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Anslow, Florence London, England: Sir Isaac Pitman and Sons, Ltd., 1922

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PRACTICAL MILLINERY

FLORENCE ANSLOW



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PRACTICAL MILLINERY

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After the original Painting by Sir Thomas Lawrence.

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THE PICTURESQUE HAT WORN BY LADY PEEL IS COMPRISED OF PURPLE VELVET, PARADISE PLUMAGE, AND JEWELLED CABOCHON

Frontispiece

P R A C T I C A L M I L L I N E R Y

BY

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LONDON

SIR ISAAC PITMAN & SONS, LTD. PARKER STREET, KINGSWAY, W.C.2 BATH, MELBOURNE, TORONTO, NEW YORK Printed by Sir Isaac Pitman & Sons, Ltd. Bath, England



FOREWORD

I^N compiling the following book, the author has in her mind, not only the teaching of a handicraft, but the hope of presenting her subject in such a form as may stimulate thought, ingenuity, and originality.

Millinery suffers perhaps more than most subjects from its transitoriness, but with the foundation work carefully and fully described, it is believed that the serious student will be able to apply this knowledge to the new ideas which must continually occur. Should this hope be fulfilled the author has achieved her object of raising Millinery from a mere craft to an educational subject.

BLANCHE STREATHER

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PRACTICAL MILLINERY

CHAPTER I

THE HISTORY OF MILLINERY

IN millinery, as in everything else, "there is nothing new under the sun." Fashions change, materials alter, seemingly fresh trickeries come and go. But they are modifications of ancient headwear that has owed its being first to necessity, and its survival usually to vanity. Women in the dim past found it necessary to protect their heads from sun and rain. Taking the nearest thing to hand, they threw over their heads a cloth, or *couvre-chef* as the Normans called it, drawing it down well on to the forehead, and leaving it short at the sides, and so deep at the back that in some cases it rested like a mantle over the shoulders. The modern bridal and confirmation veils are clearly relics of this covering, which stood our Saxon and British forbears in good stead for more than a hundred years.

In the days before, and long after, the Norman Conquest, fashions changed extremely slowly, for the country was too disturbed for anyone to trouble seriously about their mode of dress. The great lady in the baronial castle was practically the only woman who had leisure to give to her clothes, and these she often embroidered sumptuously. But even she indulged in such stitchery only after she had worked an elaborate surcoat for her lord to wear over his armour, and a banner with his armorial bearings, which fluttered above him while she watched him from the castle walls ride out with his followers to the wars. While the men were away she would have little leisure to give to her dress, and probably less heart. As travelling was slow then, it might be months before the warriors returned, and new clothes

1

would be needed to greet them. So the great lady, feeling the responsibility of the charge of her husband's property, would turn her attention to his people in the hamlet just outside the castle. She would teach the women to spin, to weave, and to plan, and cut out their materials to the best advantage; to make clothes for themselves and their families, and to complete these outfits maybe with the caps of the day (*Fig. 1, a & b*) banded with bright colours—green, red, or blue. Such caps are not greatly different from many one sees to-day, and *Fig. 1, c*, is thought to have suggested the design for the modern police and fireman's helmets.

Woman's head-dress has always varied according to her station. In Norman times there was nothing showy or smart about it. No matter whether the lady lived in castle or farmstead, her gown was simple, and her hair, that was coiled closely about her head, was almost hidden beneath the folds of her coloured head-rail, couvre-chef, or wimple, made of silk, cloth, or linen, according to her social position. Portraits of Matilda of Flanders, wife of the Conqueror, show her head covered with a deep wimple falling straight down from beneath her crown. Other wealthy women held this 23yd. length of fine material in place with an embroidered head-band, and on state occasions when guests assembled at the castle for wedding or other festivities, or the women put on their prettiest clothes to welcome back the soldiers, the soft silk wimples were circled by a band of gold set with jewels (Fig. 2). In summer my lady's wimple drooped gracefully about her shoulders, but in winter when keen winds flapped the tapestry restlessly against the rough-hewn stone walls of her sanctum, she was pleased to pleat her wimple and drape it round her neck like a scarf, leaving the end to fall over one shoulder towards the back. Worn thus, it was more convenient when she slipped on her long outdoor cloak and drew its hood over her head to protect her from the weather as she went from one part of her draughty stronghold to another, or answered a hasty summons to cure the sick.



Small caps for men and boys, as in Fig. 3, $a \notin b$, were worn by early Briton and late Norman alike, while the women as late as Henry I's reign still appeared out-of-doors in summer in a modified *couvre-chef* of silk pulled down tightly over their heads, and held round the forehead with an embroidered band (Fig. 4), a mode which, singularly enough, persisted in spite of the fact that the hair was no longer worn tightly coiled about the head, but was allowed to fall over each shoulder in a plait, at first simply braided, and later finished with tasselled ends of silk, or with ornamental metal cases.

But while the ladies at Court appeared with their shining braided tresses sometimes of real, and often of artificial hair, hanging down over the front of their high-necked purple dresses and voluminous scarlet mantles, their poorer sisters in the country were content with bright head-rails of coarse linen, while their brother, the shepherd, found that his cloak and hood of unshorn sheepskin, worn with the smooth side innermost, was his best protection during long watches on hill and headland. Meantime the doctor and the better-class civilian in and about the towns might be seen going about their business wearing the Phrygian cap (Fig. 5) or some other pleasing variation of it such as the capuchon (Fig. 6). Country fashions were often quite fifty years behind those set by the wealthy dwellers in the towns. Nevertheless things were improving, for year by year rich stuffs were slowly but steadily coming into Britain from the silk mercers on the Continent, and from the more luxurious though distant markets of Persia. Arabia and India. Traders who brought these tempting wares could show pictures of how they were made up and worn in their native places, and thus an Oriental influence began to make itself felt in European modes. Peace at home also tended to foster the arts and crafts of the people, and clever seamstresses did ample justice to the richness of the velvets, silks, and cloths that they cut with such simplicity and grace.

In Stephen's day plain clothes were most in favour, and ladies and merchants' wives alike wore the simple hooded cloak when they went out riding, travelling, or marketing. At the open-air markets it must have been a sight, as one writer remarks, to watch the titled dames with their hoods thrown back and their heads held high, as they went from stall to stall selecting the best of the goods while the lesser folk hung around waiting until their betters had been served and they also would be allowed to make a purchase.

When woman discarded her two long betasselled plaits, she again hid her hair beneath a wimple, this time one of fine white linen arranged over a stiffened forehead-strap, and fastened at the sides to a chin-band—a head-dress very similar to those worn by the nuns of to-day.

Richard I's short reign saw little change made in women's dress or millinery, though materials were becoming more plentiful, and new ideas came filtering in from the Continent in the train of the foreign ladies attached to the Court. Cloth of gold, for instance, was being received in quantities from the East, and Oriental tunics and turbans brought back by the Crusaders were often to be seen gracing the titled revellers at Christmas masques and revellings. Poorer women plodded along the highway in their straight gowns and plain white wimples, and from the castle keep the men-at-arms kept guard with their heads protected by small caps, or hoods wrapped closely round their heads, and fitting in a very deep collar or cape round their shoulders.

Until after the reign of Henry III fashions changed only with the favoured upper classes living in the towns, the country folk still continuing to wear the wimple, or wrapping their bright hair in hooded cloaks lined with sheepskin, or in hairy hoods made from the skins of wolves killed almost at their doors. Moleskin hats were a luxury furnished by the combined efforts of the native mole-catcher and the local seamstress—often his wife.

In Edward I's reign my lady donned as her most striking novelty the *gorget*—a piece of white linen that she wrapped about her throat, bringing up the ends and pinning them to the tightlycoiled hair above her ears, whence the ends either disappeared

beneath a stiff white linen cap, or were drawn up through a crown-like band of stiff white linen, and fell over the top in softly trailing folds that shrouded the back or side of the head.

The reign of the second Edward heralded in a notable fashion that first affected my lord, and later on-my lady of that day, and incidentally of our own. This innovation was the liripipe, which some dandy first caused to be attached to the hood of his cloak. It was indeed but an exaggeration of the peak of that hood, an elongated point that gained and gained in length until it reached the heels of the wearer, and, becoming a nuisance to him, was ultimately coiled up and worn about his neck with only the end left to dangle, or was wound round the head, as the case might be. By Richard II's reign the liripipe and hood or chaperon to which it was attached, had altogether left their original places upon the shoulders of the wearer, and were to be seen in a caplike form upon his head (Figs. 7 & 8), with the tabbed hood edges falling like a cockscomb to one side. This fashion, much affected by the dandies or cockscombs of the time, is the origin of the cockade of to-day with its pleated edge and circular twisted centre so familiar on my lady's tailored hat, on her footman's top-hat, and more or less expressed upon the vestments worn by the Knights of the Order of the Garter.

Women who wore a tall hat over a wimple were exceptions whom jesters of Plantagenet days thought fit subjects for their mimicry. Women with a hood open at the neck and short at the back were in evidence everywhere. Men in high-crowned, white cloth hats with coloured brims and a long feather held in place by a jewelled or enamelled buckle (*Fig. 9, a & b*) were to be seen both strutting the streets in Westminster, and teasing the girls as they went to market in the fourteenth century. But women of rank had made themselves extraordinary spectacles, creatures whose every hair was dragged up tightly into a *crispine*, or silk net bag sometimes sewn with pearls. Every hair likely to stray beyond reach of the crispine was shaved from the neck until this was bare to a level of the top of the ears; in other



CHAPTER I

cases much of the hair was pulled out—a fate shared also by the eyebrows of the ultra-fashionable dame of the moment. Some women, less foolish, had banished their hair beneath a crispine and a veil, as in Fig. 10. Others covered their hair with an entire caul or bag of pearl-embroidered gold net (Fig. 11), or masked it as in Fig. 12, or with a turban as Fig. 13. It is a relief to those who detest such artificiality to learn that young girls left their hair to wave down naturally about their shoulders, parting it in the middle and banding it for everyday wear with ribbon, embroidered silk, or garlands of real or artificial flowers, or a plain ring of gold. For hawking, hunting the fox, hare and deer, and such sports wear, a plain dress and jerkin of gay cloth were surmounted by a hood and cape, while for riding a big round hat was sometimes worn by the ladies as an additional protection above the hood.

Every student of millinery and dress should thank good old Geoffrey Chaucer for the picture of life and customs he had given us in his day, for his Pilgrims pass before us clear as cameos. His Wife of Bath astride her horse is seen clothed in her plain wide-sleeved gown, her hips draped in a foot-mantle securely strapped about her feet, her hair invisible beneath a wimple crowned by a hat "as broad as a buckler." When in her native Bath, we are told, her head was wrapped in wimples of fine, though weighty linen, for Chaucer says : "I dorste swere they weyeden ten pound That on a Sonday were upon her head." The Pardoner has on the high-crowned hat of the period, with a handkerchief upon the front of it bearing a supposed representation of the face of Christ ; the merchant is wearing his usual beaver hat.

At its outset the fifteenth century gives us no startling new headwear for men. They still retained hats and caps more or less based on the designs of *Fig. 14*, *a*, *b*, *c* & *d*, and adopted as their greatest innovation, in Henry IV's reign, a sugar-loaf cap carried high, with its top lopped over to the left side at a rakish angle. Henry V was greeted home from Agincourt by his male





subjects wearing flat solid-looking turbans, befittingly donned, parti-coloured hose, and jerkins with sleeves of extravagant size. His female subjects following the extremes set by their men folks adopted the eccentric, but often pleasing, high-horned head-dress (Fig. 15) from which was hung a silk or linen wimple. This fashion, as may well be supposed, grew little by little out of all bounds, and wonderful indeed must the ladies of the Courts of Henry V and Henry VI have looked, some of them with their heads pushed, as it were, into huge circular diamond-studded cauls or padded bags of stiff gold wire that made their heads appear more than twice the normal size; others with boxes of one kind or another which stood out in 14-in. horn-like projections on either side of the forehead, and were veiled over the top and back with a flowing wimple. The limit, perhaps, was reached by the *hennin* or steeple head-dress, a fashion of Flemish origin (Fig. 16). This great, black, silk-covered cone, held in place on the forehead by a velvet loop or cross proclaiming the wearer's status, was bordered round the lower edge with black velvet embroidered in gold thread, and towards the peak supported a veil of gold tissue, gauze or linen. Later still in the history of this fashion, a cylinder blazing with jewels was to be seen veiled with great gauze wings as in our sketch (Fig. 17). Huge heartshaped erections, mitres, crowns, turbans, boxes or cones figured monstrous on the heads of every Court lady at high festivals, and not until these millinery eccentricities were poorly copied and unwittingly caricatured by less wealthy wearers did the ladies of rank forsake them.

Fig. 18, a, b & c shows some of the simpler caps of cloth, silk, velvet, felt, or beaver, that found favour with men until Henry VIII's days, when elegant plumed caps, as in Fig. 19, made in bright velvet for preference, and braided in gold, were worn by King, courtiers, and rich civilians alike. A flat cap and coif similar to Fig. 20 was also in fashion, particularly for men, in rough weather.

Pictures of ladies of Henry VII's time, and of Henry VIII's wives, have made us familiar with the black silk pyramid or

HISTORY OF MILLINERY

diamond-shaped head-dress sewn with pearls, or gold on white or a colour (Fig. 20, a); also with the white-lined head-dress worn by Anne Boleyn, Jane Seymour, their Maids of Honour, and the courtiers of the time. Catherine of Aragon, whose sad dignified bearing has left a mark on England's pages for ever, adopted a simpler hood-like covering, as in Fig. 20, b & c. Ladies getting on in years preferred white linen head-dresses arranged more or less in pyramid form over a closely-fitting cap, while in country and town alike the poor chose linen coifs or caps.

Elaborate head-dresses, however, were all very well for ladies of leisure who had opportunities to put them on and ladies'-maids to prepare fresh headgear when such was necessary. But in Tudor England the great new middle class was becoming an important item to be reckoned with. These working women wanted to be well dressed in as easy and expeditious a way as possible, and the elegant and elaborate millinery of the upper classes gave place for them to ready-made hats for every day, and for Sundays to peaked bonnets of the Mary, Queen of Scots order, which still kept a suggestion of their diamond-shaped predecessors. Greater simplicity in dress was also noticeable, the voluminous and heavily embroidered skirts and bodices giving place to plain fabrics not unduly full and almost devoid of ornament. Bonnets were evidently a much-prized present during the girlhood of Henry VIII's daughter, Mary. On one occasion, we read, that Princess bought six bonnets from the Lady Mayoress of London, who was a milliner ; £1 each was paid for the bonnets, which the Princess gave to ladies whom she knew. Fashion, however, was not rigidly in favour of bonnets, for some years later when Mary was crowned Queen of England, she wore a white velvet gown adorned with crimson, and a small cap of gold net over her hair.

History teems with men and women at the end of the sixteenth century wearing the popular high hats adorned with a single feather, a swathe of silk, or twist of material (*Figs. 21, 22,* 23 & 24). These were seen alike on the heads of men of leisure

and on the merchant and his jaunty apprentice; on women of rank and her humbler sister on the way to church. Queen Elizabeth herself often put on a silk-swathed hat when she journeved to and fro about the country. Indeed, this good lady did much for millinery, favouring one style and then another to the great joy, no doubt, of her followers of fashion. A picture of the period, for instance, shows her on a white horse reviewing her troops at Tilbury with her red-gold, close-curled periwig topped with a shallow curved hat, bunched with ostrich plumes, and, as we know, portraits of her are many and her headgear varies in them all. In public she was always impressively attired, but in private life and when visiting her courtiers, her millinery was simpler, and in the garden at Hatfield House she might have been seen wearing the limp, shallow-crowned, wide-brimmed hat trimmed with a band of ribbon, that she left behind there, and which now lies under glass in the drawing-room of that mansion, prized by the Cecil family as one of its greatest treasures.

With the coming of James I we have variations of the highcrowned hat for men (*Fig. 25*) ranging from that with a deep brim at back and front, to the close-brimmed Spanish type befeathered at the side and back. Poor women went about their work in untrimmed wide hats, while their mistresses covered their high-bunched hair with a plateau-like oddity of silk or straw, or possibly chose a fine straw finished with several ostrich plumes, and in the extreme of fashion donned a small silk hood with a jewelled frontlet.

We all know the beautiful picturesque gowns of the Charles I period, and the simple black silk hood with its ends knotted beneath the chin, that covered my lady's curls when, accompanied by her maid, she went out walking. We are also familiar with the wide-brimmed, high-crowned hats then to be seen on every market woman, and the white linen hood worn at home, with black hat over it, that distinguished the indoor and outdoor headwear of the merchant's wife and elderly daughter. Figs. 26 & 27 show typical Stuart models.



CHAPTER I

With Cromwell we naturally expect the sober puritanical hats —wide, soft, and almost devoid of trimming—and we get these side by side with traces of the waning glories of previous years.

Charles II's reign gives us glimpses of ladies indoors with curled hair tied up with ribbons, while out-of-doors they trip along Pall Mall in large circular hats with sweeping plumes, rather wider, but not unlike those worn by the gay cavaliers who escort them.

