Chapter IV

SHAPE-MAKING

THE materials used for the making of shapes are—

(*1*) *ESPATRA.*—This is made from bleached cream-coloured grass grown for the purpose. There are three qualities: (*a*) stiff, (*b*) medium, (*c*) fine and soft. (*a*) and (*b*) have a plaited backing of the shredded grass and a fine white muslin stretched over one side of the grass basket-work. (*c*) has no muslin over the basket-work, and is not stiffened in the finishing processess as (*a*) and (*b*) are. The espatra is woven about 48 in. wide, is usually cut to 24 in. width for convenience, and sold in sheets about 27 in. to 30 in. × 24 in., though when hat brims were more than ordinarily large the espatra was sold in 48 in. width.

(*2*) *COTTON ESPATRA* is very similar in colour and character but is woven entirely from cotton. Strands of cotton are plaited to form a background of fine canvas, over which a fine woven muslin is stretched and then stiffened.

(*3*) *WILLOW BUCKRAM* is also like espatra, but has a backing of plaited willow which is coarser than the shredded espatra grass.

(*4*) *BUCKRAM* consists of several layers of coarse muslin, with a finer one on the surface, well pressed together and stiffened with gum or paste. It is manufactured in black and white, and is from 24 in. to 27 in. in width.

(*5*) *MARLEY NET* is a coarse-meshed cotton net that is highly sized and glazed, and manufactured in black and white, in 24 in. width.

(*6*) *STIFF NET* is softer and finer than Marley net and is slightly glazed on the right side. It is 24 in. wide and is manufactured in black, white, cream, and many other colours.

(*7*) *FRENCH NET* is a little coarser than ordinary stiff net, and is much more highly glazed; it is 24 in. in width, and manufactured in black and white.

(*8*) *FRENCH CANVAS* is sold in black, cream, and a natural brown. It is made of flax or jute fibres finely woven; is slightly stiffened, yet very pliable, and is sold in 24 in. width.

(*9*) *BATISTE* is the French name for cambric. It is a fine linen muslin made in France, sold in many colours, and is from 18 in. to 36 in. wide.

(*10*) *BOOK MUSLIN* is a plain clear muslin, sold in three kinds "lawn buke," stiffened to imitate the clear French lawn, or in a harder bluish form that is much dressed. Sometimes it is soft in imitation of "Indian buke." Book muslin can be obtained in black, white, and other colours, and in 36 in. width.

(*11*) *LENO MUSLIN* is a kind of coarse and stiffened cotton gauze that is woven with a twist on the warp thread.

ESPATRA is the best stiffening to use for shape-making, as it is easily manipulated and can be moulded into most graceful shapes. It is not easily spoiled by a damp atmosphere, and it responds to the blocking and steaming processes involved in shape-making more readily than any other stiffening material. Espatra retains its form for a longer time than cotton espatra, buckram, net or muslin, each of which is artificially stiffened with size or other substance, which is apt to become limp in wet weather.

Planning Patterns of Shapes on the Stiffening

In the planning of patterns on the stiffening the same rule applies to all the foundation materials, i.e. plan the centre front of brim, side-band and crown patterns, exactly on the cross of the stiffening, unless for some particular shape it is thought better to break this rule.

Patterns often work out more economically when arranged on the cross of the stiffening, and the shape produced is more graceful, as well as more enduring, than if they were set out on the straight. Stiffenings, as well as coverings and trimming

materials, are more supple when cut exactly across the warp and weft threads, and are thus much more easy to manipulate along the many curves of which every hat is composed.

In a few instances, e.g. where (*1*) a rolled-up brim, or (*2*) a blocked crown are concerned, the rule just stated is set aside in favour of a straightway cutting. Espatra should always be kept rolled up to avoid creasing, and before use be gently rolled the reverse way to flatten it.

