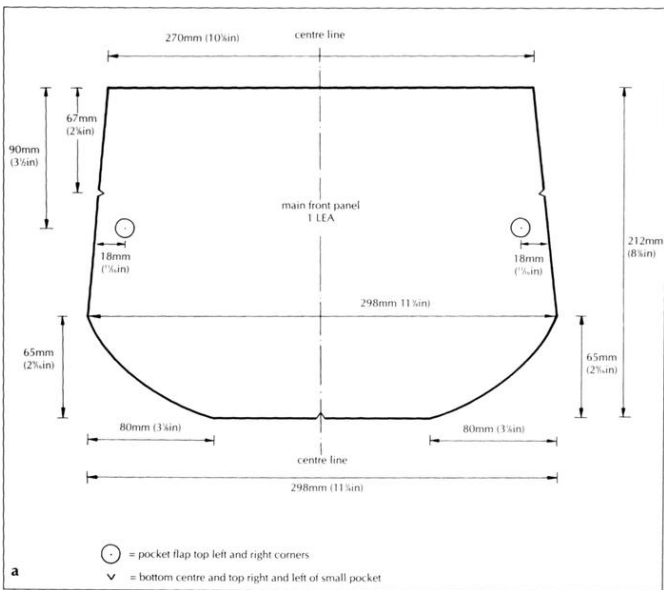
Fig 160a-g Large plain handbag. Cutting patterns

LARGE PLAIN HANDBAG

DESCRIPTION

Cut-edge construction, straightforward design. One front pocket; flaps secured by press-studs (ring spring fasteners). Strap attached by buckles via straps to gusset. Main cover flap and back body are one unit, the main flap extending right across the complete front of bag. Hand stitched (saddle stitch), with thinner lining leather for the front flap. Two-part gusset, joined at the centre of base.

MATERIALS

- Natural, vegetable-tanned leather, 2.5–3mm ($^3/_{32}$–⅛in) thickness for main bag components and strap.
- Thinner, chrome-tanned darker-brown leather for lining the front flap (1–1½mm/$^1/_{32}$–$^1/_{16}$in).
- Three ring spring fasteners.
- Two plain brass buckles, for 19mm (¾in) strap size.
- White 3-ply thread.
- Leather softener/wax for final finish.
- PVA adhesive; latex adhesive.
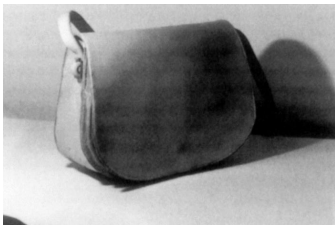
Fig 161 Large plain handbag.

TOOLS

As for small plain handbag, plus press-stud fixing tool and metal hammer.

front flap lining
1 thin LEA

335mm
(13⅛in)

325mm (12⅞in)

b
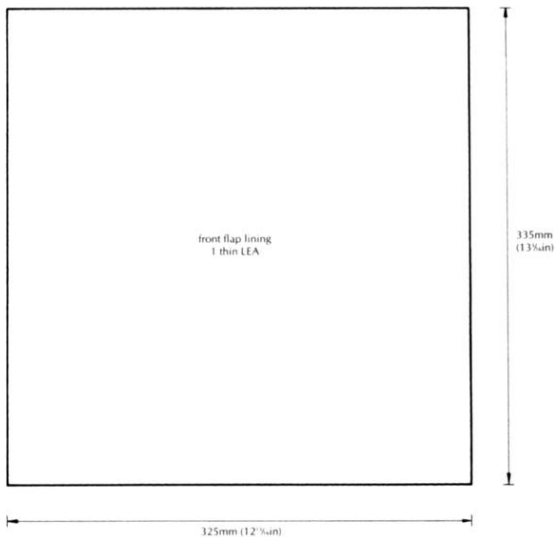
PREPARATION

1. Cut paper patterns, then card patterns, then leather pieces in the usual way. In addition, cut a strap from the thick (vegetable-tanned) leather, size 101cm× 19mm (33¼×¾in).
2. Mark all the reference points on the leather pieces. As for the small plain handbag, carefully cut tiny V marks from the patterns, marking them from the *grain* side of leather. Then, using the scratch awl, mark through patterns with pin-prick marks (again onto grain side of leather) to transfer the eventual

positions of various components (encircled holes on pattern).

18mm (⅛in)

40mm
(1⅝in)

120mm
(4¹⁵⁄₁₆in)

80mm
(3⅛in)

buckle-straps
2 LEA

35mm (1⅜in)

c

45mm (1¾in)   45mm (1¾in)

108mm
(1¼in)

60mm
(2⅜in)

pocket flap
1 LEA

245mm (9⅝in)

d

280mm (11⅛in)

centre line

53mm (2⅛in)

150mm (5⅛in)

72mm (2⅛in)

pocket panel
1 LEA

72mm (2⅛in)

65mm (2⅝in)

65mm (2⅛in)

80mm (3⅛in)

centre line

35mm (1⅜in)

80mm (3⅛in)

298mm (11¾in)

+ = position of male press-studs
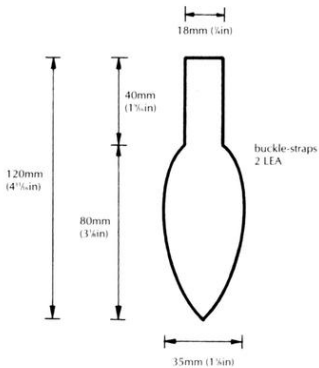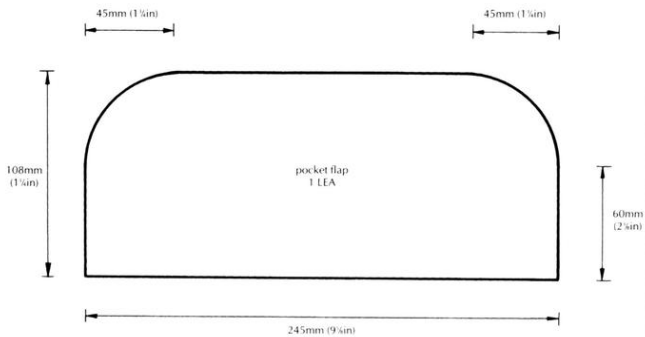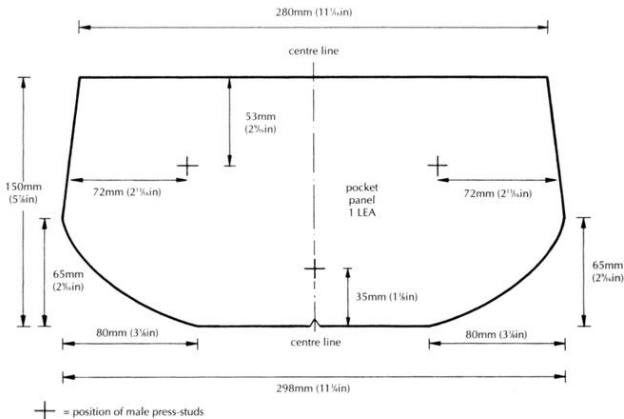
e

BUCKLE-STRAPS

For each strap:

1. Use the stitching groover to mark around the edge of buckle-straps, then stitch-mark in this groove and also along a line 65mm (2⅝in) from the central point of the base.
2. Punch two holes along the centre, one 73mm (2⅞in) from the base central point, the other 92mm (3⅝in) from the same point.
3. Cut a slot by joining these two holes.
4. Turn the buckle-strap over and skive the flesh area of the narrow tongue with the slot to approximately half its thickness.
5. Position buckle on the strap centrally, and loop the tongue around behind, so that the two skived flesh areas of leather are facing.