Black hoods made their appearance on women's heads in Samuel Pepy's day, when the country women in a simpler fashion still knotted a handkerchief over their hair, and when necessary crowned it with a wide straw hat. Comfort and the weather still dictated rather forcibly to the fair sex what they should wear, for until the days of the umbrella the elements had to be reckoned with seriously.

Fig. 28 was a head-dress familiar to every fashionable dame at the end of the seventeenth century. This $\frac{1}{2}$ -yd. high fontage, or tower of lace, was at first nothing more than a bow of ribbon tied round the hair and finished in front with rather long loops and ends, but it soon aspired to something more important, and to accommodate it the hair was piled up over a wire frame or commode, against which rested the three or four tiers of lace, finished with long lappets hanging from the sides and back on to the shoulders. High-crowned hats were obviously necessary to cover such elaborate coiffures, and *Plate 1* shows a typical example banded with silk set in straight bows on the left side.

When Queen Anne came to the throne the fontage had already dwindled in height and width until it appeared more like a cap, over which the ladies threw a black lace or silk fichu or headwrap. Women of the middle classes might be seen on week-days and Sundays in charming frilled white linen caps drawn over their hair, which was coiled loosely round their heads, and among the better-class women, wide-brimmed, low-crowned hats of many kinds were common. Men preferred above all others a white felt, three-cornered shape (*Plate 2*), which was often trimmed







PLATE II





PLATE IV



PLATE V



PLATE VI



PLATE VII



PLATE VIII


with the gold or silver lace, braid, or feathers, that in these days would be considered so effeminate.

From 1760 to 1820 powder and pomatum were used lavishly. Hairdressers and fashion generally might be said to have gone mad, for they piled my lady's tresses up and up over masses of stuffing, until she appeared twice her natural height. As one writer says: "From being adorned at first with jewellery and ornaments stuck with long, straight feathers, the hair passed on to having petticoats of lace and puffed satin over it, and then on to even wilder extravagances. In some of the prints reproduced in the Pall Mall Magazine, we see the hair broadened out well as it ascended, until, on reaching the top (which, by the way, could only have been accomplished with the aid of a pair of steps), it was flattened into a sort of sloping roof, and decorated with wonderful designs in cardboard, blown glass, and steel and gold wires. For example, in one we see a huge garden laid out with at least twenty parterres; a hedge all round, a summerhouse at one end, a tree at the side, and, to crown all, a miniature cardboard man in the act of syringing it. Huge vegetables, imitated in wax and other materials, were quite ordinary, while some of the heads were adorned with small models of coaches. carriages, or waggons !"

Over such monstrosities a large hood or *calash*, stiffened with whalebone was necessary to cover the entire head-dress out ofdoors, and by night a linen nightcap, for, be it whispered, this hairdressing was so elaborate and costly to arrange that it was sometimes left dressed for two or three months at a stretch. One can imagine how some ladies suffered for their vanity and foolishness. The alternative hat for wear on hair piled rather high, but at any rate more naturally, was a tiny flat shape either poised upon the front of the upstanding coiffure or carried in the hand. Young girls left their hair hanging down over their shoulders and wore simple flat straw shapes trimmed with ribbon, or high-crowned hats with drooping brims.

Plate 3, showing a ribbon and straw hat or bonnet, and Plate 4

MILLINERY ·

a model in straw, give one an idea of fashionable millinery around the years 1803 and 1804. *Plate 5* shows a hat, of the same period, of silk, the edges of the crown strip being gimped.

Plate 6 depicts an 1810 white silk *cased* bonnet trimmed with padded flowers, and looking very like the print cottage bonnet of to-day.

In *Plate* 7 we get a glimpse of smart wear in the time of George IV, when folded silk and tufts of plumes were used with such good effect. This shape, so familiar in the Empire modes of France, is very familiar to the Russian hats lately introduced into this country as novelties for children's wear. Poke bonnets, lace caps, bows, flowers and jewels all graced the heads of the ladies in the reigns of the fourth George and William. From them we pass naturally to Victorian styles that vary from the silk and lace cottage bonnet of *Plate* 8 to the flat Leghorn hat of *Plate* 9, a typical mode of 1862, bound with black velvet, and trimmed with an ostrich feather *flat*, and streamers of black velvet ribbon.

Thus, from the hats of the past we can see more or less clearly how we derive the ever-changing styles of the present. Season by season Fashion reiterates that she has something absolutely new to give us, but, as students of millinery, we can accept her statement with a smile when we know from which generation of our ancestors she has most probably drawn it.

CHAPTER II

THE IDEAL HAT—CHOICE OF COLOUR, SHAPE, AND MATERIAL

"A WOMAN'S crowning glory is her hair" indoors, but outof-doors it is undoubtedly her hat. Hence the choice of her headgear is a most important point for the consideration of every woman, no matter whether she be buying a hat readymade, or what is far more interesting, is thinking of making it herself. For the hat to be successful it must not only be the frame, as it were, for the face, but must harmonize with the rest of the wearer's appearance, of which it forms so important a part. A smart, suitable hat will often redeem indifferent raiment; and, on the other hand, unsuitable headgear can ruin an otherwise elegant appearance. For example, the replacement of a large hat with sweeping plumes, as part of a Stuart costume, by a modern policewoman's helmet results in a *tout ensemble* farcical in the extreme.

Many women have the natural gift of knowing what to wear and how to wear it. When planning a new costume or dress, they can not only visualize it as a whole, but grasp instantly the style and colour of *the* hat to go with it. To other women the vision is not so clear, and often when they want a hat they buy or make one that proves quite unsuitable. As a means of avoiding such disappointments, let us consider the requirements of what may be termed the "ideal hat," suited to every face, figure and occasion.

The four main considerations are its (1) Colour, (2) Shape, (3) Material, (4) Suitability—to the occasion and the wearer.

COLOUR.—Students of millinery frequently find that their greatest difficulty in choosing a hat is to select a colour at once becoming to themselves and appropriate to the clothes with which

it is to be worn. Complexion and colour of hair and eyes must largely influence the decision. The pale skin must be warmed; the ruddy one must be cooled, the very red shade of hair neutralized, and the dull shades of hair toned up. "Match your eyes and contrast your hair" is a well-known saying that offers excellent, if limited, advice. To expand this into a few general rules one may say the following colours are becoming to—

BLONDES

(a) With Fair Hair and Pink-and-White Complexion.—Pale grey or pink; rose colour, brown, white, eau-de-Nil, and any shade of green, purple, or blue. Avoid fawn, which dulls the hair and the pink of the skin. Shun also any strong colour, except in very limited quantity.

(b) With Brown Hair and Pale Complexion.—Blue, blue green, turquoise, and emerald; chestnut brown, wine colour, cerise and crimson; heliotrope and mauve, pink, salmon and brownish pink. Avoid shades of green, grey, yellow or dull brown.

(c) With Golden Brown Hair and Ruddy Complexion.—Cream, buff, fawn and soft tans, in conjunction, preferably, with black or a dark shade; any shade of grey—except dove colour; brown, sage and olive green, claret, pale or dark blues in soft dull shades; and soft bluish purples. Beware of bright shades of any colour, and avoid medium reds, blues, pinks, pale greens, and yellow fawn.

(d) With Light Hair and Muddy Complexions.—Crimson and wine shades; warm browns; medium and dark blues; sage and olive greens; emerald, pink and cerise in small quantities. Avoid greys, dull browns or fawn.

(e) With Titian Red Hair and White Skin.—Greens in dark and light soft shades; dark reddish purple and petunia; dark and light blues in soft shades; rich browns, tan, and warm autumn leaf colourings; soft greys; black, ivory, and pale rose pink in limited quantity. Beware of hard black-and-white greys; hard bright greens, blues, purples, or reds.

BRUNETTES

(a) With Fair Skin and Fresh Colour can wear any shade of any colour.

(b) With Dark Hair, Clear Olive Complexion, and a Little Colour.—Navy blue, olive and eau-de-Nil green; pink, cerise, red and crimson; flame colour, maize, old gold and fawn. Avoid yellow and pale blues.

(c) With Dark Brown Hair and Sallow Complexion.—Warm navy blue; browns in red and yellow shades; white, olive green relieved with touches of pink; reddish heliotrope; wine colour, black in conjunction with white, yellow or flame colour. Avoid dead shades of grey or brown; also of pale yellow, blue, and fawn.

In regard to colour generally, it is well to remember that to be complete in itself a colour composition should afford some relief to every colour sensation that it excites. This may be achieved by the addition of darker shades of the colour itself, or of black. Dark colours require less relief than light ones, a touch of bright contrasting colour, or cream collar, on a dark dress often rendering it most becoming to the wearer. With light dresses a blonde should introduce a touch of black or deep colour-which is not necessary for a brunette whose dark hair supplies the desired relief. Dark colours make a hat look smaller, while light shades appear to increase its size. Black makes a fair skin appear fairer by contrast, but it takes the life out of some complexions, intensifying sallowness, and making a dull complexion still duller. Where possible it should be relieved by transparent white near the face. Transparent black and white are far more becoming than dense material. White and cream are becoming to all except those of colourless hair and complexion. and dull, muddy skin.

The foregoing remarks all apply to colours for day wear. As artificial light modifies the yellow tints of the skin, so that women of sallow complexion can often wear by night colours that would be most unbecoming by day.

SHAPE is the next important consideration. The general outline of brim and crown must be studied. A thin, narrow face requires a hat suggesting roundness and width of shape; a full, round face needs one suggesting length and sometimes height. Great care is necessary when choosing toques. They should be studied from all points when on the wearer, for the front view may be good, while the general contour is most unbecoming. Much improvement, however, may often be made by careful hairdressing, and by the softening of the outline of the shape. During recent years, the small-brimmed hat or close fitting toque has rather taken the place of the bonnet, for elderly ladies' wear. But whether a shape be large or small, it should help to minimize any faults in the wearer's features and accentuate all the good ones, just as the well-chosen colour adds warmth to the pale complexion, and cools the ruddy one.

For children, who are usually chubby and round featured, the simple round types of shapes are the most becoming. When the hair is short, a narrow back brim is more suitable than a wide one, and in all cases when making or buying children's shapes it is important that they should fit comfortably.

MATERIAL.—Though much consideration may have been given to the choice of colour and shape, one's headgear will not be wholly successful unless suitable materials are used. The season of the year, the occasion for wear, and the accompanying dress or costume, all help in deciding this question. Black velvet was at one time looked upon as a safe anchorage when one was in difficulty as regards choice, but nowadays georgette, aerophane, and ninon are most popular choices. To wear flimsy headgear along with a tailored costume, or dress, is in bad taste, just as it is when white shoes and stockings are neighbours to a dark and heavy woollen skirt. A hat of tulle or lace is pleasing on a sunny summer day if worn with a light voile, silk or similar dress, whereas a tailored hat or one of thick woollen material in, say, vivid red, would be most unattractive.

For hard wear, materials should be chosen from those that

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are little affected by dust, fog, or rain, and they should be chosen with due attention to texture and colouring. For sports wear, oil silk, gabardine, tweed, and firm cloth are all satisfactory while for general hard wear, millinery velvet, fine cloth, stout silk, or satin, and, of course, durable felts and straws, can all be requisitioned with confidence.

As the lightness in weight of a hat is one of the chief factors in its comfort, this quality should be borne in mind when choosing materials. When completed, a hat should not weigh more than 2 or 3 oz.; if the weight exceeds 4 oz., it interferes considerably with one's comfort, especially if it is worn for several hours in succession.

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PATTERN MAKING

ONE of the first tasks of the student is to provide herself with a pattern from which to make her hat. There are two usual methods of obtaining this: (a) By pinning soft paper or muslin over each part of a shape already to hand, and moulding it until it fits exactly the form of the shape desired; (b) by drafting the pattern geometrically. Both methods are good, and provided that the shape required is always to hand, and a pattern can be moulded from it, method (a) is probably the easier and quicker for the unskilled draughtswoman. But it is certain that if method (b) is thoroughly understood, it leads to greater originality and more knowledge of shape cutting and making, as well as opening up very wide possibilities in shape designing; and that the time and patience expended in mastering this part of the craft will, in time, be amply repaid.

To obtain a pattern by method (a) pin soft tissue paper over the under part of the hat brim (Fig. 1) and mould it to the exact shape of the brim. If the brim is quite flat this is an easy matter, but if it either droops or rolls upward at any point the paper must be cut, or pleated, and carefully smoothed and fitted into all the different parts. When a drooping or an upturned brim is the model it may be necessary to cut away quite a large portion of the paper after fitting it carefully round the brim edge, in order to obtain a true fit round the head part (Fig. 2). If the paper were fitted flatly over the head opening and brim (Fig. 1), the pattern would be too tightly strained across the head part and would not give the correct size and shape. After the paper has been moulded to shape the surplus must be cut away at the brim edge and headline, and before the pattern is unpinned the exact centre point of the front and back of the head part should be either snicked or marked in pencil upon it.



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If the brim has a sharp edge as in many of the turban shapes, the pattern of the under part must be taken separately; the upper part is often a straight band that can be cut to the correct length and width without a pattern. A flat-topped crown is quite easy to mould in paper, but if this part of the shape has any peculiar indents, the paper must be pinned flatly over the crown top, and pleats be taken up in the paper where necessary, just as was done in fitting the under brim (*Fig. 2*).

The pattern of the side-band presents a difficulty to most students. Take a strip of paper several inches wider and longer than the side-band; pin the centre of the paper to the front of the shape, and smooth each end round each side of the crown, pinning and moulding the paper round the base of the crown (Fig. 3). If the top of the crown is larger or smaller than the head-part, it is difficult to make the paper fit both the top and the base of the band. Arrange a cross-cut join by folding the paper back at each end on the cross (Fig. 4) at the back, side, or even front of the crown, in a position where the trimming will cover it. After fitting and pinning the side-band strip carefully to the top and base of crown, cut away the surplus paper round the outline of the top of the crown. Mark the centre front of pattern, also the centre back, if the join is at the side.

Make a crease or pencil mark all round the headline, and at the join remove the paper; cut the curve for the headline, being careful not to trim away too much, and then fold back the two ends to obtain the cross join for the band (*Fig. 4*). There is no necessity to take the pattern of the upper brim, as it has the same shape as the under one; and it is usually much easier to obtain a correct moulding of an underbrim piece than of an upper one, where the crown interferes so much with the shaping of the headline.

If the hat or toque that is being used as a model for the new pattern happens to be trimmed, it is very difficult to obtain a correct moulding of the side-band, and if the shape is covered with dainty material there is always the fear of either crushing or soiling it when taking a pattern by this method. It is in such cases that geometrical drafting (*method b*) is of the greatest use to those engaged in millinery.

Once this method (b) is thoroughly understood, a few measurements carefully taken will be sufficient guide for the drafting of an exact pattern of any model, and there is no fear of crushing or soiling the daintiest materials and trimmings. If the pattern be drafted on stiff paper, and cut with an allowance for $\frac{1}{2}$ in. turnings whenever parts require building together, a copy of the model can soon be made in paper, stiff net, or muslin, parts of each can be compared, and judgment passed on the copy when it is on the head of the wearer. At this stage in shape building individual alterations can easily be made without loss of time, material, or temper.

GEOMETRICAL DRAFTING

HAT BRIMS.—To draw or draft the pattern of a simple flat hat shape is quite easy. First obtain the exact measurement and shape of the head to be fitted. This can be done with a tape measure, or by fitting a wired band of stiffening well down on the head and pressing it into shape. The size and shape of the oval of the head vary considerably in individuals; again, the method of dressing the hair, and the manner of wearing the hat should be taken into consideration in deciding the size and the outline of the head-part of a pattern. The two sides of the head are not always alike in shape, and if this peculiarity is taken account of, the comfort of the wearer will be much greater. A round head-part, or one that is not sufficiently oval is extremely uncomfortable.

Having obtained the size and outline of the head, draw two construction lines at right angles and crossing one another; then two other lines at equal distances between the first two, and crossing a common centre (Fig. 5). Place the wired band on these lines with the centre front and back on the vertical line

A-B (*Fig.* 6) and pencil the outline, or mark on the line A-B the length of the head (in this instance $8\frac{1}{2}$ in.), and on C-D the width of the head ($6\frac{1}{2}$ in.), and draw the oval to touch these points. Lines E-F and G-H may be used as extra guiding points by those who are unaccustomed to drawing.

The width of the brim must now be decided, and the measurement marked on each line beyond the head oval, as the $2\frac{1}{2}$ in. shown as the brim width in *Fig.* 6. Draw the brim outline to connect these points. This brim is a flat, oval shape measuring the same width all round, and it is always more or less in fashion for schoolgirls' wear.

A flat, oval-shaped brim wider at the front than at the back, or vice versa, is more popular for general wear. An oval-shaped brim, cut wider on the left side, is frequently met with, and there are many other varieties of this standard type of brim that are constantly being introduced to our notice. The outlines of the head-part and the brim of these shapes alter very little from season to season, but the position that the head oval shall occupy within that of the brim is a question decided by Dame Fashion. *Fig.* 7 shows the head oval placed 1 in. nearer to the back or front, whichever one chooses to make it, of the brim outline. *Fig.* 8 shows a left-side brim wider than the right. All these changes are made by simply moving the head oval from one position to another as required by fashion or the desire of the wearer.