Place the espatra flat on the table with the smooth or right side uppermost. Patterns should always be planned on the *right side* of stiffening, except when rolled brims are in question. The smooth side is the right side; it is finished this way purposely, so that the roughness of stiffening may not show through the outer covering. Pin the centre of each piece of the pattern flat on to the crossway of the stiffening—drawing pins are good for this purpose—then pin round the edges, and with a pencil, mark all fitting curves, outlines, and centre points of each part on the espatra (*Fig. 1*). Allow $\frac{3}{4}$-in. turnings on the inside of the head curve of the brim pattern, and $\frac{1}{2}$-in. turnings at both ends of the side-band.

Cut the stiffening out to the pattern shapes with sharp scissors, or, better still, with a pocket knife, as this leaves a clearly-cut edge. Take great care not to increase either the width of brim or the depth of the side-band, and on no account decrease the head size. If so much as $\frac{1}{32}$ in. be added to the size of the pattern round all the outlines, the shape will be considerably increased; but if this amount be taken from the head size the probability is that when complete the hat will not fit the intended wearer.

WIRING.—In order to give firmness to the shape it is necessary to wire some of the edges. For this choose either a cotton or a silk-wrapped wire of medium weight. Thread a No. 4 straw needle with a long piece of No. 20 cotton.

Brim.—With the millinery nippers cut off a length of wire 1 in. longer than the brim circumference, and "wire stitch"

it firmly on to the upper side of the brim, quite close to the edge, and commencing at the back. The stitches should be about $\frac{1}{4}$ in. apart when they are worked (*Fig. 2*). Let the inch of wire overlap at the centre of the back, taking the stitch over both ends of the wire to keep them firm. Notch the turnings on the head part of the brim, and turn them up straight. Now wire-stitch a wire on the outside of the shape just below the notches (*Fig. 3*).

Band.—Cut a length of wire, $\frac{1}{2}$ in. longer than the upper edge of side-band, and stitch it on the inside, i.e. the rough side of the stiffening. Let the stitches be neat and firm, the needle being inserted quite close to the wire, to keep it from moving away from the extreme edge of the stiffening. Commence and finish the stitches very securely, as the springy nature of the wire necessitates good, firm sewing if the shape is to be well made and durable. If preferred the side-band can be wired on the lower edge also, in which case the head part of the brim will not need wiring. If the shape requires a join at the centre back of the brim piece, overlap the $\frac{1}{2}$-in. turnings allowed for this purpose, and "stab-stitch" the two thicknesses firmly together from the head part to the brim edge in two rows before it is wired (*Fig. 4*). Darts are stitched in the same way.

Mulling the Shape.—This is necessary to prevent the joins in the stiffening, as well as the wire, from showing through the outer covering; it also softens the shape outlines just a little. The mull may either be sewn on raw-edged or have the tiniest turning ironed down along both edges before it is sewn on. Strips of cross-cut mull muslin, about $\frac{1}{2}$ in. wide, are used to cover the joins in the shape, and to bind over the wire. It may be more convenient to "mull" the outer edge of the brim before attaching the side-band to it. The joining at the back of the brim-piece should be covered first, on both the upper and under sides, great care being taken to keep the muslin strained flat (*Fig. 3*). The strip for binding the brim edge should be joined to the length required, then be folded along its length and pressed,

after which it should be placed round the brim with one edge on each side, and be held in position by stab stitches, the muslin being held slightly stretched with the left hand (*Fig. 3*). Be sure all the joins in the mull lie quite flat, as any raised seams or edges are liable to show through the outer coverings.

Fit and pin the side-band outside the notched edges round the head part of the brim, making a neat join at the centre back of the band (*Fig. 5*). Join the back in the same way as shown for the brim joining, and firmly stab-stitch band and brim together round the head part. Mull the joining of the band as well as the lower wire. If the crown piece is simply a flat oval shape, cut to fit the top of the side-band, it should now be pinned into place at the centre front and back, and either overcast or loop-stitched edge to edge with the side-band, and the mull muslin then be sewn over the two edges. If the top of the crown is a blocked one it should be arranged in position, then be pinned and sewn through the top edge of the band. Finish off the crown top neatly with an oval-shaped piece of mull, straining it tightly over the crown and stab-stitching it about ¼ in. below the upper edge of the band. If a full crown of leno muslin is required, the upper edge of the side-band should first be mulled, then the leno be pleated or gathered to the size of the top edge of the band. Pin the full edge of the crown inside the band and then stab-stitch through it, producing a finished effect as in *Fig. 6*.