6. Stick this tongue against the main buckle-strap (flesh-side to flesh-side) using latex adhesive.

7. Using latex adhesive, stick the completed buckle-strap against the alignment marks on the gusset half. First, scratch the glossy grain surface side of the gusset beneath where the buckle will go, so that the adhesive will successfully bond.

small gusset
1 LEA

255mm
(10in)

510mm
(20in)

255mm
(10in)

36mm (1⅜in)

38.5mm 38.5mm
(1½in)   (1½in)

247mm
(9¾in)

27mm   27mm
(1⅛in)   (1⅛in)

100mm (3⅞in)

335mm
(13¼in)

210mm
(8¼in)

190mm
(7½in)

main gusset
2 LEA

100mm (3⅞in)

⊕ denotes outside edge and
base of buckle-strap. Hole
in pattern to be transferred
to leathers (pin-prick only)

g
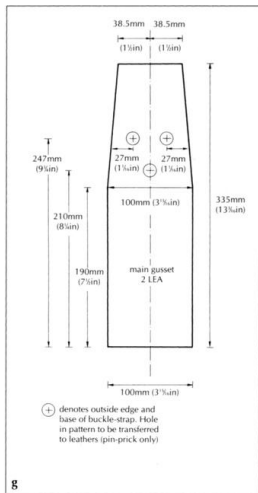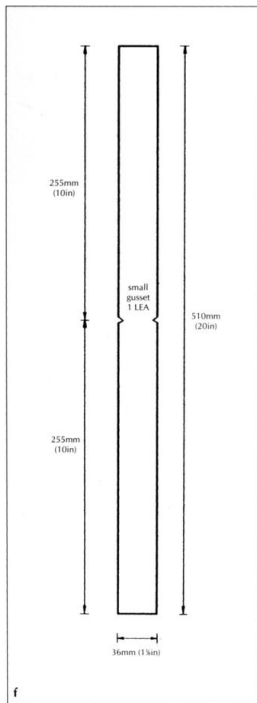
8. Stitch the buckle-strap onto the gusset half.

JOINING GUSSET HALVES TOGETHER

1. Skive the bottom 13mm (½in) of the gusset halves (flesh side), measuring from the wider, non-tapered end, reducing the leather

to approximately half thickness.
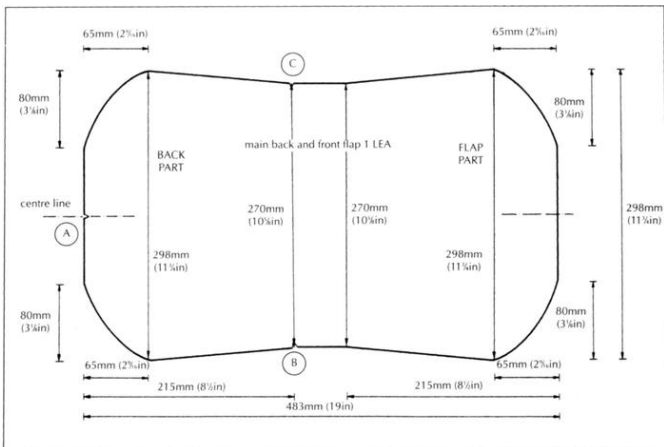
Fig 162 Main tack and front flap cutting pattern. V marks: A = centre of baseline of back part; B and C = relative position of top right and left corners of main front panel. (N.B. Do not mark Vs on flap section of leather.)

2. Measure and mark lines with a pen on the flesh (skived) sides of both gusset halves, 9mm (⅜in) from the bottom (wider, non-tapered) end.
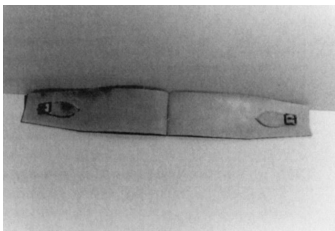
*Fig 163 **Large plain handbag**. Gusset halves sewn together.*

3. Stitch-mark along one of these lines.
4. Sew the gussets together, grain side against grain side.
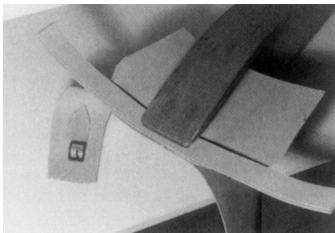
Fig 164 Fixing small pocket gusset to main gusset and main body front.

FIXING GUSSET TO MAIN BODY FRONT AND SMALL POCKET GUSSET

1. From the flesh-side, skive around part of the two curved sides of the main front body panel. The skiving should be about 13mm (½in) back from the edge, between the V marks denoting the position of the ends of the small gusset. The skiving should not extend above these marks, or extend along the top (straight edge).
2. With the stitching groover set to 3mm (⅛in), groove along the grain side of one long edge of the small gusset, and also 100mm

(4in) down (grain side) of left and right sides from the top to 25mm (1in) beyond the V marks of the front main panel. Stitch-mark along these grooves. To guarantee neat stitching, stab awl holes in the small gusset at this stage (*see* Chapter 4 Neat stitching section).

Stitching around a tight curve
This can be extremely difficult, as the unyielding leather panels will bend and twist, continually springing out of position. The trick is to keep repositioning the panels in the clam, sometimes even partially removing the assembly from the clam if necessary or holding the parts lower down. Stitch only two or three stitches at a time before repositioning. As the curves are held tight in place by the stitching, the work will take shape as it should. When the curve is past, the stitching will immediately become easier, and the leather will not need to be bent and twisted against its natural direction.

3. Bending and manipulating the gusset as necessary, push the gusset, main front panel and small gusset into the clam jaws, as in the photograph, lining up the gusset base join-line (centre of base), with the centre base V of the main front panel and centre V of the small gusset. Fix the panels so that the stitch-marks on the small gusset are to the stitcher's right (or left if stitcher is left-handed).
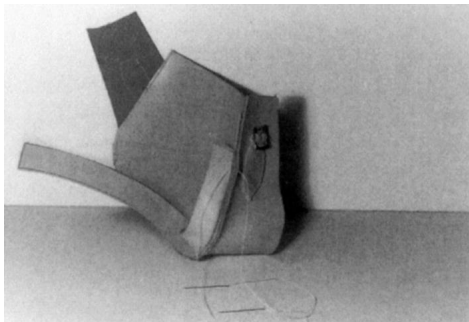
Fig 165 Sewing along the three thicknesses of leather.

4. Thread the needles on thread, stab the first hole with the diamond (stitching) awl, insert one needle and equalize thread on both sides in the usual way for saddle stitching. Proceed to sew.

5. Continue stitching around the curve through all three panels until the top of the small gusset is reached. (N.B. This point may not coincide exactly with the V mark on the main front panel. Continue sewing to the top of the main front panel.)

6. At the top of the main front panel, trim away excess leather from the gusset (which was cut oversize) in order to make it possible to loop a stitch over (*see* Stitching for Strength, <u>page 128</u>) to consolidate the strength of this corner. Make sure the material removed from the gusset top is of a constant width, so that the gusset does not slope at the top. Stitch backwards a couple of stitches, then cut off threads close to the leather surface, taking care not to scratch the leather.

7. Remove the work from the clam. Measure the exact width of the leather trimmed from the right-hand gusset top, then trim the same width from the top edge of the other side. Loop stitches over the top, as in Step 6.
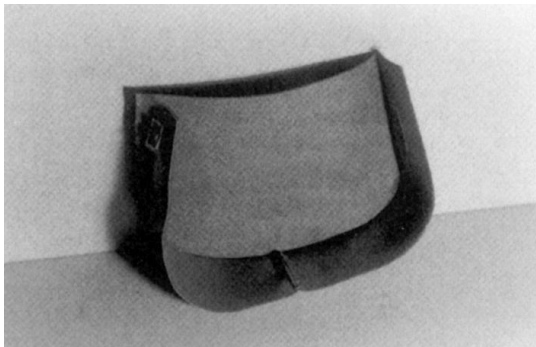
Fig 166 Back view of main body panel and gusset assembly.

8. Match the top left corner of the front main panel with the top of the gusset and begin stitching. Continue down for 25mm (1in), then remove the work from the clam.
9. Identify the exact position of the top of the small gusset with relation to the V mark on the right side of the front main panel, unless it meets this mark precisely. Mark the proposed position of the other end of the small gusset against the left edge of the main pocket panel in the same relative position. For instance, if the small gusset top coincides with a point 6mm (¼in) below V mark, measure this distance below left-hand V mark, and mark this point for panel alignment to match the other side.
10. Replace work in the clam and continue stitching, matching the small gusset end to this new mark.
11. Stitch around as before until the stitching meets starting point of Step 4. Stitch across two stitches to lock threads in place and then cut them off. This is the hardest part of the whole construction and the least rewarding.
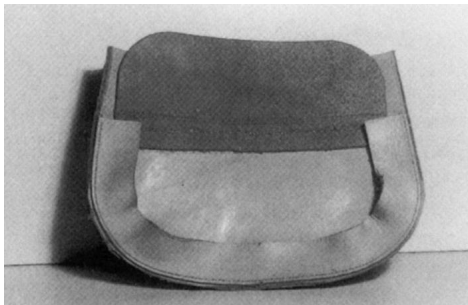
Fig 167 Small pocket flap attached to front of main body.