When a brim is required that is slightly "rolled" either at the back, left side, or at any other point, the flat brim pattern is drafted according to the measurements decided upon, and then small wedge-shaped pieces are taken out of the pattern between the brim edge and the head-part to give the desired curve (*Fig. 9*).

When measuring for, and taking out these wedges, one should take great care not to alter the size or the outline of the headpart. In *Fig.* 9 three $\frac{1}{2}$ in. darts are taken out at A, B, C as the brim rolls considerably from the flat on the left side; and in order to place the pattern quite flat on the stiffening when



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cutting out the shape, one should cut through the paper at one point only, probably at the back (Fig. 10). This will necessitate only one seam being made in the stiffening—a great advantage in shape-making. Where the darts have been taken up the outline of the brim will be slightly uneven, and it must be cut quite level again. Should more roll to the brim be required, small additional darts may be taken between A, B, C, D. A cloche, or mushroom-shaped brim, may be obtained by taking $\frac{1}{4}$ in. darts out at every divisional construction line of the draft.

A tricorne or three-cornered brim presents more difficulty in drafting. If the shape is intended for a young girl it is often drawn quite flat (Fig. 6) and rolled over, in three places, just to suit the wearer. Another method is shown in Fig. 11, the outline of the brim being divided into six equal parts, and the width marked on these divisional lines according to the position of the points, or corners. In Fig. 11 the three points A, B, C, are 2 in. from the head curve; the brim will form into a tricorne if rolled back at E, F, D, and the points will occur at A, B, C.

A three-cornered brim of this type is not very becoming to older faces; for them, a shape that droops slightly before being rolled backwards into points, is far less trying. To obtain this shape a larger radius is required for the *head curve* (Fig. 12). If the length of head is 9 in., take as radius 5 in., or the half-head length $+\frac{1}{2}$ in., and describe a circle. Measure, from the centre front dot on head curve, half the round-head measure (which is 25 in.) to the left, and half to the right; mark with dots, and rule from the centre of the circle to these points which, when the brim is joined, will be the centre back.

The widest parts of the brim will be 3 in., as they were in *Fig.* 11, so that the second radius is 5 in. + 3 in. = 8 in. (*Fig.* 12.) Extend the centre back lines to meet this circle. Divide the brim outline into six equal parts and mark as in *Fig.* 11, A, B, C, 2 in. wide; D, E, F, 3 in. wide.

When points F1 and F2 are joined a slight droop is produced on the brim. If an oval head-part is required, the points F1 and F2 are extended, and the oval is marked on the head curve, midway between these points and the centre front. If the head length is 9 in. and the width is 7 in. (*Fig. 13*), the amount marked for the oval is 1 in. on each side of the head-part, and F1 and F2 must be extended 1 in. along the head curve as shown; if this point is overlooked the head size will be too small, for the oval head curve measures decidedly less than the circular one, which is merely the base of construction in this shape. The amount of extension at F1 and F2 is always decided by the amount taken in to shape the head oval; in *Fig. 13* this is 1 in., but if the head length measured 9 in. and the width measured $7\frac{1}{2}$ in. it would be $\frac{3}{4}$ in.

As mentioned earlier in the chapter, "rolled" or "cloche" shaped brims can be obtained from an ordinary flat sailor brim draft pattern by means of darts. That method is quite satisfactory when only a slight droop or roll is desired; but when hats for children are being made in soft washing materials, and sports and weather hats, and many varieties of toques and "pullon" hats are in question, a much tighter "roll" or a more decided "droop" is often more satisfactory. They require drafting on the "rolled" brim principle in order to retain their shape.

When a "rolled" brim pattern is required a slack head measurement is taken with the tape measure, and either $\frac{1}{5}$, $\frac{1}{6}$, or $\frac{1}{4}$ of this measurement is used as a radius for the head curve, according to the amount of "roll" necessary; the greater the radius, the more the brim will "droop," or roll up as desired.

In Fig. 14, 25 in. is the head measurement decided upon, and the radius for the head curve of the brim is $\frac{1}{5}$ of this, viz., 5 in. Draw the lines A-B and C-D; with a 5-in. radius describe about $\frac{3}{4}$ of a circle, the centre being exactly where the two lines cross. Decide the brim width, add this measurement to the first radius, and describe another $\frac{3}{4}$ circle, outside the first one, keeping the same centre point. In this draft (Fig. 14) the brim is $2\frac{1}{2}$ in. wide, the second radius being $7\frac{1}{2}$ in. Measure the head size (25 in.) round the head curve, taking $12\frac{1}{2}$ in. to the right and $12\frac{1}{2}$ in.

to the left of the centre line; rule from these points to where the lines cross in the centre and also to the brim outline, as shown by E-F and F-G.

In Fig. 15 the head size required is 24 in. and the radius for the head curve is $\frac{1}{6}$ of this, viz., 4 in. The brim width is 3 in., therefore the second radius is 7 in. A much smaller piece will be cut away when the head size has been measured; therefore the brim will roll only very slightly. In Fig. 16 the head size is again 24 in. and the radius $\frac{1}{4}$ of this measurement, viz., 6 in., and the brim is $2\frac{3}{4}$ in. wide; therefore the second radius is $8\frac{3}{4}$ in. This brim will have a greater "roll" than either of the previous ones, as there is a greater distance between the points E and G and these will, of course, meet when the brim is joined.

If $\frac{1}{3}$ of the head measurement is taken as radius, a very tight rolled brim is obtained (*Fig. 17*). This is sometimes required for children's hats, in conjunction with a four-piece sectional crown. This brim is obtained from a semicircle, and the lines joining E, F, G cut just $\frac{1}{2}$ in. within this boundary.

Fig. 14 takes about three parts of a circle, Fig. 15 almost the whole; very little more experiment is necessary in order to obtain any particular degree of roll that may be required. Fig. 17 forms a splendid basis for a tightly-rolled toque brim; the brim outline can be varied in shape, e.g. cut wider on the left side, or probably between the left side and the front, or it may even be cut as narrow as 1 in. to $1\frac{1}{2}$ in. on the right, and widened to 3 in. to 4 in. on the left side.

Fig. 14 may be used as a "cloche" brim for children's hats; the brim edge can be cut into six or seven scallops; it is also the foundation of many varieties of poked hats and bonnets, as is also Fig. 16.

There are many other types of brims constantly coming into fashion, but the chief principles of geometrical drafting being understood, it is quite an easy matter to make the necessary alterations from season to season. Fundamentally the shapes of hat brims have changed very little for very many years. In



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1649 Charles II introduced the "tricorne" shape to this country, in addition to many other "fine fashions of France." The drooping or "mushroom brim" with a tall "chimney crown" dates back to 1688 in William III's time, and in a modified form may be traced even as far back as the days of Queen Elizabeth. The "cocked beaver hats" for men in the days of King Charles I were variations of this style.

HAT CROWNS.—Hat crowns are quite as varied in shape and type as the brims are, and fashion is constantly "ringing the changes" in their height and size. The standard type of crown is the one with flat oval top and upright side-band such as is blocked for a man's summer hat of "monopole" straw.

This is probably the simplest shape from which to draft a pattern. The crown-oval is decided by the size and shape of the head part of the brim, and the side-band is quite straight, its length being equal to the round measurement of the head and its depth varying from $1\frac{1}{2}$ in. to $3\frac{1}{2}$ in. or even to 4 in., according to fashion. *Fig. 18, 18a* and *18b* illustrate this type of crown; the length of the crown oval is $8\frac{1}{2}$ in., the width $6\frac{1}{2}$ in., and the side-band is ruled $2\frac{1}{2}$ in. deep.

When the side-band slopes (Fig. 19) the top of the crown is made smaller than the head opening in the brim, the size being determined by the amount of curve on the band. For a band that is very little curved, take as radius twice the head measurement; e.g. if the head measures 23 in., the radius for the sideband is 46 in. If the height of crown is decided on as $2\frac{1}{2}$ in., the second radius or inner curve is $46 \text{ in.} - 2\frac{1}{2} \text{ in.} = 43\frac{1}{2} \text{ in.}$ (Fig. 19a). Measure the head size, 23 in. along the first curve drawn, taking $11\frac{1}{2}$ in. on each side of the centre line, and rule from this point to the apex. Measure the second curve carefully, and draw the crown to fit this size exactly; if the measure is 22 in. make the crown $8\frac{1}{6}$ in. $\times 6\frac{1}{6}$ in.; this can be cut from the head opening of the brim piece, so saving the drawing of another oval (Fig. 19a). If the band is to slope more, and the top to be less in comparison with the head opening, a smaller radius must



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be taken for the band; $34\frac{1}{2}$ in., or $1\frac{1}{2}$ times the head size, will produce a nicely-curved side-band (*Fig. 20a*).

Fig. 21a illustrates a side-band $3\frac{1}{2}$ in. deep, curved on a radius of $1\frac{1}{2}$ times the head measure; the top of the crown will, of course, be cut to fit the smaller curve of band. When the head size is taken as the radius for the side-band, the top of the crown will be very much less than the head opening of the brim, and the band will slope very decidedly (Fig. 21).

A "bell-shaped" crown, i.e. one that is wider at the top than at the head-part (Fig. 22), is shaped in exactly the same way as Figs. 19a, 20a and 21a, but the side-band is measured along the inner curve for the head size (Fig. 20), and the outer one for the crown. When a side-band is shaped, as in Fig. 23, the band is cut in two parts and both parts are slightly curved. The smaller curves of the bands meet at the waist, usually the half-depth of the crown, and the wider curves are placed one at the head-part, and one at the top of the crown (Fig. 23a).

Fig. 24 shows a crown that has a small oval centre and a deep side-band that is fitted to the oval, either with pleats or by darting. The side-band may either be cut quite straight or slightly curved, but as it forms part of the top of the crown, it must be cut sufficiently deep to allow for this. In Fig. 24 the oval piece is cut $3\frac{1}{2}$ in. $\times 2\frac{1}{2}$ in. and the band $24\frac{1}{2}$ in. $\times 5\frac{1}{2}$ in.; the finished depth of the band is 4 in. and the top of the crown is $3\frac{1}{2}$ in. $+ 1\frac{1}{2}$ in. $= 6\frac{1}{2}$ in. A soft top of muslin or stiff net is often used with a stiff band; any of the bands illustrated may be chosen and the oval piece for the top cut probably 1 in., $1\frac{1}{2}$ in., or 2 in. larger than the head oval of the brim, and then either gathered or pleated to fit the band (Fig. 25).

There are many ways of cutting "Tam-o'-Shanter" crowns which are usually very little stiffened. Method 1, is simply to cut a circular or an oval shape, which varies in size from about 12 in. to 18 in. across the crown-piece, and is either pleated or gathered or darted to the required measurement (Fig. 26).



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Fig. 27 is shaped from an 18-in. circle, and is set in twelve pleats to the head size.

Method 2 involves two oval or circular pieces which usually measure from 9 in. to 12 in. in diameter. The head-part is cut from one of the pieces and the two parts are joined together, making a seam all round the edge of the crown (Fig. 28, a & b). The French "Berri" cap is exactly of this shape but, as it is "blocked," the seam at the crown edge is unnecessary. The caps worn by the lawyers of England in the sixteenth century were very similar in shape to this type of crown which we now class as a "Tam-o'-Shanter."

Method 3 is illustrated by Fig. 27; the fullness is reduced to the head size by means of darts (Fig. 29). Six, eight, or twelve darts may be taken out to reduce the cap to the head size. If the circle is 18 in. in diameter, 12 in. should be left in the centre and the darts measured 3 in. deep, as shown by the dotted inner circle of Fig. 29, and $\frac{1}{12}$ of the head measure is left between each dart round the outer circle. A smaller crown measuring 15 in. or 16 in. in diameter would require only eight darts, and $\frac{1}{8}$ of the head size would be left between the darts on the outer circle.

Crowns are often cut in sections, sometimes in four parts (*Fig. 30*), and made to fit a band which is cut from $1\frac{1}{2}$ in. to 3 in. deep and of a length equivalent to the head measure (*Fig. 30a*).

The head-band in this figure is 24 in. \times 2 in. and the crown is 10 in. \times 10 in. (*Fig. 30*); the darts are 2 in. deep and $\frac{1}{4}$ of the head measure is left between each dart. Other sectional crowns are cut without any head-band and the divisions are taken down to the headline.

In Fig. 31 the crown measures 14 in. from back to front and from side to side, and as there are six divisions, $\frac{1}{6}$ of the head measure is left between each dart; if the head size is 24 in., the divisions each measure 4 in. The depth of the darts varies with fashion, sometimes being half the crown depth, i.e. in this shape $3\frac{1}{2}$ in., and sometimes deeper, in which case a higher crown is evolved.

In Fig. 32 there are eight divisions and $\frac{1}{8}$ of the head part is left between each of the eight darts; the crown measures 15 in. across and the darts are $3\frac{1}{2}$ in. deep.

CHAPTER IV

SHAPE-MAKING

THE materials used for the making of shapes are— (1) ESPATRA.—This is made from bleached creamcoloured 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 processes 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. \times 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 shapemaking 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 seissors, 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"

SHAPE-MAKING

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 loopstitched 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 $\frac{1}{2}$ 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.



CHAPTER IV

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

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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 cottoncovered 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.

CHAPTER V

WIRE SHAPE-MAKING

THE making of wire shapes is one of the most interesting and useful of all branches of millinery. Once the knack of manipulating the wire is acquired, it is possible for even an amateur worker to design graceful and becoming headgear. As a foundation for transparent materials such as tulle, lace, net and jewelled fabrics, the wire shape is always in demand, and is used by a great many milliners as a support for the light-weight fancy straws and braids.

In this process most careful and accurate workmanship is essential, and for this one must have suitable wire, a pair of good quality wire nippers, strong cotton Nos. 16 or 20, and covering net or muslin of just the best weight and texture to support the material of which the headgear is to be made.

CHOICE OF WIRE.—A medium-weight, silk-wrapped wire is quite the most satisfactory one for shape-building. A mediumsized, satin-wrapped wire is often used for the head-ring and occasionally for the brim-outline. Satin-wrapped wire has an inner padding of cotton filaments bound along its length by the smooth wrapping of fine silky fibres used for the outer covering. This padded wire is comparatively soft to the touch, and does away with the chief objection to the wearing of a wire shape, namely, the pressure of the hard wire on the forehead.

There are many qualities and sizes of wire used in making shapes, and a knowledge of them is essential. They are—

(1) Fine mounting or "tie"-wire which can be bought in most colours wound on large or small reels.

(2) "Filet" or lace-wire is very fine and obtainable in many colours.

(3) Light-weight, medium and heavy, silk-wrapped wire, manufactured in many colours.

(4) Fine, medium and thick, satin-wrapped wire, obtainable in many colours.

It is often an advantage for a worker to use three sizes of wire in the making of a hat shape, choosing probably a firm silk or a satin-wrapped one at the brim-edge; a medium silk-wrapped one for the principal rings and supports, and a filet wire for extra rings and supports when an intricate shape is being modelled.

METHODS OF MAKING.—There are two methods of making wire shapes: (a) in the hand, by measurement; (b) over a block by modelling. Both these methods are good, (a) being much the simpler and more practical for a straightforward shape, and (b) for a more difficult form.

There are a few rules to be noted—

(1) The wire and covering material must be of suitable weight and texture for the outer covering.

(2) The pattern or measurements of the shape to be made must be accurate.

(3) The sketch, model or block to be copied, must be thoroughly understood.

(4) Before any shape is begun the wire must be "sprung," that is, well slackened from the coil and flattened out straight before use, in order to prevent the shape from becoming twisted.

(5) Each ring and support wire should be cut in one length, as an unnecessary join weakens the shape.

(6) All joinings must be well overlapped, in the case of ring wires by 2 in.; and in nipping and tying the wires together firmness must be achieved without breakage of the filaments covering the wires.

(7) Twisting a cross wire more than once over a ring does not produce firmness, but gives the shape a clumsy appearance, in addition to causing much discomfort to the wearer.

(8) The outline of a shape must be kept most carefully, but a heavy shape is unwearable for any considerable length of time.

A strong paper pattern may be a guide to an amateur worker



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in the making of a simple flat shape, as the ruled construction lines show clearly where the cross-supports must be fixed to the head and outline rings; but this guide is of little use for either rolled or undulating brims.

It is well to practice the cutting, bending, nipping, and tying processes before attempting to make a shape as the knack of these processes must be acquired before any serious work can be done.

The "ties" round the coil of wire must first be loosened, then a length of wire be drawn out free of them, and straightened. To do this, hold the freed wire in the left hand about 6 in. from the end; then draw the right thumb and fingers flat along to the end. When this portion is straight prepare another few inches in the same way until sufficient length has been straightened for the ring or support needed.

Cutting the wire is easy. All the student has to do is to open the nippers, place the wire between the cutting edges on one side of the hollow square, and close the nippers sharply (Fig. 1).

Bending the wire is also easy. Hold the wire firmly in the left hand a few inches from the end; with the nippers in the right hand grip the wire between the roughened points of the nippers about $\frac{1}{2}$ in. from its end, then bend the wire round one point of the nippers (*Fig. 1a*).