Stiff Net Shapes are usually cut from two-fold stiffening; and the patterns are placed upon it in the same way as when they are cut from espatra or buckram, unless the shape required is small, when the brim should be cut in double material and the crown in single net.

FULL CROWNS are better cut from single net, which can be pleated to fit the top of the crown or head-band. The edges of the shape may be wired and mulled as for the espatra shapes, but when the foundation material is of stiff net only, it is often necessary to arrange wire supports at intervals across the brim.

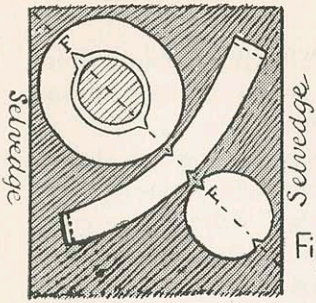

Fig 1

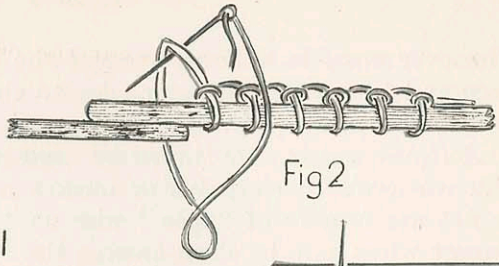

Fig 2

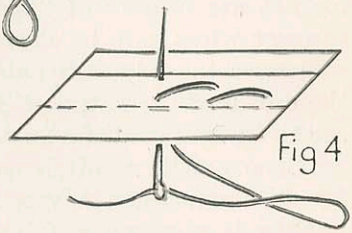

Fig 4

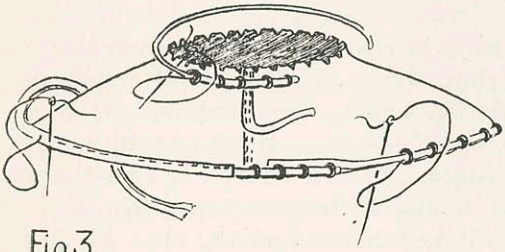

Fig 3

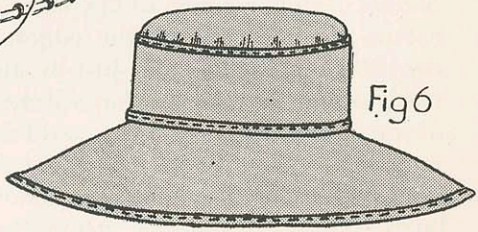

Fig 6

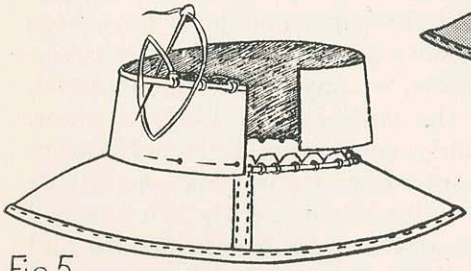

Fig 5

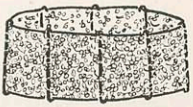

Fig 8

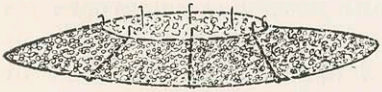

Fig 7

Fig 9

Whenever possible it is best to cut the crown and band in one piece and to reduce the outer edge to the shape of the headline by means of pleats (*Fig. 9*).

A lighter weight wire should be used when making net shapes than when working espatra or buckram, and the support wires for net are usually of "lace" wire or "tape" wire. The *cross* support wires may be sewn *between* the two-fold net, and turned well over the edge of the brim, as well as taken well up inside the crown of the hat, as *Figs. 7* and *8*; they must be firm if they are to be quite satisfactory.