FIXING SMALL POCKET FLAP TO FRONT OF MAIN BODY PANEL

1. On the flesh-side of the small pocket flap, measure and mark two pen lines parallel to the long straight side, 25mm (1in) and 35mm (1⅜in) from it.
2. Using a gouge, or skiving cautiously, reduce the thickness of the area of leather between these two lines, so as to create a band of thinner leather that will allow the flap to bend. It is not necessary to reduce leather by as much as half, as long as it is reduced slightly.
3. Using the adjustable creaser (hot), crease a line around the front and side edges of the grain side, 3mm (⅛in) from the edge.
4. Bevel both sides of front and side edges, then burnish them.
5. Mark a third pen line on the flesh-side, 15mm (⅝in) from the straight edge. Stitch-mark along this line.
6. Scratch the grain surface below this line, to allow for adhesive penetration.
7. Position the small pocket flap with each corner at the pin-mark on the main front flap, grain side to grain side. The small gusset needs to be held aside to prevent its getting in the way. Mark this lower line, using the point of a bone folder. Scratch the grain leather 13mm (½in) or so above this line, taking care not to

scratch below it.

8. Apply latex adhesive below the stitch-marked line on the grain sides of the flap leather and 9mm (⅜in) above the marked line on the main pocket front; stick the edge of the flap in position.

9. Stitching through pocket flap and main pocket, sew pocket flap onto main pocket.

STITCHING FRONT POCKET PANEL TO SMALL GUSSET

1. If not already done, use the pattern to mark the positions of the three male ring spring fasteners on the grain side of the leather of the front pocket panel.

2. Using a steel-faced hammer and fixing tool, fix the three male press-studs in place on the pocket panel.

3. Using the stitching groover, make a groove 3mm (⅛in) in from curved edges of the pocket panel, then stitch-mark along this.
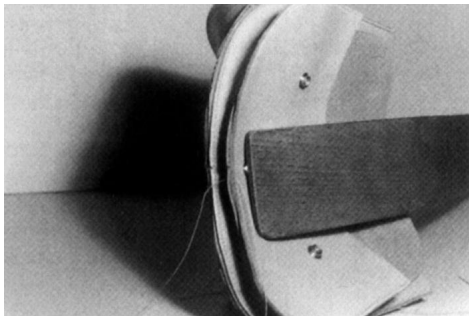
Fig 168 Aligning front pocket panel with gusset centre marks.

4. Manipulating panels into the clam, position the centre V marks on the small gusset against that of the front pocket. Begin to stitch as shown: towards the right side of the panel for those who are right-handed, and to the left for left-handed.
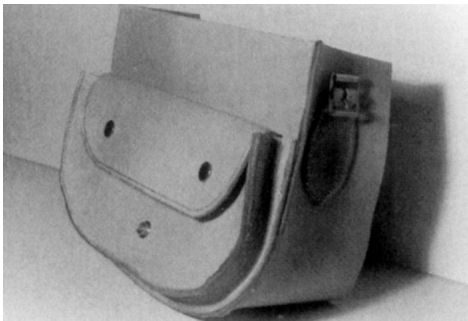
Fig 169 Front view of completed front pocket panel.

5. Continue to stitch around one half of the pocket panel until the gusset top is reached. If the top of the pocket panel is not reached, measure the exact distance it extends beyond the end of the gusset.
6. Measure this same distance on the other side, then trim off this excess leather from the pocket panel, ensuring that the cutting line is parallel to the top-line.
7. Stitch over the top of the join of gusset and pocket panel (as before), then stitch over the final two stitches and trim away excess thread.
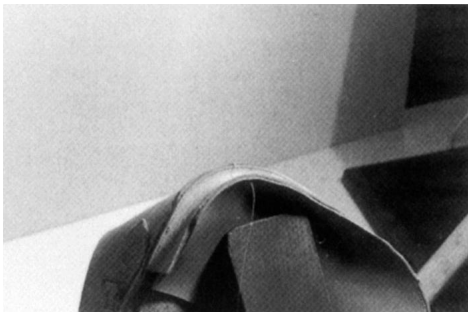
Fig 170 Stitching around front pocket panel.

8. Start stitching at the top corner on the other side of the panel, and stitch down to meet original stitching and to overlap by three stitches. Trim off excess thread.

9. Rub a pencil's lead over the top of the male press-studs on the pocket panel; then fold down the pocket flap, position the folded-down flap centrally, and press hard against the leather. Open flap, and the graphite from the male press-studs will have been transferred to the flesh-side of the leather, marking the correct position for the female studs.

10. Fix the two female press-studs in place on the pocket flap, then close the flap and press along the fold-line to create a fold; since it was skived, this area should be thinner than the rest, and thus more easily bent.

FITTING OF LINING LEATHER AND ATTACHING TO MAIN BODY

1. With the stitching groover set at 3mm (⅛in), groove all around the edge of the main body panel and front flap, then stitch-mark within this area.

2. Measure and mark a pen line on the flesh-side of the main body panel, 40mm (1⅝in) beyond the V marks denoting the top-line of the body. This is, in effect, this distance beyond the fold-line, so

that the front flap will be lined right across its underside (flesh-side), along the folding flap and 40mm (1⅝in) beyond.
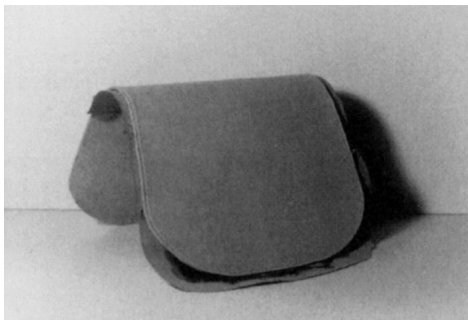
Fig 171 Method of sticking leather lining to main body to allow for fold length.

3. Place the lining leather panel on the flap part of the body panel and front flap (flesh-side to flesh-side), with the straight edge against the line marked in Step 1.

4. Apply PVA adhesive to an area of both flesh-sides, extending approximately 100mm (4in) beyond this line: the area of the flap's curve. Align the straight edge of the lining leather with the pen line, and stick the first 12mm (½in) in place.

Fig 172 First stitch to join back and flap panel to gusset.

5. Bend the piece, as in the photograph, pressing the lining leather in place from underneath so that the lining leather is attached along the curve. (If the lining were to be stuck in place with the main body and flap laid out flat, when the panel was shaped in its ultimate position, the lining leather would be stretched.) Smooth out the lining leather from underneath, ensuring there are no air pockets. The lining is cut oversize, and should extend beyond the

front flap as shown.

6. Manipulating the back and the main body panel within the clam jaws, align the central V mark on the main body panel with the join-line of the main gusset.
7. Begin stitching as shown: from centre to left if right-handed, from centre to right if left-handed.
8. Continue stitching around the curve to the top of gusset (left-hand side). Stitch a couple of stitches beyond this point, then reverse, so that the flap-over point that will be under stress is reinforced with these extra stitches. Cut off thread.
9. Identify the position of the top of gusset (left-hand side) in relation to the V mark on the main body panel. Ascertain and mark this same relative position on the main body panel on the other (right-hand) side, using the V mark on that side.
10. Starting at the top of gusset (right-hand side), stitch down the other half of the bag, stitching twice over the first (flap-over) part, as in Step 8. Continue stitching a couple of stitches beyond the meeting point of the lines of stitching (at the centre of the base).
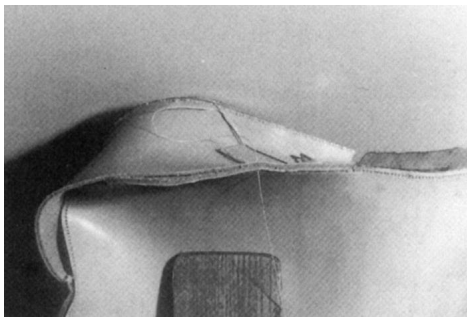
Fig 173 Stitching main body to gusset from right-hand side.