Nipping requires knack. Hold one wire firmly in the left hand, and with the right hand pass another wire across (Fig. 2a), then round it once (Fig. 2b); press the wires firmly together with the pointed ends of the nippers, and the wires should be unmovable, with the covering of each intact. Never pass the wire over a second time in an endeavour to gain firmness—clumsiness and unnecessary weight inevitably result.

Tying is necessary to give firmness where two or more wires cross one another. This can be done with the wire, or single No. 16 cotton (*Fig. 2c*) and twisting or tying the ends firmly together.

MAKING A SIMPLE FLAT-BRIMMED SHAPE IN WIRE

(1) First cut the head ring, allowing $\frac{3}{4}$ in. to 1 in. at both ends for overlapping, e.g. for a head size of $24\frac{1}{2}$ in., wire is cut $24\frac{1}{2}$ in. + $1\frac{1}{2}$ in. = 26 in. In making it up, overlap the ends and bind firmly with tie-wire or strong cotton before putting it in position on the shape. Mark the exact centre of the join and from this point mark the centre front and quarters of the ring, and if necessary, four more points midway between each of these. Many milliners prefer to make the head-wire join come just to one side of the centre back, as shown in *Fig. 3*.

(2) Now bend and cut off the front to back support-wire, as shown in position with the head-wire (Fig. 3), allowing $1\frac{1}{2}$ in. at each end, i.e. $\frac{3}{4}$ in. for the twist over head-ring, and $\frac{3}{4}$ in. for the twist over brim-outline wire; e.g. if brim is 3 in. in width all round, crown is 3 in. in height, and the top of crown is 9 in. from front to back, and 7 in. from side to side, measure 3 in. $+ 1\frac{1}{2}$ in. for front brim and bend at A; measure 3 in. for crown height and bend at B; measure 9 in. for top of crown and bend at C; measure again 3 in. for crown height, and bend at D, and 3 in. $+ 1\frac{1}{2}$ in. for the back brim; cut the wire sharply through.

(3) Fix this support wire into place on the head-ring by placing the ring over the support wire (Fig. 3), and at the exact centre front twist the support *once* over the ring, letting it wrap the ring quite closely, and press it flat with the nose of pliers. Use gentle yet firm treatment or the filament on the wire will soon resent the hard metal of the tool and become ruffled.

Twist and nip the back support round the head-ring at the centre back in just the same way as the front one. Many workers prefer the joins in rings to be placed alternately, just to right or to left of the centre back, so that the twist of the support wire just avoids them, and so can be made flatter.

(4) Measure and bend the side to the side-support, e.g. 3 in. $+1\frac{1}{2}$ in. for left side, bend at A, 3 in. for crown height, bend at B, 7 in. across crown, bend at C, 3 in. again for height, and bend at D 3 in. $+1\frac{1}{2}$ in. for right side. Fix this support on to the head-ring

from side to side (Fig. 4). Two cross supports are required, from side-front and side-back at exactly half the distance between the two already placed. The brim measurement for these is the same as for the first and second support, the brim being of equal width at all points.

The crown height is also the same, but to obtain the measurement across the top of the crown, add together the back-to-front and side-to-side measurements, i.e. 9 in. + 7 in. = 16 in., and divide the result by 2, which gives 8 in.; the crown is, of course, oval in shape. After fixing these wires tie the four supports where they cross, exactly in the centre of the crown (*Fig. 4*). Take great care to wrap the cotton tightly round each way of the cross before knotting to prevent the wires from slipping out of place.

A crown-outline ring should be joined to the exact size, round the top of the crown and carefully marked into eight parts, just as the head-ring was in Fig. 3. This ring must be tied firmly to each support wire, the joining of the ring being at the back (Fig. 5). Extra rings are placed at equal distances apart between the head-ring and crown-outline wire (Fig. 6). Sometimes one extra ring is sufficient, but two, or even three, may be required according to size of shape and weight of outer covering material. If several rings are needed, the wire used should be finer and lighter to avoid weighting the shape. These rings are tied on the outside of the shape.

Each brim support wire must be carefully measured, and turned up to the measurement of brim-width, which in this case is 3 in. (*Fig.* 7). The brim-outline wire is then cut and joined to the size required, marked into eight equal parts, and fixed to the shape by wrapping the eight support-wires once round (*Fig.* 7).

The joining of the ring of wire is put at the back and it will be found an easier method to attach the wires (a) centre front, (b) centre back, (c) side, (d) remaining side, (e), (f), (g), (h) crosswires, than it would be to work them consecutively, commencing



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at the back. After hooking the wires once round the ring, press each one flat with the nose of the pliers, and cut off the projecting end quite closely, to prevent damage to outer covering. Tie on extra rings between head and brim outline, according to size of shape and likely weight of outer covering.

OTHER TYPES OF SHAPES

OVER A BLOCK.—If made over a block, a wire shape has a tendency to increase considerably in size. This can be avoided by fixing the outline-ring for the crown *inside* the support-wires, and taking very accurate measurement of the brim-outline of the block before joining that wire, for the copied shape.

When a brim is much wider at one point, e.g. at (1) left side, (2) back, (3) front; or higher at (1) back, (2) side of the crown, the correct length of the support is gauged by adding the length of the wires on the right and left of the cross-wire together and dividing this measurement by 2, e.g. front wire 3 in., left side wire 5 in.; 5 in. + 3 in. = 8 in., 8 in. \div 2 in. = 4 in. It is not necessary to carry the extra rings of wire completely round a shape, when one side of it is much wider than the other; they should be continued just as far as the outline of shape requires defining, and then fastened either to the head-ring or to a supportwire. Great care must be taken never to spoil or lose the outline, or form of any shape by omitting necessary wires, or by adding wires at the wrong point or angle.

A mushroom-shaped brim is made similarly to the flat-brimmed hat, so far as the fixing of support and cross wires is concerned; but the brim-outline wire is decreased in size according to the amount of droop desired at the brim-edge. The brim-outline (*Fig. 8*) is 44 in.; if a $\frac{1}{2}$ in. droop is required for the mushroombrim, the outline-wire should be 42 in.; a 40-in. outline will produce a 1-in. droop all round the edge of the shape.

The support-wires of the brim must be carefully curved to meet the reduced outline-wire (*Fig.* 8). Brims that require a double turn on the support-wires, as for instance a turban or a

"directoire" shape are rather more complicated and a little difficult to calculate. The crown of either shape may be made (Fig. 9), or the sides and top be curved as a dome-shape, as fashion dictates.

Fig. 10 illustrates a simple turban with a flat-topped crown, the inner brim being 1 in. in width and the "rim" or turned-up brim 2 in. in depth. The back-to-front support is totalled as follows: Rim 2 in. $+1\frac{1}{2}$ in. (for turning over head- and brimoutlines) = $3\frac{1}{2}$ in. Add 1 in. (for inner brim) = $4\frac{1}{2}$ in. Add 3 in. (for crown height) = $7\frac{1}{2}$ in. Add 9 in. (across crown) = $16\frac{1}{2}$ in. Add 3 in. (crown height) = $19\frac{1}{2}$ in. Add 1 in. (inner brim) = $20\frac{1}{2}$ in. Add $3\frac{1}{2}$ in. = 24 in. Fasten this support on to the head-wire as in Fig. 3, and then bend into shape as shown in Fig. 9. Fasten all the four support-wires in the same way and tie on the necessary rings for outlining the crown.

Before attaching the brim-outline wire, make another ring the exact size of the outline, to keep the shape of the inner 1-in. brim; tie this firmly into place (*Fig. 10*). Complete the shape by fixing the outline to the turned-up brim, and to any necessary intervening rings (*Fig. 11*).

A type of "directoire" shape is illustrated by Fig. 12. It has a double turn on the brim-wire, the upturned portion being 3 in. deep, and the downturned part $\frac{3}{4}$ in. The crown is domeshaped, and measures 15 in. from back to front and 14 in. from side to side. If the head measurement desired is 24 in., the brimoutline should be 40 in., or 16 in. greater than the head size; if, however, the head measure is 23 in., then the brim-edge should measure 23 in. + 16 in. = 39 in., provided that the same slope is required. The measurements for the back-to-front support-wire are calculated as follows : downturned or bevelled edge = $\frac{3}{4}$ in. + $1\frac{1}{2}$ in. (for turnings) = $2\frac{1}{4}$ in. Add 3 in. (upturned portion of brim) = $5\frac{1}{4}$ in. Add 15 in. (over crown) = $20\frac{1}{4}$ in. Add 3 in., $\frac{3}{4}$ in., and $1\frac{1}{2}$ in. = $25\frac{1}{2}$ in. The back-to-front and side-to-side support-wires differ only in the crown measurement.

These principles are applicable to other types of shapes and

should enable the student both to copy and to design according to fashion and the desire of the wearer.

BONNET SHAPES

These are decidedly more simple in structure and easier to manipulate than hat shapes, but, being closely fitted round the face, they require greater care. A good grip of the head, as well as a perfectly true and carefully-chosen outline, are absolutely essential if the shape is to prove at all satisfactory. Bonnet shapes have no brim at the back and the head wire is usually arched to fit round the hair instead of keeping the oval head shape as a hat does. The first measurement is taken from ear to ear, round the forehead, and is about 15 in.; the second measurement is the back arch of the bonnet, which varies very much both in size and shape, being usually arranged according to the fashion of the hairdressing; an average measurement is 8 in. to 9 in. The back-to-front and side-to-side measurements are taken more closely than for a hat, but they vary a little with the dictates of fashion.

An average back-to-front measurement is 8 in. to 9 in. and the measure from side to side is 11 in. to 12 in., when the crown is the shape of a horseshoe. A small brim or coronet is usually added round the front of a bonnet and it may either turn downwards as in a mushroom shape (*Fig. 13*), or upwards (*Fig. 14*). In the little bonnet shape sketched (*Fig. 14*), the coronet is 3 in. deep at the front and 2 in. at the sides, the outline-wire being 10 in. longer than the face, or ear-to-ear measure.

To obtain the full head-wire size, add together the first and second measurements taken, i.e. 15 in. + 9 in. = 24 in. Add 1 in. (turnings) = 25 in.; cut this in medium satin-wrapped wire, and join into a ring. Put the joining at centre back (*Fig. 15*) where the pressure is least felt—never at the ear corners or on the face line. Measure half the back arch, i.e. $4\frac{1}{2}$ in., on both sides of the centre join, and bend the wire to the shape of the head (*Fig. 15*), taking particular care to curve the face of the bonnet, so that

it will grip the head at the ear corners. Calculate the back-tofront support-wire by adding together 9 in., $1\frac{1}{2}$ in. (turnings), 3 in. (depth of coronet), 1 in. (turnings) = $14\frac{1}{2}$ in.; fasten this wire over the outline-wire, already joined (*Fig. 16*).

Measure 3 in. to $3\frac{1}{2}$ in. from the ear corners along the faceoutline wire, and mark this for position for the side-to-side support-wire. This length is ascertained by adding together 12 in., $1\frac{1}{2}$ in. (turnings), 4 in. (twice the depth of side coronet), $1\frac{1}{2}$ in. (turnings) = 19 in.; fasten this wire into place (*Fig. 16*).

The outline-wires in this style of bonnet shape are all of horseshoe form, each of the crown wires being clipped over the back arch of bonnet (*Fig. 14*). One wire gives outline to the crown and others are fastened on at regular intervals as the shape requires them, usually one on top of the crown and two dividing the space between crown and face-outline wires. After tying these wires firmly into position, mark the exact centre of the coronet wire, and grip the front support-wire firmly to it at this point.

From Fig. 14 it will be apparent that the coronet outline continues to the ear corners of the bonnet, and in this particular shape is not hooked on to the back arch but to the face-outline wire. Fix the ends of wire firmly and hook the side supports into place on the outline wire. Add one or two outline wires round the coronet, between the face and outer edge to complete the shape. Another type of coronet is sketched in Fig. 17, an opening being made on the left side of the front to be filled in with either feather, osprey, or floral mount.

Fig. 13 is a favourite shape, the crown being built on the same principle as a hat, while the back retains the arch of the bonnet.

CHOICE OF COVERING MATERIALS

COVERING AND BINDING WIRE SHAPES.—If the shape is intended for an outer covering of straw plait, it should be covered carefully either with stiff net or leno muslin and all

outer edges neatly bound before the plait is sewn on. Each piece of covering is cut to the exact pattern of the shape, i.e. (a) upper-brim piece, (b) under-brim piece, (c) top of crown, (d) side-band; excepting that the under-brim piece is sometimes omitted when stiff net is used, on account of weight and bulk. For method of covering refer to Chapters VII and XV and for binding to Chapter IX.

Tulle is used as an undercovering for transparent outer coverings, and sometimes aerophane and georgette, of an inexpensive quality, make the most satisfactory undercovering for a more expensive quality of the same material. A binding of cross-cut velvet is often used round the head-wire of both hats and bonnets to render them more comfortable.

CHAPTER VI

THE CUTTING OF MATERIALS AND MAKING OF FOLDS, PIPINGS, AND BOWS, ETC., ON THE CROSS

IF cutting is to be done successfully, it is necessary that the cutter shall know something about the weaving of the materials that are being handled. In the weaving of simple goods the warp-threads, which are the stronger ones, are the first laid in the loom; the weft-threads, being softer and finer, are then woven into the warp-threads by means of a shuttle.

The shuttle turns over the warp-threads at the edges of the goods, and as it travels to and fro across the width of material and over both edges, it forms a "self edge" or selvedge running the length of the piece of stuff. This selvedge way is therefore the stronger one and should bear the greater strain in wear.

The *twill* or *grain* in materials runs diagonally across the goods. Silks, mourning crape, and other materials are woven with a twill or grain. Velvet, velveteen, and other materials with a cut pile, are shaded light or dark according to the way the pile lies. The smooth way, or the direction in which the pile lies, is lighter than the way against the pile. The cloth should be so cut as to show the darker shade, which is the richer one.

CUTTING ON THE CROSS.—Material is often cut on the cross for millinery purposes, because if so cut it gains elasticity, and can be strained to fit smoothly over edges and curves. The material can also be folded and draped much more softly and gracefully than if cut on the straight. The "cross" is obtained by cutting diagonally across the warp- and weft-threads of the material (*Fig. 1*) where, as will be seen, the distances A-B and A-C are equal. Incidentally a perfect cross-cut so made leaves a "corner" of material which is often in demand for draping crowns, etc.

To cut a crossway-strip, fold the material from B-C and cut along the fold. Measure the width of the strip required from D to E, fold again, and cut from F-G. If the width measurement is made from C-F or from B-G the piece cut will be too narrow. When cutting twilled material always fold across the twill (*Fig. 1*). If cut along the twill very little elasticity is gained, and the material is liable to curl. As millinery materials are usually 18 in. to 36 in. in width, several cross-cut pieces of the same width are often required, and they must be joined to obtain sufficient length for the process in hand. When the joining is being done one must take care that the "shade" in the case of velvet, and "twill" in the case of silk, lies on every piece in the same direction (*Fig. 3*).

CUTTING TO SHAPE.—Paper patterns are usually placed on the material as a guide when pieces are required to be cut to a certain shape, as, for instance, when the covering for a hat or a bonnet is needed. The cross, warp, weft, twill and shade, all play important parts, when cutting to shape or pattern, but this will be considered in a later chapter where the covering of shapes is dealt with.

Material is very seldom cut on the straight or selvedge way, and the fabrics so dealt with are thin piece-chiffons, ninons, lisses and muslins, which are too flimsy for cross-cutting. Large bows are often made of these straightway strips. When cased "Liberty" hats are in question, the selvedge way of cutting is sometimes considered to be preferable as the long strips required for brim and crown-band can be cut in one piece and more than one join be avoided. Materials are cut the weft way for making rosettes, pleatings, etc., when the goods are too flimsy to admit of cross-cutting.

Making Folds, Pipings, Bows, etc., of Materials Cut on the Cross

Folds are made of velvet, silk, satin, crepe, lisse, chiffon, and many other materials that are constantly coming on to the market.



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JOININGS.—These materials are usually cut on the cross, the strips being from $\frac{1}{2}$ in. to 1 in. or more in width, then joined to the length required by (a) back-stitching (Fig. 4), (b) run and back-stitching (Fig. 5), or (c) running only (Fig. 6). A very fine needle and either silk or cotton should be used, and great care be taken not to pucker the material. Velvet, satin, and silk require a back-stitched joining as they are thick in texture; lighter-weight materials may only require fine running, or run and back-stitching.

Pin the selvedge ends of strips together (Fig. 7) and join at least $\frac{1}{8}$ in. below the selvedge. As the strips when joined and opened out must form one length with edges level the whole way, it is important, when joining, to place the top right-hand corner of the front piece so that it projects beyond the back piece (Fig. 7); the amount of the front piece projection should measure the same distance beyond the back piece as the joining stitches measure from the upper edge of the strips (Fig. 7) where A to B and C to D are equal.

Hold the work over the first and second finger of the left hand while joining, and keep the upper piece of material taut, to prevent puckering. Open each join out flat and rub the back with the thimble, then cut away as much of the selvedge as can be spared (*Fig. 8*). When joining transparent materials like chiffon and lisse, the whole of the selvedge must be cut off, as it is thick, and would show through to the right side if left on the strip. An iron is often required to steam or press a joining quite flat.