Leno muslin is often used as a covering and as a substitute for stiff net, when a very thin, light-weight shape is required. Batiste is used as a foundation chiefly for washing-hats and bonnets, and in place of the wire it is strengthened by means of cotton bonnet cord at the edges. French canvas is sometimes corded at the edge, or just bound with linen tape when it is used as an interlining for stitched hats of cloth, etc. Shapes of buckram and espatra should be entirely covered with mull muslin or mercerized lawn after the edges and joins have been "mulled" if they are intended for a plain stretched outer covering of silk, satin crepe, georgette, or any other thin material, through which the threads of the stiffening are likely to show. If the covering material is fairly substantial it is not always necessary to mull the joins and outer edge of the shape separately; in such a case the entire mull covering is laid over the brim, tacked to the headline, and the edges drawn over the brim-wire and stab-stitched through the shape, the turnings below being snipped away as closely as possible. The mull of the crown top is taken down to the side-band and tacked down flat and any unevennesses cut away; a side-band without turnings at top or bottom is then tacked round, the ends just lapped without turnings at the back.

The under covering should be cut from the same pattern as the shape, and must fit quite flat over it, and be smooth at all the edges and joins. The "mull" gives substance to a thin

outer covering, as well as roundness to the edges and general contour of shape. Shapes made of stiff net or of leno muslin are more suitable for use under full outer coverings of gathered, folded, or pleated materials, than for plainly stretched ones; though they may be used quite satisfactorily for a stretched covering of tulle, fine lace, net, etc., when in the hands of an experienced worker.

Blocked and moulded shapes suitable for covering with silk, velvet, etc., offer difficulties at first to the inexperienced worker. Espatra is probably the most satisfactory stiffening for blocking processes, but stiff net and French canvas, if carefully managed, are quite amenable to the necessary damping and moulding. A well-shaped wire or other foundation is necessary as a block, unless one is fortunate enough to possess a wooden or plaster one.

An old bowler hat is often found to be a good substitute for a more expensive crown block. Shapes made of cheap cotton-covered wire padded with cotton waste and covered with coarse muslin are usually employed as blocks in the workroom, but the outline of the wire often shows through the material that is blocked over it, and this necessitates very careful pressing after the blocking process. If a brim requires a slight roll on the edge there is no necessity to use a block. Cut the shapes in espatra in the usual way and steam the edge, just where the roll is required; while it is moist mould it carefully into shape in the hands, and take great care to ease the edge well into the wire. A skillful worker can manage a rolled edge most successfully in this way, as the steam softens the size in the espatra, and makes it responsive to the will and management of the adept. A brim, crown, or side-band of espatra may be dipped into water and, while wet, strained to the shape of the block; all fullness must be carefully moulded away with the tips of the fingers and the balls of the thumbs. When it is quite smooth fasten the espatra to the block with fine drawing pins and leave until dry.

If a bowler hat is used for the blocking of a crown, fasten a

cloth over the felt and strain the espatra over this, pinning the edges to the cloth when it is sufficiently moulded to shape. Quite a large amount of time, skill and patience must be spent on the moulding if all the wrinkles and flutes are to be successfully worked away, but the process, though a sticky one, is quite interesting.

French canvas can be treated in the same way as the espatra, but must be brushed over with either size or glue water after the blocking is completed and the canvas is quite dry.

Buckram is not so responsive a medium as espatra, and requires a greater expenditure of time and care if the blocking is to prove at all successful. Only the finest quality of buckram is at all worth the trouble that it will entail.

Shaping can be accomplished by means of a hat iron and a slightly-damped cloth if the worker is thoroughly skilled in this art, just after the same manner as a skilful tailor disposes of the fullnes sat the head of a coat sleeve, etc. This is, of course, a matter of practice, and it is well worth attaining, as herein is the great secret of the most skilfully-made model shapes.