COMPLETING FRONT FLAP AND FIXING FEMALE PRESS-STUD TO

LINING

1. Fasten the pocket flap shut with the two ring spring fasteners.
2. Mark the bottom male fastener joining surface by rubbing along the metal with a pencil's lead.
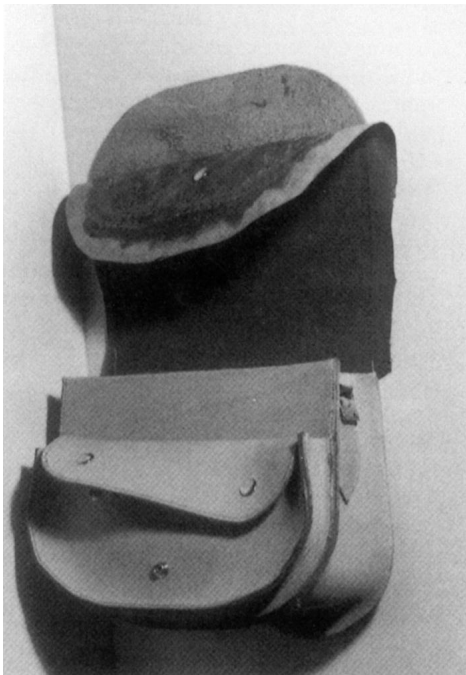
Fig 174 Fixing female fastener half to lining leather.

3. Close the main front flap, ensuring that the loose, unglued, lining panel is uniformly flat, and fitting, close up across entire surface of the reverse side of flap. Make sure that the flap fits against the bag centrally, and that the base of the flap and bag are in line, then press hard against the male fastener, so that the lining leather will be marked.

4. Open flap and ascertain whether a pencil circle has been marked on the grain side of lining leather. If not repeat Steps 2 and 3. Using the main flap and body pattern, check that this mark coincides with the centre line; if not, adjust it so that it does.

5. Punch a hole in the *lining leather only* where material is marked by the pencil circle, then fit the female fastener in this hole, again fitting female fastener to lining leather only. To do this it will be necessary to part the flap and lining leathers completely.

6. Close flap and press male and female fastener closed, checking that everything lines up as it should.

7. Open flap, then glue the lining in position against the flap, using PVA adhesive applied to both surfaces.

8. Starting from the left-hand side, stitch right around front flap and lining, overlapping initial and final stitching by two or three stitches.

9. Trim off excess lining material.

FINISHING OFF EDGES

1. Using either the clicker knife or the skiving knife, trim along the edges of the bag, where the panels have been sewn together, so that all joining edges finish level.

2. Bevel the edges of the panels with the edge-beveller. Do not bevel the lining leather – being thinner it does not require it.

3. Burnish all of these edges.

MOULDING BAG TO SHAPE

Because the leather is thick, stiff and unyielding, it may form itself into a displeasing, awkward shape, as a result of its having been stretched and bent to accommodate curving gussets. The solution is to soak the bag with warm water, then pack it with newspaper

and carefully mould it into the correct shape. Allow it to dry natur-ally and slowly.

> **Caution**
> Some brass-finish press-studs/fasteners can stain untanned leather when it is wet, so try to avoid soaking these areas too much. If staining occurs it can usually be successfully re-moved using oxalic acid (*see* Chapter 1).
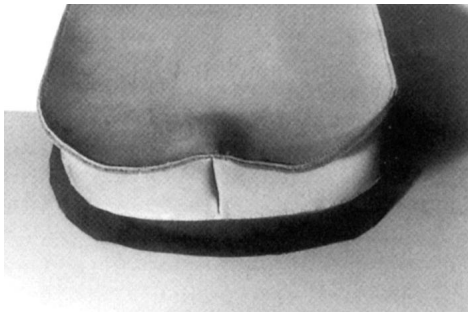
Fig 175 Ill-shapen bag before moulding it to shape.

1. Use a sponge to soak the bag thoroughly with warm water until it feels soft and pliable. It may be necessary to wet the inside of the leather as well to achieve this.
2. Bend and push the bag into the desired ultimate shape, paying particular attention to:

   • The base. Main gusset join at base may be pushing down, sides may be pushed out or non-matching, and when the bag is placed on a flat surface it may slope forwards or backwards. Push base as necessary until bag sits comfortably, untilted, on a flat surface.

- Tops of sides of gussets. These should show a gentle curve inwards to allow the bag's shape to slope backwards from front to back.
- Front pocket. This will have a tendency to lie flat, making fastening of the flap fasteners difficult. Pack it out with newspaper, then crush this down from the outside to make the pocket lie flat rather than bulged out. Fasten the flap with the studs and let it dry in this position.
- Front of main body. Pack the main body of bag with newspaper and crush it down as above, achieving a flat, uncorrugated edge.
- Front flap. Close bag and fasten fastener. The flap should present a smooth flat face, with no depression where fastener may pull it down at the centre. Adjust as necessary.

3. Allow the bag to dry naturally (in front of gentle, but not excessive, heat).
4. After first stage of drying (about a day), the original, lighter colour may be beginning to return. Carefully remove the newspaper from inside at this stage, and leave the flaps open: unless the flaps are open and newspaper removed, the inside of the bag will not dry. Allow the bag to continue drying until it is completely dry both inside and out.

The front flap may take considerably longer to dry than the rest, as the lining leather prevents moisture from drying out from behind. In time the colour will be uniform across the whole of the outside of the bag.

MAKING STRAP

1. Using a template cut from thick cardboard, shape the strap ends to a point.
2. Crease a line 3mm (⅛in) in from the edge, both sides.
3. Punch several holes, starting 55mm (2¼in) from each end, at 15mm (⅝in) intervals.
4. Bevel the edges, both sides.
5. Burnish edges.

FINISHING OFF

If adhesive or marks are on the grain surface, clean them off using oxalic acid solution (*see* Chapter 1). The soaking process can make the leather hard and brittle, so, if necessary, use a leather-rejuvenating preparation to reintroduce suppleness to the dried-out leather. As with the small plain bag, finish either with a plain wax finish or stain darker (with dye or antique finish) according to taste.

CARVED AND THONGED PROJECTS

CARVED LEATHER KEY-CASE

Fig 176 Key-case.

DESCRIPTION

Key-case with floral and leaf design carved on the back, the raised sections of which are coloured red, yellow and green with a brown background. Thonging (double loop stitch) around the edge and ring spring fastener fastening.

MATERIALS

- 2.5–3mm ($^3/_{32}$–⅛in) thick vegetable-tanned leather.
- A smaller piece of thinner leather.
- Some 3mm (⅛in) flat thonging (brown).
- One ring spring fastener (or, alternatively, a press-stud).
- Key-case fitting and two rivets for fixing this.
- Acrylic dyes of the different colours.

• Acrylic surface-sealer.

TOOLS

• Clicker knife.
• Swivel knife.
• Skiving knife.
• Needles.
• 305mm (12in) ruler.
• Scratch awl.
• Chisel punch.
• Thonging tools.
• Small brush for applying dyes.
• Stamps: beveller, pear shader, veiner,
• seeder, backgrounder, camouflage.
• Stylus.
• Tracing paper and pencil.
• Sponge, water and water container for casing leather.
• Rivet-fixing tool
• Ring spring fastener fixing tool.

METHOD

CUTTING PIECES AND TRANSFERRING DESIGN TO CASED LEATHER

1. Cut the main leather piece as shown in the diagram, plus another piece of thinner leather, size 130×55mm (5⅛×2³/₁₆in).
2. Trace the design overleaf onto tracing paper, using a sharp pencil (HB or B). Case the main panel *(see* Chapter 6*)*.
3. Transfer the design to the leather *(see* Chapter 6*)*.