FOLDS.—There are several methods of making folds for millinery purposes, the one shown in Fig. 9 being cut twice the width that is required when finished; the cut edges are pinned together and then either tacked or lightly run $\frac{1}{8}$ in. from the cut edge. This is a raw-edge fold, and is used when a succession of folds are required to fit flatly round the side-crown, or the brim of a shape. As each succeeding fold is sewn into place it is arranged to cover the raw edges of the previous one. For piping, the material is cut and run as for a raw-edge fold, except that a piece of cord or thick wool is laid inside the fold of the material (Fig. 10) and held in place by fine running stitches taken through the two folds of material. Another fold (Fig. 11) is also cut twice the finished width, but in this case the raw edges are turned over to meet at the centre where they are caught together with lacing stitches, the needle being put under the cut edge of first one side and then the other. This makes a rounder fold than Fig. 9 and is termed a rouleau. Fig. 12 shows another fold or roll, for which the material is cut three times the finished width, e.g. if the finished fold is to be $\frac{1}{2}$ in. wide, the material must be cut 11 in. wide. First the edges are folded towards the centre, the upper edge is left raw, and the lower one is folded again and slip-stitched to the upper one. This rouleau is often called a French fold and is used as a trimming or finishing fold; it frequently covers the raw edges (Fig. 9) at the lower edge of a side crown-covering, etc. If a long length of this rouleau is required in a material that does not easily crease or soil, a more speedy method of making it is to place the right sides of the material together as Fig. 13, then pin and run-stitch them $\frac{1}{4}$ in. from the cut edges, afterwards turning the rouleau carefully to the right side (Fig. 13a). This method of making would quite ruin a piece of velvet or of stiffly-finished silk, but in the case of eolienne, or silk crepe would be quite successful. A piece of cross-cut material 2 in. to 6 in. in width may be slip-hemmed along both edges, then set into folds along the length (Fig. 14), and twisted into a rouleau (Fig. 14a). Strings for elderly ladies" bonnets when made from piece material are cut on the cross and made into a flat fold 3 in. to 1 in. in width. The cut edges are both turned in neatly and slip-stitched at the edge of the fold (Fig. 15).

A method of making a padded rouleau is sketched in Fig. 16. This is usually of softly-finished silk or satin and is cut about $1\frac{1}{4}$ in. in width. The edges of the material are run together on the wrong side (Fig. 13), and the tube of material afterwards turned right side out (Fig. 13a); a length of soft cord or wool

is drawn into the tube, the material being eased slightly by drawing up the gathering thread, thus giving a rucked effect as in Fig. 16.

Bows of PIECE MATERIAL are made of silk, satin, velvet, crepe, and many other materials. With the exception, perhaps, of tulle, very thin chiffon, ninon, lisse, and muslin, these materials are all arranged more gracefully into bows if cut on the cross.

When a length exceeding one crossway strip of material is required, two or more pieces must be joined together as shown in Fig. 7. If the bow is being made of velvet the edges may be turned over once and caught down lightly on the wrong side with "catch" or "cat"-stitch (Fig. 17), or if the velvet is thin and can be neatly rolled, the edges can be turned over twice to form a tiny rolled hem, and then catch-stitched, or roll-hemmed (Figs. 17 and 18), according to the type of bow being made. The strip can either be hemmed along both sides, and across the ends after the selvedge has been cut off; or the ends may be mitred or lined (Figs. 19 and 20). Taffeta silk and other materials that are the same on both sides of the fabric are usually rollhemmed on to the right side of the trimming piece. The tiny rolled hem makes a neat edge to the bow, and the small stitches taken through the material when the hem is slip-stitched will be on the wrong side of the trimming.

To form a mitred end, fold the long pointed end of material over so that A touches C, the fold lying between B and D (*Fig. 21*). Either back-stitch, or run and back-stitch, from C to B, taking stitching well inside the selvedges (*Fig. 22*). Turn the mitred end inside out, taking great care to form a true point, and then either catch-stitch or slip-stitch from D to C (*Fig. 19*).

An end may be lined with the same material as that used for the bow, or a contrast in either colour or fabric may be chosen. A velvet end is often lined with silk or georgette, while one of millinery cloth may have a lining of velvet. Cut the lining to the same shape and the same "way" of the material as the piece being lined. Unless the selvedge way of lining and trimming



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piece run together, the edge will not lie smoothly when turned. Place the right sides of the lining and material together, pin carefully to prevent them from slipping, then join from A through B to C and D. Snip the turnings at B and cut away the extreme point at C (*Fig. 23*). Turn the end right side out, shape the points carefully, and either slip-hem or catch-stitch down the lower edge (*Fig. 20*).

Another method is shown by Fig. 24 where a pointed end, or what is known as a "donkey's ear," is cut from one piece of crossway material. After cutting, fold from A to B, so that C and D also E and F are touching, the right side being inside. Join the cut edges as in Fig. 23 and then turn. This method obviates the lengthway joining, but unless it is the means of using a small corner-piece of material it is rather wasteful as a triangular piece is cut away beyond points A and C.

When thin silk, ninon, lisse, or georgette are being prepared for trimming pieces, a French hem is quite the neatest and most dainty method of concealing the cut edge. To make this hem, turn back about $\frac{1}{2}$ in. of the material on to the right side (*Fig. 25*), run a tuck $\frac{1}{8}$ in. from the fold, then roll the hem over on to the wrong side, and slip-stitch it just to cover the running stitches (*Fig. 26*).

A further neat and good way of concealing a raw edge is by binding. The binding may be of crosscut strips of material in contrast with the trimming piece, as, for instance, a bow of brown silk bound with brown velvet. The strips should be cut about $\frac{3}{4}$ in. in width. Place the binding material and trimming piece with right side together, then neatly run the edges together, turn the bind over on to the wrong side of the trimming piece and slip-stitch the edge down to cover the running stitches just as in the French hem (*Fig. 26*).

Figs. 27 and 28 are standard types of piece-material bows. Heavy makes of velvet should never be chosen for trimming purposes, as they make a hat heavy and uncomfortable; the light-weight millinery velvet is always best. There is always a



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difficulty in manipulating trimmings of piece velvet, and skill is needed to dispose of the bulk of material at the root of the bow. It is sometimes necessary to make the loops and ends up separately and mount them neatly and firmly on a small foundation of stiff net or muslin (Fig. 27). Great care must be taken in pleating the loops and ends to see that the pleats fall gracefully into place, and that the edges of the loops fall evenly one above the other and hide the back of the velvet and the catch-stitching. Strong cotton or silk are necessary in stitching these bows, and neat firm stitches must be taken through the centre of the bow. An evenly-pleated and twisted wrap-over (Figs. 28a and 28b) carried round the waist of the bow, from front to back, where it must be neatly finished, will hide all stitches and cover the net mount (Fig. 29). When this silk, ninon, georgette and other lightweight piece-goods are being made into bows, a mount of net is not required, as such bows are made in the same way as ribbon bows (see Chapter VIII).

A thin lining of tarlatan or leno is occasionally put into an upstanding bow of soft silk or satin to make it more durable, but this is apt to weight the hat and is not to be recommended generally. Fine lace wire can, if necessary, be inserted in the hems of ends or loops or wire-stitched within their edges, to hold them in position.

ROSETTES OF PIECE-MATERIAL.—Silk, satin, chiffon and georgette as well as crêpe-de-Chine are cut on the cross for making rosettes. The length and width of the strip will vary according to the size of the rosette required.

A strip of 1 yd., if cut 2 in. in width and folded along the length, will make a simple rosette (*Fig. 30*). Join the ends on the wrong side by running the cut edges together; fold the strip in half lengthways, making the ends square, then holding the cut edges towards you to prevent creasing the fold, gather them together along their whole length.

Cut a 1-in. circular foundation of two-fold stiff net, and a $1\frac{3}{4}$ -in. circle of sarcenet for covering it. Run the edge of the

sarcenet, place the net rounds upon it, draw up the gathering thread and tie the ends (*Fig. 30*). Commencing at the outer edge of foundation, with the neatly-covered side away from you, arrange and sew the material round the outer edge, taking small stitches at the back of the foundation and longer ones in front to secure the material in place (*Fig. 30*). Ease the material sufficiently for it to fall in soft flutes as it is arranged round and round the foundation towards the centre. Each succeeding row of gathered material covers the raw edges of its predecessor, and the tip of the centre can be drawn down a little among the folds of the last row, so that when complete the rosette is quite neat and compact (*Fig. 31*).

Single silk, either roll-hemmed or French-hemmed along the outer edge, is often used for this type of rosette. Narrow lace, ribbon, or soft straw are sometimes used in conjunction with the single silk, the outer edge of which is turned over once to the right side, and the lace, ribbon or straw run lightly over it, after which the inner edge of the silk is gathered on to a net foundation as described above. Another variety of such a rosette has the edge blanket-stitched or outlined with overcasting stitch worked in fine wool, fibrone or silk.

A neat little rosette edged with shell-shaped shirring is pretty for infants' and children's millinery. The upper edge of the material is rolled over twice to form a narrow hem, and the gathering is worked in a "shell"- or "scallop"-shaped wave, the needle being taken over the folded edge of the hem during the gathering process (*Fig. 32*). The ends are cut and hemmed, and the long edge is gathered in the usual way, but before the material is sewn on to the net foundation the shell-shirred edge should be thrown into points by being slightly eased on to the gathering thread. A strip of material measuring about $1\frac{1}{4}$ yds. in length will be required for a small rosette sewn to a 1-in. wide foundation as in *Fig. 31*.

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CHAPTER VII -

COVERING SHAPES

HAT shapes may be covered in two ways—with plain stretched coverings, or with full coverings, according to the taste of the wearer. The stouter makes of silk, velvet, and cloth are usually chosen for the plain covering ; finer ones for full coverings ; and tulle, lace, net, chiffon, muslin, for the "drawn hats" as they are often called.

Suitable materials for coverings are as follow-

MILLINERY VELVET, 18 in. to 24 in. in width, is manufactured with silk pile and cotton back, and is rather stiff, but of light weight.

MIRROR VELVET, usually 18 in. in width, is light in weight and has the short-cut silk pile on its surface rolled flat in one direction, which produces a mirror-like appearance.

PANNE VELVET, about 18 in. wide, has a longer pile than mirror velvet and is rolled in the same way.

COUCHÉ VELVET is very similar to mirror velvet, the pile being laid in one direction.

HATTER'S PLUSH has a more shaggy pile than panne velvet and is rolled flatter; it is manufactured almost entirely of silk.

TERRE VELVET is silk velvet in an uncut state, showing the ridges or cords that run from selvedge to selvedge.

VELVETEEN is a patent velvet usually 24 in. to 26 in. wide, sometimes 40 in. This is rather too heavy for millinery purposes, as are also the striped and corded velveteens that are used occasionally.

EMBOSSED AND FANCY VELVETS and VELVETEENS are often used for a part of the covering, usually the crown or under-brim of a hat or toque.

COVERING SHAPES

CHIFFON VELVETEEN is a light-weight, soft, pliable make of velveteen and is very suitable for stretched coverings, more especially for children's wear.

| | | SILK | | | | |
|------------------|----|-------|---|---|-----------------------|--|
| Faille | | | | | 22"-40" wide. | |
| Chiffon taffeta | | | | | 24"-40" wide. | |
| Glacé | | | | | , , , , | |
| Surah | | | | | ,, ,, | |
| Japanese . | | | | | ,, ,, | |
| Corded . | | | | • | 24" wide. | |
| Brocade . | | | | | 18"-24" wide. | |
| Crêpe-de-Chine | | | | | 27"-44" wide. | |
| Georgette . | | | | | 18"-36" wide. | |
| Ninon de soie | | | | | 36" wide. | |
| | | a | | | | |
| | | SATIN | 1 | | | |
| Duchesse . | | | | | 38"-40" wide. | |
| Merveilleux . | | • • | | | 18"-36" wide. | |
| Mousseline . | | | | | 38"-40" wide. | |
| Charmeuse . | | | | | 38"-44" wide. | |
| Cotton-backed | | | | | 24" wide. | |
| Wool-backed | | | | | 20"-44" wide. | |
| | | ~ | | | | |
| Cloth | | | | | | |
| Fine box . | | | | | 45"-60" wide. | |
| Beaver . | | | | • | ,, ,, | |
| Melton | | | | | ,, ,, | |
| Monchon . | | | | | Circular | |
| Curl cloth . | | | | | 24"-30" wide. | |
| Velour . | | | | | ,, ,, | |
| Imitation Monche | on | cloth | | | 22"-30" wide. | |
| Mourning crape | | | | | 32"-40" wide. | |
| Aerophane . | | | | | 22"-42" wide. | |
| Lisse | | | | | 30" wide. | |
| Tulle | | | | | 36" wide. | |

SILK

METHOD OF PLANNING PLAIN HAT COVERINGS ON VELVET.-After obtaining a correct pattern of all parts of the shape, as described in a previous chapter, place these carefully on the material chosen, with due regard to (a) cross, (b) shade, (c) sheen, (d) pile, (e) twill, (f) cord or stripe, as they occur. The method of planning on velvet is shown in Fig. 1, where the two brim patterns, i.e. the upper and under, the side-band and top of crown, are all arranged so that the dark shade, or the way against the pile, being the richer one, will be seen from the front of the hat when covered. Fig. 1 shows the best and most economical way of "laying" the pattern of a simple flat hat-shape when the velvet is about 20 in. wide; turnings of 1 in. are required round the outer edges of all patterns and $\frac{3}{4}$ in. within the head-part of the upper-brim piece; if the under-brim piece is left uncut at the head-part until after fitting, this process will be simplified in the covering.

Lillikin or steel pins or needles are the least likely to mark the material; these should be carefully used, and only a small piece of the velvet be taken on the pin. The centre points, both back and front, should be chalked on the turnings of the material. If the patterns are planned on the wrong side of the goods, the outline may be lightly chalked round each piece of the pattern which will certainly be a guide for amateur cutters.

When the side-band of a shape is uncurved the piece for covering it is simply a cross-cut strip. The joining in this case is less noticeable when made diagonally, e.g. that shown in Fig. 4, Chapter III, is preferable to that shown in Fig. 1 where it is vertical.

PLANNING ON TWILLED SILK AND CRAPE, ETC.— When the material used has either a twill or a grain on the surface, the patterns are planned as in Fig. 2; the twill or grain will then run from front to back of the shape when the pieces are fitted.

The grain of crape runs in the opposite direction to the twill of silk, etc., and this must be noted when planning. The shade, or sheen, on the surface of satin should be planned to look richer



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and darker from the front of the hat, just as in the case of velvet (Fig. 1).

Mirrored and panne velvets are frequently planned with the pile lying flat, from front to back of the shape; this causes the light, smooth surface to be seen from the front of the hat rather than the darker shade. When a rolled or drooping brim is being covered, it may be necessary to make a join in both the upper and under brim-covering pieces; if so, the joins should be arranged where they are least noticeable, not necessarily at the centre back. When the brim is sharply rolled at one side, the upper-brim piece may be joined on the inside of this turn, where it will be almost hidden and probably the under-brim piece could be joined on the opposite side of the brim where the roll is quite narrow.

It is quite possible to ease out carefully an amount of fullness from the upper-brim covering in many cases, without having a join in the material, and so avoid a seam at the back of the brim.

FITTING THE PIECES.—The usual order of fitting the pieces of a plain covering is—

- (a) Upper-brim piece;
- (b) Under-brim piece;
- (c) Top of crown;
- (d) Side-band.

When a softly-gathered or pleated crown-top is in question the side-band is usually covered before the crown is sewn to the hat. Many milliners cover the brim-piece of the shape as well as the side-crown, or the whole crown, before joining together the various parts. Whichever method is chosen, great care must be exercised if the covering is to be perfectly managed.

The method of binding or mulling a shape in preparation for a stretched outer covering of velvet and other fairly substantial materials is given in Chapter IV on "Shape-making." When thin silk or satin is being used, an undercovering of fine domette or mull muslin must be cut out by the pattern pieces, and quite flatly strained and tacked in position over the whole shape.

If aerophane, georgette, lisse, or similar transparent material is being used, either an inferior quality of the same material or a coarse tulle or cotton net may be used as an undercovering.

After the sparterie or wire shape is prepared according to the substance of the outer covering (see Chapter IV), cut out the pattern pieces in material. When this is done, fit on the upper-brim piece, gently straining out all tendency to fullness. To do this pull the material a little along the warp and weft threads, but on no account pull across them as this will cause the material to cockle; snip the turnings on the slant round the head-part nearly to the fitting-line, and on no account beyond it. Stabstitch the material to the head-part of the shape, just above the fitting-line, and pare off all spare material. Turn the material over the brim-edge, smoothing it with the ball of the thumb to fit and coax it to the outline of the shape, and secure it there with fine steel or lillikin pins (Fig. 3). Use a fine needle and silk, and tack the covering material into place near the brim-edge. Pare away all unnecessary material, and so avoid a bulky edge, as there are four thicknesses of the covering to be considered before the brim-edge is completed. Hold the hat upside down with the under-brim facing you, then catch-stitch the edge of the upper-brim piece down to the espatra, being careful not to push the material along in doing so (Fig. 4). Stab-stitch round head part just above fitting line.

The next process is the fitting of the under-brim piece and this requires care. Without cutting away the oval for the head, place the material over the hat, depress it a little in the centre over the head oval, and pin it in place at the centre front, back, and sides, easing out all fullness while turning in the edge and pinning it flat to the shape all round. Cut out the head oval in the material to within $\frac{3}{4}$ in. of the fitting-line, notch the edges on the slant almost to the fitting-line, turn them up inside the crown and pin or stab-stitch through to it. Slip-stitch the

under-brim to shape along the outer edge, keeping the folded edges of the material upper- and under-brims quite level, and in doing the slip-stitching take the longer stitch into the loose material and short ones into the brim-edge (Fig. 5). If the crown of the hat is turned downwards, and the edge of the brim is held towards the worker, control can be exercised over the work, and a smooth edge should be the outcome. When the slip-stitching is completed, fasten the thread firmly by a few stitches taken backwards into the upper-brim covering.

An amateur usually experiences difficulty in obtaining a perfectly smooth and invisibly-stitched edge and is inclined to push forward any fullness that accumulates in the under-brim piece, hoping to dispose of it later rather than by coaxing the material a little towards the needle and turning it in a trifle more all round the edge, and so lessening the size of its circumference. Some milliners prefer to finish the outer edge of the brim before cutting or finishing the head-oval. In that case, after the outer edge is slip-stitched cut away the material inside the head-part to within $\frac{1}{2}$ in. of the fitting-line, snip this $\frac{1}{2}$ in. slantwise at intervals almost to the fitting-line, turn the notches up inside the crown, and stab-stitch through to it.

If the crown is a plainly fitting one, tack a piece of headlining inside the crown of the shape, and then carefully fit on the crown covering. Pin it well to the shape just over the crown turn (*Fig.* 4), stab-stitch it flat through the side-band, then pare away all unnecessary turnings.

To prevent an ugly ridge showing at the top and base of the side-band, cut a piece of fine soft muslin to the shape and depth of the crown-band without allowance for turnings, and strain flatly round and tack to the shape before the outer covering band is fitted on. Join the covering band of material by carefully back-stitching the ends together, open out and flatten the seam, ease it over the crown and pin it in position, turn in the lower edge and slip-stitch lightly round the head-part, then turn in the upper edge and slip-stitch down (*Fig. 6*).

After making and sewing in the head-lining (see p. 110), the covering is completed.

Stretched coverings of diaphanous materials such as tulle, net, georgette, etc., are better put on in two or three-fold material, even when the undercovering is well padded; but if a transparent effect is wanted, the covering is put as thinly as possible over a shape of either stiff net, leno, or wire. Mourning crape, crêpe-de-Chine and such fabrics of rather thicker substance than tulle are used singly.

OTHER METHODS OF COVERING PLAINLY.— 1. To give variety, cords or fine wire are often inserted midway between the head-part and the edges of the upper-brim covering, and at the edge of the under-brim piece as well as at the top and bottom of the side-band; these are visibly sewn to the shape by means of stab-stitches and obviate the necessity for slip-stitching.

2. The edges of the brim-covering pieces may be left unturned and simply stab-stitched through the shape, $\frac{1}{4}$ in. to 1 in. inside the brim-edge, and a crosscut binding of piece silk, velvet or other material be slip-stitched over the edge. In arranging for this, measure the exact length of the brim-edge, cut a 2-in. wide crossway strip of material, join it in the round, slip it over the hat brim, pin it in position, turn in each edge evenly and slip-stitch to the upper- and under-brim respectively.

3. Either the upper- or the under-brim covering may be turned over the edge of the shape, the other brim-piece being tacked to the shape, raw edged, and finished off neatly with either a crosscut fold or a shaped facing of "self" material or of a contrasting colour which is piped or has the edges turned in and plainly slip-stitched to the edge of the brim.

4. The whole or part of the under-brim covering may be cut in a contrasting colour, or a material of different texture from that used for covering the remainder of the shape, e.g. an upper covering of stretched silk or satin, and an under-brim of stretched velvet; or the upper covering of dark velvet and the under-brim of a brighter shade of satin or silk. Cloth is frequently used to

cover the upper or "weather side" of a shape, and a softlyfinished silk to line in the under side, which is more or less protected as shown in Chapter IX by Figs. 4, 5 and 6.

5. Pipings, plain and pleated bindings of ribbon, etc., narrow strips of feather trimming, or of fur, all make pretty varieties round the edges of plain covered shapes, particularly for girls' and children's hats. An outstanding pleating of ribbon or crosscut silk, similar to Fig. 7 both trims and softens the outline of a plainly covered shape.

Similarly, in the covering of the crowns of shapes, the upper or the lower half of the side-band may be of a colour or texture of material in contrast with that used for the covering, or alternatively a band of velvet may encircle the crown of a silk-covered shape.

Cordings and pipings (*Fig.* 8) always afford a pleasing "finish" when introduced to emphasize the outlines of the crown, or to break the flatness of a large crown of the tam-o'-shanter variety.

FULL COVERINGS.—It is very necessary to choose a material as light in weight as possible for any full covering, otherwise the completed hat may be quite unwearable. With the exception of tulle, materials are cut on the cross for gathering, pleating, or folding (see Chapter VI).

For gathering, allow from one-and-a-half to three times the length of material required when finished, according to the thickness of the fabric and the amount of fullness desired. For pleating, allow from two to three times the finished length, according to depth of pleat desired.

For folding, allow as for pleating; no hard and fast rules can be given for these processes, as so much depends on the bulk of material and the fashion that prevails.

Gathering.—This may be applied either to the whole of a hat, toque, or bonnet, or possibly to the crown, to the brim, or only to the edge of the brim. A shape is often covered with gathered velvet, silk, chiffon, or other material, the gathering being done either (a) quite flatly, (b) over cords, and (c) to form tucks.



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Fig. 9 shows a suitable little shape to be covered with gathered velvet; the brim is 21 in. wide, all round; the crown measures 14 in. from back to front, and 13 in. from side to side ; the small oval top to the crown measures 4 in. \times 3 in. and is included in the full measurement. The head size is 24 in., the brim-edge 34 in. A strip of cross-cut velvet about 7 in. wide and 51 in. long is required for the brim-the width being equal to twice the brim depth $(2\frac{1}{2} \text{ in. } \times 2 = 5 \text{ in. }; \text{ add } \frac{1}{2} \text{ in. } (\text{turnings})$ $=5\frac{1}{2}$ in.; add $1\frac{1}{2}$ in. (fullness) =7 in.); and the length being 11 times the brim circumference. If the velvet is 20 in. in width, two cross-cut pieces will just be sufficient; join these together (Fig. 4, Chapter VI), and then join them into a ring (Fig. 8a); mark the quarters, and run a strong gathering thread along the back of the velvet, about $\frac{1}{4}$ in. from both edges. Cut a strip for the crown, 7 in. wide and about 36 in. long when joined; join this piece into a ring and gather over a fine cord along both edges (Fig. 8b), after marking the quarters with pins. Cut an eval 5 in. \times 4 in. for the top of the crown and stab-stitch it to the shape. Arrange the quarters of velvet brim-piece to the front, back and sides of shapes, setting the joins in the velvet at the sides. Draw up the gathering thread and sew the velvet evenly round the head-part of the upper-brim; arrange the fullness tastefully round the brim-edge, draw up the second gathering thread and sew the velvet inside the head-part just above the fitting-line, thus completing the brim. Draw up one cord in the crown piece to fit the small oval; then draw up the gathering thread and fasten it off. Draw up the second cord and fit to the head-size; arrange the fullness and place this full piece over the crown shape, pinning the quarters to those marked on the shape. Stab-stitch round the top of the oval first, then round the head-part, hiding the stitches in the fullness of the gathering (Fig. 10).

Silk and satin are equally suitable for this style of gathered covering; when these thinner materials are used, sets of three gatherings about $\frac{1}{4}$ in. apart may be introduced in the

COVERING SHAPES

brim- and crown-covering. When drawn up to fit the shape these help to set the fullness closer to it and, being caught down flat to the shape, will make this style of covering equally suitable for a much wider-brimmed shape.

FULL CROWN COVERINGS.—These may be cut from an oval or circular piece of material, and either pleated, gathered, or corded round the cut edge to reduce the circumference to the size required (Fig. 11). This type of covering may be cut large enough to form the whole crown of a hat or toque, the fullness being set at the base of the crown, or it may be cut smaller and simply cover the top of the crown (Fig. 12); the side-band being covered either quite plainly or with material set into folds (Fig. 13).

PLEATED COVERINGS.—Thin materials (as silk, satin, ribbon, georgette, and tulle) make a pretty covering for a lightlymade shape when arranged in folds and pleats (*Fig. 14*), evenly set in circles for the crown top, and radiating downwards from these to the base of crown; the brim pleated from edge of brim to the crown. In *Fig. 15* the crown-top is plain and the side-band and brim set in groups of pleats.

FOLDED COVERINGS.—These may be cut and joined to size, as Figs. &a and &b, ample allowance being made for the depth of the folds required in the width rather than in the length of pieces; or each fold may be cut separately and sewn singly to the shape. In the former method the folding has a soft rounded effect, and in the latter the single folds set more closely to the shape, defining its outline more clearly.

There are many other ways of arranging the folds; Fig. 16 shows a crown covering arranged from one piece of material, and Fig. 17 shows a crown and brim covered entirely with single folds, each sewn on separately. In sewing these on work from the outer edge of the brim towards the crown and from the base of the crown up towards the top.

DRAPED AND SWATHED COVERINGS are usually arranged from either a corner-shaped piece of material or an irregular piece, such as a horseshoe. The folds set very stiffly 7-(2236)

unless they are arranged to cross the warp and weft threads of the fabric. If very thin materials (as silk, ninon, crêpe-de-Chine, lisse, net, etc.) are used, a thin interlining of soft muslin or fine net, tacked to the edge of the material all round and folded with it, will prevent the folds from falling out of shape in the wear. The interlining must correspond with the material as to warp, weft and cross of the weaving, or a pulled appearance will be the result.

Piece straws, crinolines and fancy braids sewn together, also fine straw plateaux, are often used for the draping of hat, toque, and bonnet crowns.

When draping, avoid heavy folds, yet do not skimp the material; arrange it tastefully in the style desired, using plenty of fine pins to hold each pleat until it can be caught into position. Aim at a smart, neat effect, but never set folds too primly. Cords or gatherings interspersed between the folds of drapery give a rather pleasing result when fashion allows them to be used. A piece of 18-in. wide material cut to measure 9 in. along the left-hand edge, and 27 in. along the right-hand edge (Fig. 18), forms a corner-shaped piece suitable for the crown of a toque, draped as in Fig. 19. Pin the corner into position first—whether at the front or at the side of the shape depends upon the suitability for the face—then pin each fold into place just behind the corner as shown. Finally, draw the folds to meet at the desired point and either twist or knot the two points (Fig. 19), or line them as described in Chapter VI dealing with crosscut bows, etc.

Tie-stitch each fold lightly but firmly to the shape where necessary, if possible only where the fold touches it, using silk of the same shade as the material; remove the pins as you go. A bonnet-crown is often draped with a horseshoe-shaped piece of velvet or silk, which is cut so that the crossway (and dark shade) lies down the centre of the crown running from front to back. The folds are arranged in the same way as for *Fig. 19*, each one finishing over the back arch at the back of the bonnet-shape.



CHAPTER VII

DRAPING is an art that demands deftness of fingers, a knowledge of the possibilities of the material being manipulated, and an understanding and appreciation of "line," "form," and true proportion. A stiffly-set drapery is never an artistic achievement, and students would be well advised to practise draping with crossway muslin or old material on a discarded hat or toque before trying their skill on new fabrics.

SWATHING differs somewhat from draping, inasmuch as the folds are arranged in a more spiral or twisting fashion like those of an Eastern turban. This method of covering is usually applied to closely-fitting shapes, or those having a very narrow brim. Softly-finished silks and satins fall into the daintiest folds, and light-weight chiffon velvet is often used most satisfactorily. A length of crosscut material is the easiest to arrange; but wide, softly-finished chine ribbons make a very pretty swathing for a trimming round a crown, or even to cover an entire shape. Fig. 20 shows one method of swathing a piece of crosscut material over a small shape.

The material is first either pleated or gathered to the headpart of the crown, just sufficient fullness being allowed for the first fold of material to fall softly round the shape. The folds are drawn slightly on the cross as they are pinned to the shape, and arranged in a spiral form from right to left as they are carried upward towards the top of the crown, where they finish in the centre or to one side. The folds require tie-stitching to the shape wherever they are pinned to keep them in place.

Fig. 21 shows a popular method of swathing ribbon round a hat crown.

CHAPTER VIII

STRAW WORKING

STRAW used for millinery purposes is grown largely in Italy, where the wheat is specially sown as thickly as possible, so that its growth may be impoverished and thin stalks be produced.

Many other stalks of grain are utilized for plaiting for millinery purposes, and in addition, rushes and grasses of many kinds, raffia and wood pulp, as well as nettle stalks and other vegetable fibres, have also been used.

Wool, chenille, horsehair, tinsel, leather, cotton and paper pulp are constantly used for fashionable plaits. Some of the plaits that we bought most cheaply for many years were of wood shavings, which were dyed in many colours and either machined and blocked or hand-sewn into serviceable hats. The brilliant plaits made from wheat stalks, dyed and varnished, are perhaps the most durable ones on the market.

The Yedda plaits, made of Japanese and Chinese grass, are soft and pliable, and can be dyed in most beautiful shades, of which, perhaps, the mole, grey and blue are the most attractive.

Bass and raffia are also very pliable and form artistic plaits, either in their natural colour or in black and bright shades. Natural-coloured raffia and finely-shredded satin straw, either white or coloured, are most effective when plaited together.

Satin plaits are bright and durable; they make "dressy" looking hats and can be repeatedly steamed and remodelled at home.

Crinoline and tagel braids are, perhaps, the finest plaits, as well as the most transparent; while tuscan braids, in both plain and fancy plaitings, are durable and capable of frequent cleaning and remodelling.

Dunstable, pedal, canton and other forms of fine, durable
plaiting are always to the fore, either in blocked hats and bonnets for children and older folks, or as uniform hats, caps, helmets, etc., for nurses, policemen, tram conductors, and Salvation Army lasses. Panama, Java, and Leghorn hats are plaited and blocked only by the manufacturer; they are summer favourites almost every year, probably on account of their light weight and durability.

Plaits are usually bundled in 5, 10 or 20-yd. lengths, according to their width. The finer braids like horsehair, etc., are carded in 3, 6, 9 and 12-doz.-yd. lengths.

WORKING PLAIT.—There are several methods of working straw plait into hats, caps and bonnets. The wholesale manufacturer does this by means of machine and block, while the retail trade milliner stitches and moulds chiefly by hand. A few years ago a large amount of renovating and remodelling of straw hats was done entirely by hand in the villages of this country, where the income of the family was often much augmented by the women who either "clocked" stockings or remodelled "straws" in their spare time.

At the present day the "strawing" of hat shapes is quite a hobby for the business girls in our large towns. This method of making a straw hat is comparatively easy, and, providing a light-weight wire, soft espatra basket or stiff net shape is chosen, for the foundation, the technical details of "springing" and "moulding" are easily overcome.

A fine lacey plait of satin and tuscan straw, or of crinoline should be worked over a neatly-made wire shape well covered with muslin or net that matches the plait in colour. Heavier plaits and those more closely interlaced are more satisfactory if worked over basket or soft espatra shapes, while stiff net is always a satisfactory foundation for little hats, caps and bonnets for children as the outlines are soft and graceful and the shape is light in weight and very comfortable to wear.

WORKING STRAW.—Method 1.—There are two ways of working straws, viz., over a foundation, or merely in the hand.

Most plaits suitable for working over a foundation have a draw-string inserted through the inner edge. This can be stretched or drawn up at any point along the whole length of the plait, greatly easing the process of fitting smoothly over or into any curve desired. The lacey or very open straws are suitable only for working over a foundation, but the coarser straws having their inner or straight edge formed of fairly wide stiff straws are sufficiently firm to support each successive row of plait in turn, and can be worked up successfully in the hand, and after steaming and pressing will retain their shape without any inner support. We shall deal first with covering a shape.

In "strawing" a shape, sewing cotton No. 40 should be chosen to match the plait in colour, and a "straw" needle should always be used.

In covering the upper brim the crown of the shape should be held towards the worker, and the plait be commenced about 1 in. to the right of the centre-back of the brim and pinned either to the extreme edge all the way round, or slightly over it. After pinning this first row, stab-stitch the outer edge through to the shape (*Fig. 1*), the long stitch being on the underneath of the shape and the tiny slanting back-stitch hidden in the plait. The second row of straw should be passed diagonally across the first exactly in the centre of the back brim (*Fig. 1*).

It is not always necessary to sew the edge of the first row of plait to the shape, as it is held in place by the sewing of the outer-edge straw that lines the under-brim. The second row is either pinned or sewn so as to overlap the first row about onethird of its width, unless the plait has a thick, well-finished edge, in which case the edges should just overlap.

Care must be taken to draw the easing string sufficiently to allow the plait to fit exactly to the curves and outlines of the shape at all parts.