Left   all corners rounded   Right

main body
1 LEA

130mm
(5⅛in)

10mm (⅜in)
centre line
10mm (⅜in)

10mm (⅜in)

180mm (7⅛in)
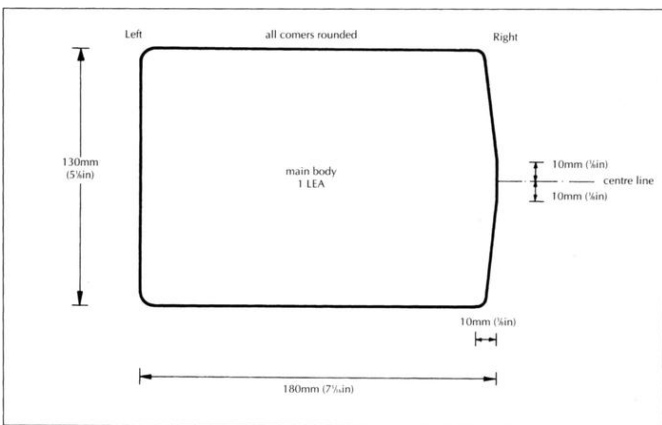
Fig 177a Carved leather key-case – cutting-pattern.
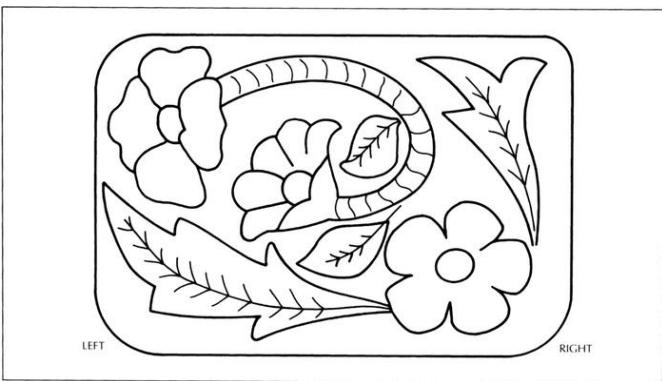
Fig 177b Carved leather key-case – design that is to be transferred to leather (not to scale).
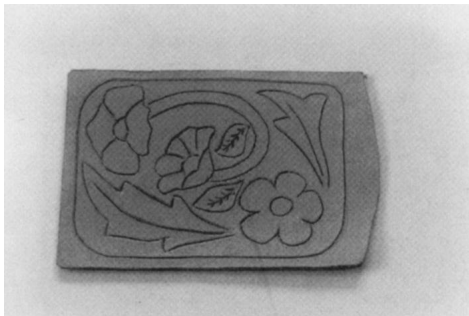
*Fig 178 **Key-case carving**. Design carved onto leather surface.*

CUTTING DESIGN LINES AND STAMPING

With the swivel knife, cut along all the lines *(see* Chapter 6*)*. Remember to hold the knife in the correct way, and to turn the leather with the non-cutting hand for curves. As swivel-cutting continues, it will be necessary to re-case the leather from time to time: always from the front, never from the back (apart from the initial wetting).

For stamping procedures below, refer to Chapter 7 for instructions on the use of individual tools.

1. With the camouflage tool, stamp along the stem of the flower (*see* photograph).

Fig 179 Camouflage tool used along flower stem; pear shader used for flower petals.

2. Use the pear shader to give shape and contour to the flower petals. The idea is to 'squeeze' the leather surface towards the edge by 'walking' the tool, so as to leave a narrow raised lip at the outer perimeter, which accentuates the petal-like structure of the design. It can be difficult to manipulate the tool along the leaves of the central flower, as they are so narrow. Tilt the tool, so that only the narrow end of the head is in contact with the leather as it is struck.

Fig 180 Beveller used to flatten one side of lines, and veiner used for veins on large leaves.

3. Then use the beveller to flatten down one side (background side) of the area adjacent to cuts. Use the tool as a means of compressing areas surrounding the leaves, flowers and stem, so that the moulded item stands out, raised above the background surface. As the beveller flattens the fibres, the slit may show up as whiter than its surroundings. Subsequent dyeing will eradicate this colour difference. Also bevel on the inside of the cut that runs around the periphery of the whole design. In this way, the background area is delineated by a bevelled angle one side (surrounding flowers and leaves) and also on its outer edge, leaving a raised area between the two.
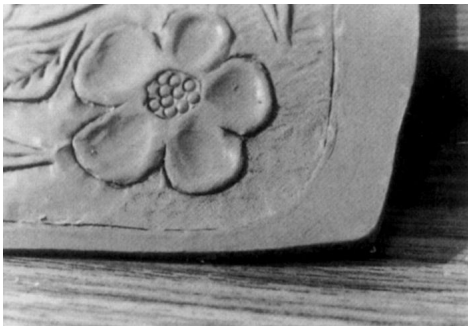
Fig 181 Seeder and backgrounder tool work.

4. Use the veiner for veins on the large leaf.
5. Then with the seeder, mark the three flower centres.
6. The background tool should then be used for the whole of the background. This particular operation requires the leather to be fairly dry in order for an even pattern to be produced.

Fig 182 *Carving and stamping completed.*

7. Check over the whole design, and re-do any stamping operations that may be necessary.
8. Allow the panel to dry out completely before colouring with any dyes.

COLOURING

Before working on the actual project, practise using the brush and dyes. Paint the raised areas (leaves, petals, stem) first and the background last Carefully paint the side (edge) of the raised areas, ensuring that the colour does not bleed onto the background; a tiny overlap can probably be covered with the darker background colour, but a larger area will not. If the edges of the raised areas are unpainted they will show afterwards, especially when the article is folded in use. Similarly, carefully paint the background area along its edge line, where it abuts the uncarved, natural leather border.

Acrylic dyes

- These chemicals sit on the surface, rather than penetrate into the leather pores, as spirit- and water-based ones do. This is one of the reasons why it is imperative to seal the surface after dyeing is completed.
- The colours can rarely be successfully covered up by others, as they are to some extent opaque, allowing colour beneath to show through.
- While they are still wet, acrylic dyes are easy to dissolve under running water, so always wash brushes (and hands) immediately after use.
- Very small, good-quality brush (es) are required for this type of work. The most suitable ones form a point when wet, which is ideal for accurate painting.
- When dyeing appears to be completed, fold the key-case (or whatever) along the lines it will eventually take. Unpainted areas, especially along cut-lines, may become apparent and these must be repainted carefully and the process repeated

until no tiny unpainted 'cracks' open up.

SEALING THE SURFACE

The leather is likely to be very dried out and inelastic after repeated wetting and drying, because this process removes the tanning oils. To replace these it is usually advisable to apply some leather conditioner. Make sure that the chosen conditioner can have a clear finish applied over it. Most can, but very waxy ones cannot. Wax or polish the conditioned surface afterwards as instructed by the product's manufacturer, then apply the chosen clear finish: do not use a lacquer-based finish (based on volatile solvent), as these do not work well when applied over conditioners. Acrylic was used on the example shown.

KEY-CASE FITTING PANEL AND THONGING AROUND EDGE

1. Mark and punch holes for rivets in the key-case fitting panel, using the key-case fitting to mark it.
2. Rivet the key-case fitting onto the panel.
3. Fix the key-case fitting panel in place on the inside of the main panel. Stick the top and bottom short edges using latex adhesive.
4. Mark a line (using dividers) 3mm (⅛in) in from the edge on the grain side of the main panel.
5. Use the chisel punch to punch thong holes along this line.
6. Starting at the centre of the base (long) edge, thong all around the key-case, using the double loop stitch (*see* Chapter 8). Remember to go through corner holes three times. If joining is necessary at a place where there is only a single-leather thickness, follow the joining procedure (Chapter 8), ignoring the part referring to tucking spare ends between the leather panels.

FINISHING OFF

1. Attach a male ring spring fastener half (or press-stud), taking its position from the marked point on the pattern.
2. Apply pencil lead to the top surface of male fastener, then fold

the key-case shut and press the closing panel tightly against this metal surface, to transfer graphite marks.

3. Open up key-case, punch a hole in the centre of newly marked position and fix the female fastener there.
4. Clip the key-case shut and check that it fastens correctly.