The strawing is continued from right to left round the brim until it touches the head-curve of the shape, here the plait is cut and the end sewn to the side crown $\frac{1}{2}$ in. above the head-part,

so that it is easily covered and made neat by the side-band. Should the brim of the shape differ in width at any part, extra pieces or gussets of plait (see Fig. 2) must be added until an even line is obtained round the head-part of crown, which must be circled with a complete upstanding ring of straw after the gussets have been arranged.

The crown strawing is commenced at the centre, about 1 in. of plait being ravelled and twisted to make a fine, neat startingpoint (Fig. 3), and then firmly sewn apart from the shape (Fig. 4).

The "tip" or top of crown may be circular or oval in shape and the plait must be worked accordingly (*Figs. 5* and 6). The first few rows or the entire top of crown should be worked away from the shape—each row of plait being well sewn to the preceding one—and then either steamed or pressed according to the nature of the plait. Many workers complete the crown-top and side-band before fastening the plait to the shape; others pin the crown-top into place over the shape, and then continue down the band to the head-part, fitting each row of plait just underneath the one above it, as they pin and sew right through the shape. Both these methods are good, so the one that appeals to the worker should be chosen.

Another method is to sew the straw to an oval erown from front to back, meeting the fancy edges of the two centre rows down the centre; and then, working away from each side, to finish the straw in a lozenge-shaped piece that is quite ornamental. In this case the base of the crown is finished off with a single row or twist of straw carried round it. A crown that is bent in at the top should be started with a straight piece of straw 3 in. or 4 in. long; rows of straw should then be shaped and stretched round it, the straw being steamed or damped and pressed into the hollows as the working proceeds. A sugar-loaf crown must be steamed and pressed row by row, and care taken to keep the shape in working.

If a crown is strawed from base to tip as is sometimes done, great difficulty is experienced in obtaining a well-shaped and



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neatly-finished centre, and this is the deciding point between a well-worked and a badly-worked crown. The last row of straw on the side of the crown overlaps and hides neatly all the odd ends left from the covering of the brim. If the under-brim is strawed, the *head opening* of the shape is held towards the worker and the plait again fixed 1 in. to the right of the centre-back, and pinned round the outline of shape. The two rows of plait, i.e. the upper and under edges, are slip-stitched together and the remainder of the brim is worked just as the upper one is, except that the long stitches are taken between straw and shape, so as to be quite invisible, and the tiny slanting ones come through to the upper and under surfaces. The half-width of the last row of plait is sewn inside the head of the shape, where the lining will make all quite neat.

The outer edge of the brim is sometimes bound with plait, velvet, or silk before the shape is strawed, and if this method is chosen, the edges of the plait are arranged so as to leave the binding exposed.

A straw hat should never weigh more than 3 oz. to 4 oz., so care must be taken to choose a light-weight plait.

Method 2.—The method of working and moulding a hat of plait, either in the hand, guided by measurements, or from a paper pattern of the shape desired, is much more difficult than the one just explained. The heavier plaits, e.g. wheat, rush, bass, etc., are the most suitable for this method, as they are firmer than plaits of satin-straw and do not lose either gloss or crinkle when damped or steamed.

Glazed cotton is quite the best to choose for sewing these plaits as it is strong and does not ravel during the processes; a piece of wax, constantly used, keeps the thread smooth and toughens the fibres; a strong straw needle is essential.

The plait chosen should be rolled in a damp cloth for a short time to make it pliable, or else be frequently steamed while being worked. Accurate measurements, a strong paper pattern, or a block of the shape being made, should be used as a guide. The brim is again commenced 1 in. right of centre back, the right side of plait facing the worker, and the sewing done from right to left. The heavier plaits have no draw-thread so the "springing" and "easing" are a little more difficult to manage until experience has been gained.

Take the outline measure of the brim, and join the plait by pinning it, but allowing 2 in. or 3 in. more in the ring than the actual measurement of the shape, as the size decreases a little when the succeeding rows of plait draw it inwards to the headcurve. Work the plait round and round, keeping the brim circular, oval, or three-cornered, flat or curved, according to pattern or block. The method of pinning and sewing is the same as for the first method, except that there is no foundation shape to be relied upon for strength, and that the sewing must be very evenly and well done. Straw is brittle, and if not kept damp during the working the thread is apt to cut the strands so that they will not hold the stitches.

A considerable amount of easing and stretching is necessary if the shape is to be perfect when completed and, as the worker nears the head-curve of the brim her skill in moulding will be well tested. Gussets may be required if the brim is wider at some parts than at others, say, for instance, when the sides are wider than the front or the back or *vice versa*.

A tricorne shape will require gussets at three points, A, B, C (*Fig. 2*). In working, these graduated rows of straw should be stretched rather more than the outer rows in order to do away with all unnecessary spring. When the head-part is reached, one row of plait must be added (without reducing the head-size) to turn upwards inside the head-part and make a support for the crown. The brim should now be pressed or steamed, and carefully moulded while drying.

STEAMING AND PRESSING STRAW.—To steam and press the straw, place the brim right side downwards on a clean board, dip a clean cloth in water, wring it out, lay it over the brim and then press it all over with a small-sized hot flat-iron,

and repeat this process until the straw is as flat and firm as desired. If the straw is thin, the cloth need only be damp, but if thick, it may require actual wetting before it will flatten well. Sometimes it is a good plan to place a damp cloth under as well as over the straw while pressing. When the straw has been steamed flat, remove the cloth and dry off the brim with the warm iron until there is no dampness. In dealing with a curved brim, the straw must be eased and stretched under the iron on its outward curve, and drawn in and contracted on the inner part of the curve, after which it can be gently dried off. When the brim is wired at the edge this support will draw the curves up into place and keep the straight parts flat.

A cotton-wrapped wire is often sewn just within the brimedge on the under side of it, and a second row of straw is sewn invisibly over this, unless the brim is being finished with a lining of ribbon or other material. Some workers prefer to sew the straw to a thin paper pattern row by row, afterwards tearing away the paper before steaming and pressing.

The crown is worked from centre to base, as in the former method; but when the tip is completed, it should be steamed or pressed before the side-crown is worked. When the band is completed, the crown is sewn just over the upstanding row of straw, round the head-part of the brim.

Shapes of crowns and brims are so numerous and so constantly changing that details in the working of each shape must be left to the skill of the worker, but constant reference to pattern or block is absolutely necessary until practice has made perfect. One or two coats of clear varnish applied after the hat is finished will toughen the plait and make the hat dust-resisting.

A worker who is the happy possessor of an expanding crown block will make constant use of it when steaming, blocking and moulding these hats, but unfortunately the expense of a block when hats are always changing in form is usually beyond the individual student's purse; as a substitute, an old bowler hat may often render useful service. Method 3.—A third method of straw working or wiring is suitable only when the plait has a double inner edge, through which fine filet wire can be threaded (Fig. 7). The flat brilliant satin plaits are woven in this way.

A pattern of the brim is prepared in stiff paper—at any rate by the amateur worker—and each row of straw is measured carefully by this, every ring being cut and joined separately. The outer edge of the brim-pattern is measured and the first length of plait cut several inches longer than the actual measurement of the pattern; the cut ends of plait are then carefully interlaced from the back and sewn together invisibly to keep them in position. The joining or splicing must extend about $1\frac{1}{2}$ in. to make it quite firm.

Wire of the same shade as the plait is inserted through the folded inner edge, and then carefully joined to the size of the pattern. Each succeeding ring is measured and joined to fit within the previous one, until the head-part is reached. These rings are then sewn firmly together to form the brim (*Fig. 8*). Two or four cross support-wires are measured and bent to shape as explained in Chapter IV on wire-shape making, and these wires make a platform for the crown as well as a support for the brim. They are usually of fine lace wire which is threaded in and out of the plait across the brim width, and so are not at all noticeable in wear.

The length of plait used for the crown may also be threaded along the inner edge with wire and then worked to shape in the hand, as in Method 2, the wire assisting in the easing and springing of the plait; this method requires more than one ring of wire, but, as the extra wire is liable to weight the hat, it is better omitted if possible.

The crown- and brim-pieces must be well sewn together round the head-part and a second row of plait be stitched under the outer edge of the brim to give it firmness and finish.

The last two methods of working plait are most economical, there being no necessity to add a lining to the brim if the straw

is neatly and carefully worked. There is also another point in their favour, that is the lessening of the total weight of the hat.

Capelines, many Tam-o'-Shanter, turban, and other types of headgear, are made according to Method 2, even when crinoline and lacey tuscan plaits are used; these are intended only for light wear in the summer time, and so need not be made particularly durable. For these, straw plait is often worked into a large plateau, and then pleated or folded to form either a cap or the crown of a hat, toque, or matron's bonnet. Many a fantastical shape such as "torpedo," "diabolo," "balloon," or huge Tam-o'-Shanter has been made in this way or manufactured of crinoline or other fine plait to be twisted and crushed into any form dictated by fashion's whim.

Another method of working plait is, for instance, that of cutting short lengths from the piece, and fitting each one to cover either brim or crown of shape (*Figs. 9* and 10). This is not an economical method if one is thinking of remodelling these short lengths of plait at some future time.

We see brims covered with tab-shaped pieces (Fig. 10), and the cycle of fashion is constantly introducing old and new methods of strawing, but the standard ways are the long-standing favourites, and certainly are best when the processes of turning and re-dyeing have to be considered.

A hand-made hat of plait is easily renovated, and if the plait is wisely chosen and a good quality and colouring are obtained, it is well worth turning and remodelling when it becomes faded. Often the best pieces of plait from two worn hats may be combined and made into one good wearable hat; or probably the most worn portion, i.e. the brim-edge straw or the top of the crown may be cast aside, and another fabric introduced for the crown and as a binding at the brim edge.

Small hats and toques, as well as little hats, caps and bonnets for children, can frequently be made from large-brimmed hats that have lost their freshness; and steaming and pressing, with an after coating of clear varnish are good helpmeets in this department of renovation.

Machine-made hats may in some cases be altered by the amateur milliner; the crowns can be either raised by inserting



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a band of stiffening, or lowered by removing a few rows of plait; brims can be made less or enlarged, and if necessary be bound at the edge.

A hat-crown may be brought back to shape, and the colour somewhat restored, by pressing it under a cloth that has been dipped in and wrung out of a pint of water to which about a teaspoonful of liquid ammonia has been added.

A hat-brim, pressed in the same manner, will regain its firmness, and if a fine wire is sewn round the brim edge, and hidden

by stitchery, a fold, or a binding, the brim will keep its true shape.

Leghorn hats and those of finely-woven plait can always be cleaned or dyed, and remodelled by the professional cleaner at about half or one-third of the cost of a new one, if they are of good quality. Good Leghorn hats can be cleaned quite satisfactorily and re-calendered three times and, if still in good condition, may then be dyed or cut down for other purposes.

CHAPTER IX

LINING, BINDING AND FACING BRIMS

HATS, toques, turbans and bonnets may require a lining either to finish or to soften the under or upturned brim.

PLAIN LININGS.—Linings when cut quite plainly and to the shape of the brim are usually of velvet, silk, satin or georgette. A paper pattern of the shape is obtained as described in Chapter III. The material is cut, fixed and sewn as explained in Chapter VI on "Plain Coverings."

When a hat-brim of rough straw is to be lined, it is better to tack an interlining of leno or domette over the brim before covering it with the brim lining, as otherwise the roughness of the straw may spoil the finished effect. Another method is to tack the leno or domette to the silk or other thin covering material, and make them up together.

CROSS-CUT AND RIBBON LININGS.—A brim may be lined with a cross-cut strip of material or with ribbon, and in the latter case the outer edge of lining will be quite plain at the brim edge, but must be set in small pleats round the head-part. Cut the lining $\frac{1}{2}$ in. longer than the outer edge of the brim, allowing for width about $1\frac{1}{4}$ in. greater than the widest measure of brim taken from edge to head-part. Join the lining piece neatly on the wrong side by running the ends together $\frac{1}{4}$ in. from the ends, pin the lining to the quarters of the under-brim along the outer edge, and either slip-stitch or pipe it to the hat over a fine cord or wire. Draw the fullness well down to the head-part where it should be set in tiny pleats secured by stab-stitches through the crown and just below the headline.

GATHERED, PLEATED AND CORDED LININGS.—These look the most dainty when of chiffon, georgette, aerophane, fine silk or

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muslin. The methods of cutting and preparing them are stated in detail in Chapter VII.

The gathers may be put in singly and at equal distances apart, or they may be arranged in groups, forming shirring (Fig. 1), or shell shirring (Fig. 2), where one or more tucks are gathered in a waved line. Tiny tucks are pretty arranged either singly or in groups of three, and a waved gathering either on the outer edge of a brim lining, or on the edges of the tucks. Fig. 3 is also a pretty variation. In arranging for this waved gathering, tack two or more tucks at even distances apart, run the gathering thread in a waved line as shown, being careful to take the thread over the edge of the tuck at the highest point of each scallop. Another favourite method of lining is by gathers and tucks arranged in alternate groups. Tucked and gathered linings are set more evenly into the head-part by means of tiny pleats than they are with gathers. Take out the tacking thread, and draw up the gathering thread to the size required.

NARROW LACE, RIBBON, ETC.—Lace edging or ribbon, $\frac{1}{2}$ in. to 1 in. in width, gathered along one edge, and sewn round and round in the same way as straw plait, i.e. from the outer edge of brim to the head-part, is another pretty method of lining a hat brim.

BINDINGS.—These are made of cross-cut materials such as velvet and silk, and also of ribbon. Perhaps the most satisfactory method of binding a brim-edge of either felt or straw is that of first making a simple fold (see Chapter VI, Fig. 11).

Method 1.—Cut crossway strips of material and join them to fit round the hat brim quite tightly; then lace-stitch the edges to make a fold 1 in. to 2 in. in width; stretch this evenly to fit over the edge of the brim and form a plain binding, which must be caught down to the brim here and there to keep the fold in place. This method is unsuitable for wider bindings.

Method 2.—Cut crossway strips $\frac{1}{2}$ in. to $2\frac{1}{2}$ in. in width and join them neatly to the length required; pin the strip round the brim-edge quite tightly to ascertain the exact length required.



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Remove the binding from the hat and join it into a ring, taking care that all joins run in the same direction. Arrange the binding, wrong side uppermost, round the upper edge of brim, and pin it either $\frac{1}{4}$ in. or $\frac{1}{2}$ in. or 1 in. from the brim-edge, according to the width of binding desired; stab-stitch the binding down to the brim, keeping the long stitches on top of the binding, as this produces an even line of stitching. Roll the binding over the brim-edge, turn in the edge $\frac{1}{4}$ in., pin and slip-stitch to the brim, drawing the thread tightly so that the stitches will be quite invisible.

Method 3.—When a wide binding is required, cut and join it as described above, and strain the binding over the edge of the brim; turn in the edge $\frac{1}{4}$ in. on the upper side, and slip-stitch to the brim; then turn in $\frac{1}{4}$ in. on the under side and slip-stitch it down. A wide binding can be nicely managed in this way.

Method 4.—Gathered or "rucked" bindings of either crosscut material or of ribbon are joined to equal two or two-and-ahalf times the brim circumference. The quarters of the binding are marked, and gathering threads are finely run $\frac{1}{4}$ in. from both edges of cross-cut strips, or quite near the edges if the bind is of ribbon. The quarters of binding are then pinned to the quarters of the upper-brim edge; the binding is sewn neatly and firmly, then turned over the brim edge and pinned into position to form a puckered edge. The under side of the binding is afterwards invisibly sewn to the brim.

Sometimes both edges of a cross-cut bind of silk are turned over a cord and lightly run down. The silk is then drawn up on the cords, and placed round the hat, the cords being tightened to fit the upper and lower brims, the ends being finished off beneath the gatherings.

Method 5.—Corded silk ribbon is used to form either a plain or a pleated binding round a brim. If the ribbon is put on quite plainly the edges should be either machined or very neatly backstitched or slip-stitched to the brim. A binding of leather would be treated as a plain ribbon bind.

LINING, BINDING AND FACING BRIMS

If pleated, the binding is usually prepared as described in Chapter XI on "Ruching and Pleating," and illustrated by Figs. 7 and 9 in the same chapter.

FACINGS.—These are usually cut to shape by the pattern of the outer edge of a brim; they may be $1\frac{1}{2}$ in. to 3 in. or 4 in. in width. Facings must be fitted carefully to the brim; then the edges are turned in about $\frac{1}{4}$ in. on either side and slip-stitched down to the brim. A cord or wire may be inserted just under the turned-in edge of the facing, and stab-stitches used instead of slip-stitches to fasten down the material and cord. In arranging this, pin both edges of the facing to the brim all round. Take a length of lace or fine wire and with the left hand unpin a short length of the silk from the brim, place the wire inside the edge of the silk covering, draw the silk and wire up well, and stitch them to the edge of the brim in position, so that the wire comes just beyond the brim, forming a firm roll effect. Stitch it to the brim with invisible stitches on the upper side, and 3 in. stitches below. The sewing cotton or silk must be drawn very tightly so that the wire rolls over the line of stitching and thus produces a finished appearance. A wide crossway facing of either velvet or brocade is frequently used on an upturned brim where a fold might look rather too bulky. Oddly-shaped little facings of brightly-coloured silks, ribbons and brocade (Figs. 4, 5 and 6) add charm and smartness to a hat of dark velvet, plain cloth, silk, etc.