Fig 183 completed thong handbag.
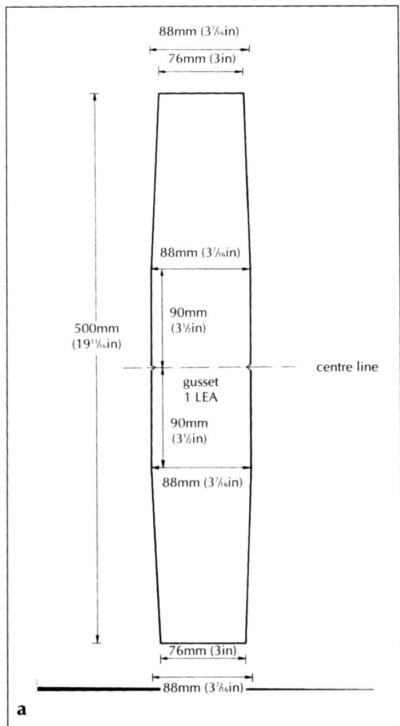
*Fig 184a-c **Thong-assembled handbag**. Cutting-patterns.*

front panel
1 LEA

165mm (6⅝in)

82.5mm (3¼in)   82.5mm (3¼in)

187mm (7⅜in)

60mm (2⅜in)

35mm (1⅜in)

35mm (1⅜in)

25mm (1in)

30mm (1⅛in)   30mm (1⅛in)

25mm (1in)

187mm (7⅜in)

185mm (7¼in)

35mm (1⅜in)

10mm (⅜in)
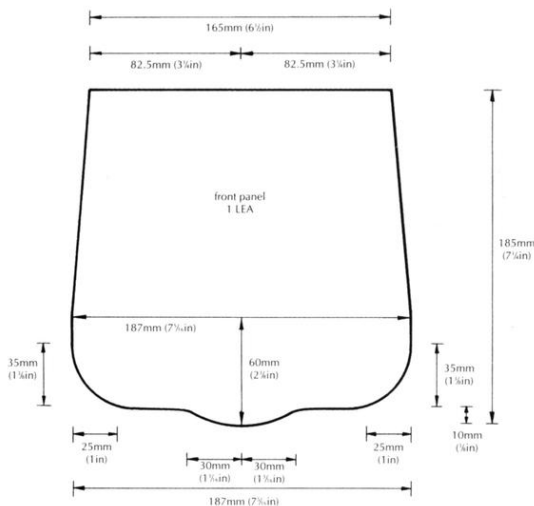
b

THONG-ASSEMBLED HANDBAG

DESCRIPTION

Medium sized bag with shaped front, overlapping flap and central fastening strap that fits through a loop that protrudes from bag front, through a thong-framed hole in the flap front. Size: 195mm (7¾in) wide (at widest point), a 210mm (8¼in) high, 90mm (3½in) deep at the widest point of gusset base. Single-piece gusset All joining by thonging (mostly double loop stitch), apart from the attachment of centre strap to body, attachment of centre strap loop, backing panels and straps to gusset, which are all stitched. This is the kind of project that lends itself to carving and staining (example is

plain).

MATERIALS

- 2.5–3mm ($^3/_{32}$–⅛in) thick leather.
- 3mm (⅛in) flat thonging.
- Brown thread.
- Paper and card for patterns.
- Dyes if required.
- Surface sealer.
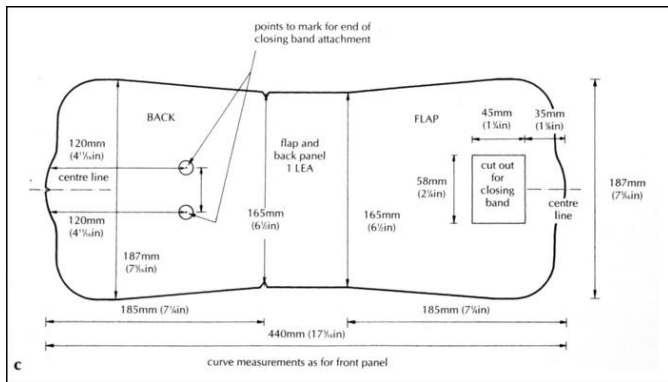
TOOLS

As for key-case (apart from the carving and stamping tools unless required), plus:

- A stylus or lacing fid is useful for enlarging holes during thonging.
- Clam or lacing pony.
- Pricking iron or stitch-making wheel (eight or nine stitches to the

inch).
- Edge beveller.
- Needles and stitching awl.

PREPARATION

1. Cut pieces from paper, then card, then leather. In addition to these three leather pieces, also cut:

   two spacer pieces, 33×33mm ($1^5/_{16}$×$1^5/_{16}$in)
   one fastening loop, 105×33mm ($4^1/_8$×$1^5/_{16}$in)
   one closing band, 330×37mm (13×$1^7/_{16}$in)
   two straps, 600×25mm (24×1in)

2. Carve and/or stamp a design on leather panels if required.
3. Apply a suitable finish to all the component panels and polish as required. It is not advisable to apply wax or dye to a thonged article after it has been thonged, as the fluid or wax may gather in the folds and recesses of the thong leather.

BODY FRONT PANEL

1. Place the flap part of the flap and body panel over the front panel so that the edges are precisely aligned and, using the scratch awl, mark the four corners of the hole cut from the flap, intended for the closing band.
2. With the latex adhesive, stick the two spacer pieces together, flesh-side to flesh-side.
3. Trim all four sides to eliminate any overlaps, then edge-bevel, stain and burnish these.
4. Groove and stitch-mark 3mm (⅛in) in from around all four edges of the double-thickness unit.
5. Stick the spacer in place, centralized within the four pin-pricks on the body front. Then stitch around to hold it in, place.
6. Round off the corners of the fastening loop, then groove and stitch-mark a line from each end, 3mm (⅛in) in.
7. Bevel, then stain and burnish all the loop's edges.

8. Stitch-mark and stitch the left-hand edge of the loop, parallel with the spacer panel, its edge 30mm (1⅛in) to the left of it. Stick and stitch the right-hand edge of the loop, so that the right-hand edge is 90mm (3½in) away from the left, and the central part bows upwards, allowing space for the central locking rib to loop under when bag is closed.

9. Using either the dividers or adjustable creaser (cold), mark a line 3mm (⅛in) in all around the edge of the main body front. Use a thonging chisel (or punch round holes if preferred) to punch holes all around the perimeter (all four sides, including the top).

FIXING STRAPS TO THE GUSSET

1. Crease the straps 3mm (⅛in) in from the edge and bevel and burnish edges to suit (i.e. using either dark or colourless edge coating).

2. Stitch the straps in place on the top side of the gusset at each end, following instructions as for small plain handbag

FIXING FRONT BODY PANEL TO GUSSET

For thonging techniques referred to below, *see* Chapter 8.

1. As in Step 9 above, mark lines and punch holes 3mm (⅛in) from the long edges of the gusset.

2. Align the central V mark of the gusset with the base of body from panel centre V and position work in clam or lacing pony.

3. Begin thonging the panels together, using the double loop stitch.

4. When the top right-hand edge is reached, ascertain whether or not either the gusset or the panel overlaps the other. If the gusset is overlong, trim off the overlapping end, then measure and cut exactly the same amount off the other (left-hand) end. If the body front is overlapping the gusset, trim a strip of even width from its top to make them meet exactly.

5. Continue thonging across the top edge, then join the left-hand gusset corner with the left-hand body top edge and thong down the side and along the bottom, meeting the start of the thonging at the centre of the base. Join the thonging to start point (*see*

).

MAKING MAIN BODY AND FLAP PANEL

1. Mark a line 3mm (⅛in) outside the hole for closing-band rectangle and make slots along this with the thonging chisel.
2. Thong around all four sides of this hole, using the double loop stitch.
3. Round off one end of the central fastening strip (closing band), then crease a line 6mm (¼in) all around its edges.
4. Bevel, stain and burnish all around the edges of the fastening strip.
5. Stitch-mark around a square area at the squared (not rounded) end. This should be of side length approximately 35mm (1⅜in).
6. Stick this marked area to the main body, with the end corners aligned with marked points, then stitch the fastening strip onto the back of the main body.

FIXING MAIN BODY AND FLAP PANEL TO BAG

1. As when fixing the body front to the gusset, align central V mark of the long body panel with central V mark of the gusset.
2. Begin thonging at this point and continue around the complete circumference, matching up the right-hand edge of the gusset with an identical point on the left (fixed) side, using the side V marks, as for large plain handbag (*see* Chapter 10).
3. Close bag and check that the fastening strap successfully closes over the folded down flap and under the loop to effect a neat finish.

FINISHING OFF

Join the straps by means of a buckle, in the usual way. Use wax or finish on any areas not already treated.

SMALL, CURVE-FRONTED HANDBAG

DESCRIPTION

Similar to small plain bag (Chapter 10), the front flap has a carved leaf and flower design, curved frontage and a central leather rib continuing below flap to base, and a ring spring fastener (concealed) fastening. The carved design was left uncoloured for the example, but colouring is another option. White stitching and a natural (light-coloured) finish were used for the example. Size: 230mm ($9\frac{1}{16}$in) wide, 165mm (6½in) high, 85mm (3⅜in) deep.

Fig 185 Completed small curve-fronted handbag.

MATERIALS

- Natural vegetable-tanned leather, 2.5–3mm ($\frac{3}{32}$ –⅛in) thick.
- White thread.
- Ring spring fastener (a large press-stud would be equally acceptable).
- Buckle for strap.
- Paper and card for patterns.
- Acrylic dyes (if design is to be coloured).
- Wax or other kind of surface sealant.

TOOLS

As for small plain handbag ([Chapter 10](#)), plus carving and stamping tools (as for key-case).

PREPARATION

.   Cut patterns, then the two leather pieces (i.e. flap and back panel and gusset). Also cut:

one centre rib, 370×50mm ($14^9/_{16}$×2in)
2 straps, 600×20mm (23½×¾in)
1 front panel, exactly the same as that for the small plain handbag in [Chapter 10](#).

.   Fix a male ring spring fastener half (or male press-stud half) on the front body panel. It should be at the front and centralized, 19mm (¾in) up from the baseline.

.   Then sew the straps on the gusset and sew the front body panel to the gusset exactly as described for the small plain handbag ([Chapter 10](#)).

CARVING AND STAMPING DESIGN ON FRONT FLAP

1. Trace the design onto tracing paper, then case the leather and transfer this, design, as described for key-case.
2. Cut the lines with the swivel knife (*see* [Chapter 6](#)).
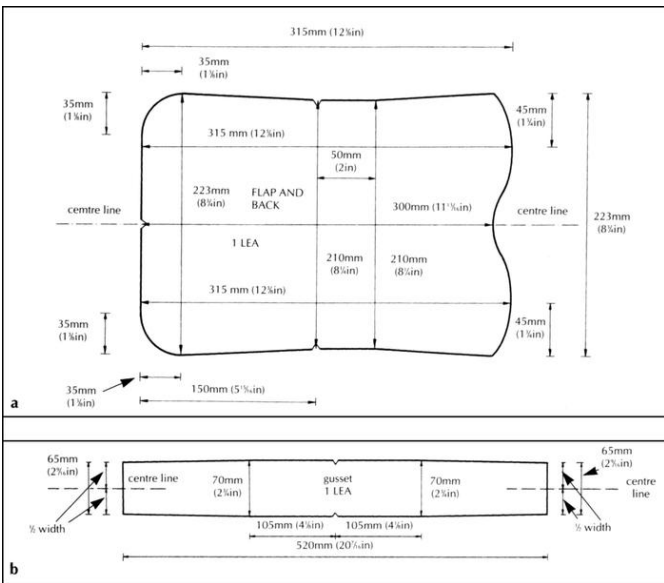
Fig 186a-b Small, curve-fronted handbag. Cutting-patterns.

3. Use stamping tools in this order: camouflage, for around flower centres (at base of petals); pear shader for flower petals; beveller for background areas (see key-case design description); veiner for leaf; seeder for flower seeds (centres); and background tool for the background (*see* Chapter 7.)
4. Examine tooled and carved areas and repeat work as may be required.
5. Allow panel to dry out completely.
6. If the carved-and-stamped design is to be coloured, do so now; if design is dirty due to finger (or other) marks, clean it with oxalic

acid before staining it with dyes.

FIXING CENTRE RIB TO FRONT FLAP AND BODY PANEL

1. With the stitching groover set to 3mm (⅛in), groove a line all around the four edges (grain side) of the centre rib, then stitch-mark within this groove.
2. Position the centre rib on the main panel centrally, so that its bottom edge aligns with the base of the back. Measuring the centre of its width and marking a line underneath (flesh-side) of the rib to align with the centre of the front flap base is helpful, but more important is to make sure that the rib does not overlap either of the two carved design areas, which both come close to its edges. If you are unused to stitching leather it may be advisable to pierce the stitching holes in the central rib alone at this stage (*see* Neat stitching, Chapter 4).
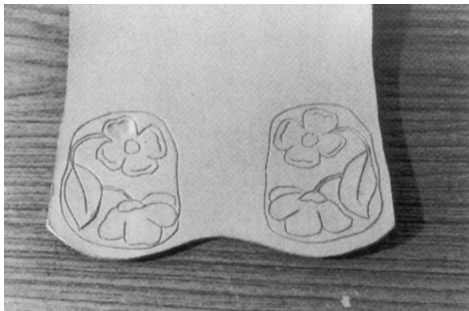

*Fig 187 **Small curve-fronted handbag**. Design carved with swivel knife.*

3. Scratch the grain surface beneath where the central rib is destined to go, just along the central 2.5cm (1in) or so; do not scratch right up to the edges of proposed rib-covered area.

Fig 188 Design carved with swivel knife and stamped.

4. Apply latex adhesive to the back of the centre rib and top surface of the flap and back panel (applying adhesive only to the central area lengthways, not right up to the edges) and stick the rib in place, carefully aligning it as in Step 2.

5. Stitch along the long edges, stopping on both sides at the point where the curved front flap ends underneath the rib.

FIXING BACK AND FRONT FLAP TO FRONT PANEL AND GUSSET ASSEMBLY

1. With the stitching groover set to 3mm (⅛in), groove a line all around the edges between the two V marks on the back panel area of the large panel: the section that is to be attached to the gusset.

2. Readjust the stitching groover to 2mm ($^{1}/_{16}$in), then complete grooving around the rest of the panel, stopping either side of the centre rib at the front.

3. Using the bone folder, mark the upward curve of the concealed front flap on the rib. Ensure that this line follows a gentle swooping upward curve, in harmony with the downward curves either side. Stitch-mark along this marked line. If required, pierce all the initial awl holes around the edge of the panel alone (except

where central rib overlaps, where two thicknesses of leather will be pierced).
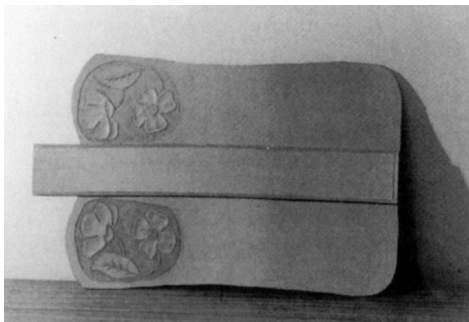

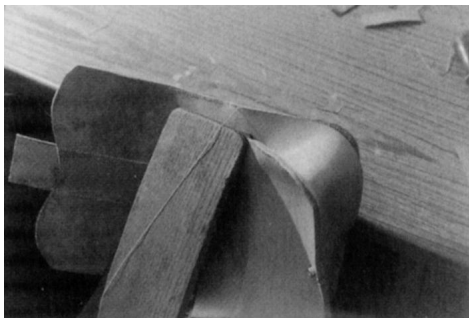*Fig 189 Centre rib fixed to front flap and back panel.*

Fig 190 Stitching down from other side.

4. In the usual way, align the central V mark on the panel base with the V mark on the gusset, and begin stitching along the base

(through central rib) around the corner and up to the left-hand back top corner of bag. Stop at this point.

5. As usual, identify the position of the end of the gusset with the V mark on the panel, then take bag out of the clam and begin to stitch at the right-hand back top side, at the same position relative to the V mark. Stitch down to meet the beginning of stitching at the centre of the base.

6. Starting at the left-hand back edge, stitch around the front of the flap to the right back edge. Overlap new and old stitching by three stitches, and make sure that the points where the flap begins and gusset ends are stitched across a couple of times for additional strength.

FIXING FEMALE FASTENER TO CENTRAL RIB LOWER PART

1. Cut a piece of matching leather, 65mm ($2^9/_{16}$in) wide and 75mm (3in) long (or slightly over this size).

2. Trim the top edge to a curve so that when the flesh-side is placed against the flesh-side of the centre rib tongue, it meets the curved lower edge of the front flap reasonably snugly. Make sure that the new piece of leather overlaps the centre rib tongue on all three sides.

3. Rub a soft pencil against the male fastener outer rim, then place the infill piece of leather in position against the rib tongue. Close the bag's flap shut, still keeping the infill in place, then make sure the flap is aligned correctly at the base (rib's tongue lower edge should be in line with bag's lower edge) and also at the sides. Press hard to transfer the pencil graphite onto the infill piece.

4. Open bag, remove the infill piece, punch a hole in the marked place and fit the female half of the fastener to the infill piece. Fasten the infill to the bag by uniting the two halves of the fastener.

5. Close the bag's flap and press the infill against the centre rib tongue. Keeping the tongue against the infill, make sure that the flap is in the correct position (*see* Step 3). Make a pen line on the infill to delineate this position later.

6. Open flap. Apply latex adhesive to the flesh-side of the tongue

and infill, and stick the two together, ensuring that the tongue is in the previously marked position (observing pen line) and again checking that the flap is correctly aligned.
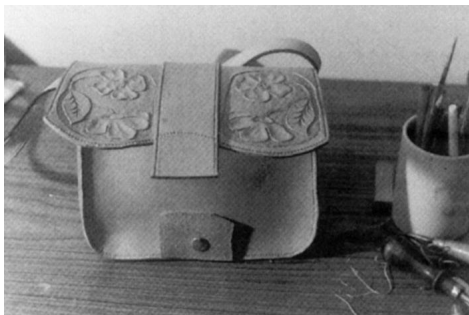

Fig 191 Fastener halves married before centre rib is fixed to male fastener's backing panel.

7. Carefully pull the press-stud halves apart (not disturbing the glued join) and trim around the tongue to remove the excess material from the infill behind it.
8. Use the stitching groover to groove a line 3mm (⅛in) from the base-line of the tongue. Stitch-mark along this line and pierce preliminary holes through both thicknesses of leather if this was done for the remainder of the stitching.
9. Starting two stitches back from the previous stitching on the centre rib, stitch along the remaining three lengths.

FINISHING OFF

Fit a buckle to the straps to join them at the centre, then apply a suitable finish.

USEFUL ADDRESSES

SUPPLIERS OF LEATHER AND TOOLS

All the following operate a mail order service, and all will send a catalogue and/or a price list. Always check with individual companies as regards stock and availability.

J T Batchelor Ltd., 9–10 Culford Mews, London NI 4DZ. Tel: 0171 254 2962/8521

Pearce Tandy Leathercraft Ltd., Billing Park, Wellingborough Road, Northampton NN3 9BG. Tel: 01604 407177

Craftwares Ltd., Hotham, York YO4 3UN. Tel: 01430 423636/423122.

BOOKBINDING SUPPLIES, PLUS THIN LEATHERS, LEATHERCLOTH (REXINE), BOARDS AND TOOLS:

J Hewit and Sons Ltd., Sales Office, Unit 28, Park Royal Metro Centre, Britannia Way, off Coronation Road, Park Royal, London NW10 7PR. Tel: 0181 965 5377.

COURSES

Cordwainers College, 182 Mare Street, London E8 3RE. Tel: 0181 985 0273.

GLOSSARY

Awling   Technique used in pattern-cutting for measuring around the circumference of one pattern onto another.

Backstitch   Type of hand stitching where one side of the stitching bites into leather's surface, and the other sits flat on the panel. Useful when soft material may be cut by the thread.

Belly   Stretchable part of cowhide that is generally unsatisfactory for constructing leather goods.

Bevelling   The removal of the sharp 90° angles from the sides of leather edges prior to the burnishing process.

Buckstitch   Type of thonging that leaves a twisted diamond-style loop visible on one side of the leather.

Built-up work   Term for items made from thin leather (skiver) or rexine, stuck to card or board; e.g. jewellery boxes, attaché cases.

Burnishing   The process of consolidating hairy cut-leather edges by applying an edge-finishing solution and rubbing vigorously with a cloth or an edge-burnishing wheel.

Butt   High quality part of cowhide.

Butt stitch   A type of hand stitching where pieces of leather are butted against one another and saddle-stitched across to effect a join.

Carving   The cutting of leather's grain surface to produce a decorative design.

Casing leather   Dampening of leather prior to carving or stamping.

Chrome-tanned leather   Leather whose surface has been stained and sealed, so as to prevent the ingress of water or dyes; unsuitable for stamping or carving.

Creasing   The imprinting of a dark line on grain's surface at a predetermined distance from the edge, for decorative effect and to compress loosened edge fibres.

Cut-edge work	Where leather is joined, flesh-side to flesh-side, and the cut edges burnished and stained to match main surface areas.
Cutting-patterns	Thick card pattern produced for cutting leather or other material to exactly the same size.
Drystick	Method of gluing, whereby adhesive is applied to both surfaces and allowed to dry before bringing them together.
Edge bevelling	As bevelling.
Edge-finishing	Encompasses bevelling and burnishing.
Faced-edge work	Where two turned-over-edges are stitched together.
Flesh side	Underside (hairy side) of leather panel.
Full grain	Top surface of leather that has not been buffed.
Grain side	The top (shiny) surface of leather panel.
Gusset	The sides and base of a handbag.
Heavy leather goods	Items made from thick vegetable-tanned leather, e.g. heavy leather belts, robust handbags.
Lacing	The process of joining leather pieces by means of long strips of leather, applied to form a decorative pattern around edges. Otherwise known as thonging.
Light leather goods	Items made from thin, often chrome-tanned, leather, e.g. wallets, purses and soft leather handbags.
Making-patterns	Paper patterns made as a first stage to clarify dimensions; they do not take into account seam allowances.
Paring	Reducing the thickness of part of the leather (flesh side), either along an edge or where a proposed fold necessitates this; otherwise known as skiving.
Pricking out	Marking the position of stiches with a pricking iron or stitch-marking wheel, prior to hand stitching.
Running stitch	Type of thonging (or lacing) where thonging is visible as loops one either side of the assembled article.

Saddle stitch	The most usual type of hand stiching, utilizing a needle on both ends of a length of thread.
Side	Half of a cowhide.
Skin	Leather derived from an animal other than a cow.
Skiving	Reducing leather thickness; otherwise known as paring (*see* paring for more details).
Splitting	Reducing the thickness of an entire panel of leather.
Stamping	Making decorative impressions on leather's grain side, using hand-held stamping tools and a rawhide hammer.
Thonging	Alternative word for lacing (*see* above).
Tooling	General term for decorating leather surface, encompassing carving and stamping.
Turned work	When panels are sewn together with grain sides facing, then the whole item turned inside out.
Turned-over-edge work	When the edges of the body panel are skived, then turned over the gusset edge and all the leather thicknesses stitched through.
Undercutting	Caused when the swivel knife is not held at a 90° angle and slices sideways.
Vegetable-tanned leather	Hide that has been treated with oils and preservatives, but whose surface is receptive to dyes and will absorb water; suitable for carving and stamping.
Wetstick	Type of gluing where the adhesive is applied to one or both surfaces, which are then brought together while it is still wet.
Whip stitch	Straightforward, simplistic type of thonging stitch.

Copyright

Dedication
With thanks to the teaching staff at the Cordwainers College, in particular Mr V. Kozak, for their excellent instruction in the past, and, latterly, Karen Riley and other members of the library staff for all their help.

Photographs by Tony Cooper (cover) and Geoffrey West
Line drawings by David Fisher