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CHAPTER X

HAT AND BONNET LININGS, AND BANDEAUX

THE materials in general use for linings are sarcenet, thin Japanese silk, polonaise, soft muslin, cotton head-lining, or imitation sarcenet, and cotton net. The material for the head lining should be suitable for the hat. A dark-coloured straw, felt, or covered shape would be lined with either sarcenet or Japanese silk of the same colour as the hat or bonnet; or with black sarcenet. A light-coloured shape would be lined with silk the same shade, or with white sarcenet.

A tailored hat of tweed, etc., would be lined with polonaise of the nearest shade obtainable to the colour of the cloth. For a child's hat, a soft washable muslin might be chosen, as also for a transparent hat of lace, chiffon, tulle, etc., or one of cotton net. A head lining should be soft in nature and smooth, so that it is comfortable and easily slipped over the hair.

Polonaise is stouter than sarcenet and more suitable for "pull-on" and "knock-about" hats. Sarcenet and its cotton imitation are usually 20 in. in width and, when cut on the cross, the strip is long enough to line the average sized head-part of a hat.

Linings are cut either (a) on the cross, (b) selvedge way of goods, or (c) to the shape of the crown.

Many milliners cut the whole piece of lining into lengths of about 25 in. selvedge way, and then cut each width into four strips, so obtaining four linings 5 in. wide from a 25 in. piece. Others cut the lining on the cross, and join many strips into one length, making it into a roll ready for use. Others use the first corner-piece for bonnet linings, and then cut off crossway strips of convenient width for the average crown depth. For class and home use a 2-yd. or 3-yd. length is probably the most economical to buy as there are only two corner-pieces to be considered.

PREPARATION OF LINING.—A hat or cap with a soft crown usually has the lining made up separately on the "cap" method, i.e. a small circular or oval piece, about 3 in. or 3 in. × 4 in. is tacked to soft leno muslin, then joined to a strip 5 in. to 6 in. deep, and the head-size in length. The long strip is joined together in a round (*Fig. 1*) and the quarters marked with pins; it is then pinned to the quarters of the tiny circular or oval piece. The lining is set to the centre piece in small pleats and run together (*Fig. 2*), the outer raw edge being turned in $\frac{1}{4}$ in., and either pinned or tacked ready for slip-stitching into the hat.

A hat with a blocked or stiffly-made crown is usually lined with two separate pieces (a) a circular or oval piece of the shape and size of the top of crown and fastened inside the crown with tiny stitches through the shape or with gum: (b) a strip the width of the crown with 2 in. added for turnings, and in length equal to that round the crown. The long crown-band strip has a narrow hem turned along one edge (*Fig. 3*) which is pinned down, and then held in place by small running stitches, forming a slot for a narrow China drawing-ribbon.

The end of the lining is turned over and pinned at the centre back of head-part of hat (*Fig.* 4); the cross-cut lower edge is then sewn to the hat just below the headline with a head-lining stitch, i.e. a short upright stitch taken into the crown-band, but not through it, or with a stab-stitch.

It is not easy at first to put a head lining in, for it must be set in quite flat, and a true line must be kept round the head. The lining sets better if slightly stretched by the left hand while it is being sewn in, especially near the front of the hat, where the greatest difficulty is met. The ends of lining should overlap $\frac{1}{4}$ in. at the back, where one end is slip-stitched to the other. The ribbon inserted through the slot is then drawn up to fit nicely round the top of the crown, and tied in a neat bow. A

few tie-stitches should hold the lining in place near the crown top, otherwise it is apt to become slack and untidy.

The third method of lining is quite a different one, and is usually employed for hats with sectional crowns and for tam-o'-shanters.

The material is cut to the same shape as the pieces of the crown, e.g. Fig. 5 would require six sectional pieces cut by the crown pattern and planned on the material just as the crown was, either the warp way or on the cross. No turnings need be allowed on the lining as this should be smaller than the outside crown. The sections must be finely run or machined together in pairs from tip to base, as in the case of the crown, and after being pressed, the lining is ready to be slip-stitched inside the head-part (Fig. 6).

A tam-o'-shanter can be lined in one of three ways, i.e. (a)"cap" lining (Fig. 2), (b) a circular lining (Fig. 7), reduced to the head-size by means of eight darts, or (c) a lining cut in two circular pieces (Figs. 8 and 8a). Here a 12-in. circle fits up into the crown, and a $2\frac{1}{4}$ -in. wide circular band measuring 12 in. diameter at the outer edge lies round the head band. Whichever method is chosen, it is usual, after stitching and pressing any darts or seams either to slip-stitch the lining inside the crown or to tack it in raw-edged, and finish neatly with a cross-cut band of lining.

BONNET LININGS (MATRON'S).—These are usually cut in two pieces and made up as in Method 2, except that the crown piece is either a horseshoe shape or the same shape as the bonnet crown, and it is slip-stitched to the shape at the centre back. The strip for banding the shape is cut just the length of the bonnet-band, and is sewn from ear to ear, the ends being slipstitched along the arch at the back to meet the crown piece. The draw ribbon is tied at the centre of the front, the ends in the slot being stitched to the back of the bonnet.

CHILDREN'S BONNET LININGS.—Stiff shapes are lined in the same way as matron's bonnets, but washing-bonnets and those having soft crowns have the linings cut and made from the



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bonnet pattern and slip-stitched to the shape round the face and neck edges.

BANDEAUX

When bandeaux are fashionable with hats, toques or bonnets, they are there to achieve one of the following purposes: to decrease or increase the head-size; to alter the head outline and make it more comfortable; to tilt the head-gear at some particular point and so make it more becoming to the wearer; or to act as a platform for trimming.

If the head-part is correctly measured and the hat is made to suit the wearer, the extra weight and expense of a bandeau should be quite unnecessary; but if a ready-blocked felt or straw is bought, a bandeau may be needed.

Bandeaux are usually made of espatra, buckram or twofold stiff net, wired along their edges. Sketches are given of the shapes usually worn; *Fig.* 9 is crescent-shaped and used chiefly at the side of the head-part of a hat or toque, when a slight tilt is desired. If cut about a quarter of the head measure in length, and about $1\frac{1}{4}$ in. to $1\frac{1}{2}$ in. wide in the centre, it will be found a useful size.

Fig. 10 is intended to fit round three-quarters of the headpart and is usually set round the back of the shape to tilt the hat a little forward and over the face. It is cut three-quarters of the head measure in length and about 1 in. wide in the centre and the ends are shaped to a point.

Fig. 11 is intended to fit across the back of the head-part and is cut one-third of the head measure in length and about 2 in. deep at both sides. It is a pannier shape and intended to carry a rosette form of trimming at both ends.

Fig. 12 shows an all-round shape joined to fit just inside the head-part to decrease the size a little; it may at the same time tilt the hat at any desired point. The usual depth varies from $\frac{3}{4}$ in. to $1\frac{1}{4}$ in. This bandeau inserted in a child's mushroom shape prevents its drooping over the eyes. Figs. 13 and 14 have the



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shape of a halo, hence their name "Halo bandeaux." They came into use when large crowns were blocked in felt, straw and buckram, and the head-size of the wearer was not taken account of, and all hats were made to a regulation size of about 30 in. in the circumference of the crown. In Fig. 13 the head oval is cut to fit the wearer's head, and the outer edge of the bandeau is round, and cut to fit the head-part of the hat. Fig. 14 was made on an expanding principle, the tongue-shaped end marked A being slipped under an elastic band at B, so that the size could be regulated to fit any sized head and hat.

Another type of bandeau has a head lining attached to it (*Fig. 15*). A crossway strip of velvet 1 in. to $1\frac{1}{2}$ in. wide and about 24 in. long was joined into a ring, and had a fine piece of cane inserted through a slot on the outer edge, where it was sewn to the head-part of the hat. A "cap" head lining was made and joined to the inner edge of the velvet and a narrow draw-string inserted by means of which the bandeau could be comfortably adjusted to any head size.

When cutting bandeaux follow the rules given in Chapter IV for planning and cutting espatra and stiff net shapes. In the bandeau the wire must be wire-stitched all round the edge, the ends of the wire being overlapped $\frac{1}{2}$ in. Do not, however, join the wire either at the extreme end of the bandeau or where it is likely to press on the head. Join the wire for Figs. 9, 10 and 11 about the centre of the upper edge; for Figs. 12 and 13 at the centre back, and for Fig. 14 on the outer edge; the wire for this last bandeau is cut in one length. When making the bandeau take care to overlap and wire-stitch the ends of the wire very securely before binding the edges of the bandeau with mull muslin.

Figs. 9 and 10 are usually covered quite plainly on both sides; the inner side with velvet, which grips the head and helps the fit of the hat, and the outer one with thin silk. Both materials should be cut to the shape of the bandeau, allowing $\frac{1}{4}$ in. all round the edge for turnings (Fig. 16). The pattern must be pinned on the cross of the material if it is to fit well. The edges can either be lace-stitched together from side to side (*Fig. 16a*), or catch-stitched to the lining (*Fig. 17*). Care is needed at the corners to prevent clumsiness where all superfluous material should be trimmed away. The outer side of the bandeau is covered with silk, which must be well strained over the stiffening and pinned to fit it, the edges being turned in narrowly, and afterwards finely slip-stitched to the velvet all round.

Figs. 10 and 11 are usually covered with either velvet or silk, though net and ninon are sometimes chosen. The material is cut on the cross to the length of the bandeau measurement, the width being two-and-a-half times the depth of the bandeau. For Fig. 12 the velvet could be joined into a ring to fit the bandeau exactly before being strained over it. Fit the inner side of the bandeau, first turning $\frac{1}{4}$ in. of material over the straight edge, and pinning it well to the stiffening; then turn the velvet over to the outer side as in Fig. 18, turn in the edge and slip-stitch round.

Fig. 11 requires careful management at the rounded ends, where the covering must be cut to shape before it is sewn.

Figs. 13 and 14 have only one exposed side when stitched into the head-part of the hat, so it is not necessary to cover the under-side except for the satisfaction of making a good finish to the work. The covering is cut to the shape of the bandeau with the cross of the fabric to the cross of the stiffening. It is then fitted round the stiffening with pins, the edge turned over, and "cat"-stitched down as in Fig. 17. The under covering is pinned flat over, the edges turned in and slip-stitched to the edge of the bandeau all round.

A bandeau is sometimes covered with a piece of gathered velvet which is lightly puffed on the outer side to give a little fullness and softness to the underpart of the hat. This is a good method to employ when the hair of the wearer of the hat is thin; also when the hair dressing is severe in style and drawn back tightly from the face above the ears.

Elderly people sometimes like a bandeau shaped like Fig. 9, arranged on each side of the hat for balance, and to give grip; otherwise the hat may be constantly slipping out of position. Bandeaux are used round the face of open-fronted bonnets where they are entirely hidden by a part of the trimming, which may be of tiny flowers or a feather band.

"Cache-peigne" is the French term for a hidden bandeau or comb, which is often attached to both sides of a hat and used both as a support and as a decoration.

A "filet" bandeau, a lightly-made and daintily-covered variation of Fig. 12, is often worn as a head-dress in the evening. A band or bandeau of tinsel, ribbon, etc., is another favourite form of head-dress.

If a bandeau is not carefully arranged and firmly sewn into position, it is of little practical use in either hat or bonnet. First, pin it firmly in position, then try the hat on the wearer to be sure it is comfortable and sets the hat at the required angle; tiestitch the bandeau firmly to the head-part either at both ends and in the centre of its length, or at intervals all round, just as the shape demands. The stitching should be quite firm but invisible.

CHAPTER XI

PLEATINGS, RUCHINGS AND QUILLINGS ; COCKADES, PLEATED AND PETAL ROSETTES, AND OTHER ORNAMENTS

PLEATINGS, ruchings and quillings are made in a variety of ways and many materials are quite suitable and effective for the purpose. A plain hat band is suitable for tailor-made hats and rather severe types of headgear, but a ribbon band with several sets of flat pleats or box pleats arranged at intervals is much more soft and pleasing on a satin straw, or one covered with tulle or chiffon. A length of pleated ribbon, tulle, lace or chiffon can be made into trim rosettes and cockades, and a pleated ribbon quill with a wired or feathered stem forms another pretty and durable trimming.

For a piece of single or knife pleating, three times the finished length will be required, i.e. $1\frac{1}{2}$ yd. of ribbon will produce $\frac{1}{2}$ yd. of pleating. Chiffon, lisse, georgette and similar materials should be cut the weft way, i.e. from selvedge to selvedge, and used either twofold or fourfold for pleatings; for quillings they can be used twofold as the pleats are very closely laid and overlap considerably.

A closely-pleated quilling will take five or even seven times the finished length, so that to produce $\frac{1}{2}$ yd. of quilling, $2\frac{1}{2}$ yd. of fine lace or folded tulle of the required width would be needed.

Pleatings should be set in even pleats of $\frac{1}{4}$ in. to $\frac{3}{4}$ in. in width, which must meet or, in the case of narrow ribbon, slightly overlap one another, and be held in place by being sewn finely with running stitches about $\frac{1}{4}$ in. from one edge. Ruchings are pleated in the same way but are sewn exactly along the centre of their width. Some of the more fanciful forms of pleatings are sewn along both edges. Knife pleating used to be gauged over a knife blade, and the kilting or pleating machine used in millinery

workrooms is made on the knife blade principle, the pleats being pressed by means of heated irons which are placed in a box over the kilter.

Pleats of $\frac{1}{4}$ in. to $\frac{3}{4}$ in. in width are the most satisfactory when ribbon is the material used. The ribbon must be pleated from the left hand into the right and in the arrangement of box pleats the backs of the pleats must just overlap one another. The pleats are held in place by running stitches worked from right to left, which are put in as the pleating progresses. One great secret in doing pleating of any kind successfully lies in keeping the needle in the material the whole of the time it is being worked, filling the needle with pleats and gradually easing them off on to the thread at the right hand as necessary.

Fig. 1 shows a length of pleating in progress; the pleats must, of course, be of uniform size and quite even at both edges.

Fig. 2 shows the process of single box pleating; this takes the same quantity of material as knife pleating; the difference in the process being that the pleats are laid alternately to right and left.

Fig. 3 shows double box pleating, which takes five times the finished length of material, if the pleats are arranged exactly over each other as illustrated; if the pleats are placed further apart and do not cover each other, rather less ribbon is required. In double and treble box pleating it is well to make the upper pleats a trifle narrower than the under ones.

Ruching is a little more difficult than pleating as the stitching must be kept quite even and exactly in the centre of the ribbon. If the ribbon is lightly creased at the half-width before working, it is easier to follow this guiding line for the stitching.

Fig. 4 shows the process of forming a single box-pleated ruche. The beginner will find it is wise to practise this process in muslin or paper before using the ribbon, and when even pleats can be made easily and quickly the effect gained will repay the most ambitious worker. Fig. 4a shows the pleats caught back with a tie-stitch in the centre to form a fancy pleating.

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Fig. 5 is a double box-pleated ruching, which is especially suitable for fine lace, tulle, net, etc., as these delicate fabrics look and wear better than if more scantily ruched. In working, a fine needle and either cotton or silk should be used, and a stitch should always fall just over the edge of each pleat to keep it firmly in position. Fig. 5a shows the double pleats tie-stitched back in the centre forming a fancy ruche.

Quilling is shown in Fig. 6. This is a series of single pleats, very much overlapped and held in place with running stitches. This form of pleating requires an extravagant amount of material. In the early Victorian period many elderly ladies made their caps from lengths of "quilled" bobbin net; and nothing looks more dainty round the face of a baby's bonnet than a quilling of fine Valenciennes lace, while fine tulle, evenly "quilled" and formed into a large rosette, is a very pretty trimming for a large summer hat.

There are many other pretty ways both of pleating and of ruching based on those already shown, and by experimenting a little with muslin or old ribbon, some very pretty original trimmings can be evolved.

Fig. 7 is a knife pleating sewn along in two lines, the distance from the edge being decided by the width of the pleats; the small corners that are folded over look best when arranged to form half a square.

Fig. 8 is formed first by single box pleating as in Fig. 4; then the four corners of the box pleats are folded in towards the centre, are well pressed, and allowed to open, when they stand out like small petals. These latter pleatings look very charming if made of ribbon woven with a contrasting colour at the back.

When trimming a hat with a ribbon pleating or ruching, an economical and pleasing variety can be made by alternating a few inches of the pleating with a few inches of plain ribbon (Fig. 9).

Piece silk may be used for making both pleatings and ruchings;

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it falls into softer and more graceful pleats if cut the weft way. The strips should be neatly joined to the required length, and the edges turned in very narrowly and either finished with a French or a rolled hem.

When a frayed edge is desired, the silk must be cut on the cross, and the edges carefully frayed with a pin before the ruching is made.

COCKADES, QUILLS, ROSETTES AND ORNAMENTS

Fine corded silk ribbon from $\frac{3}{4}$ in. to 1 in. in width is the most satisfactory choice for making fine pleatings, though satin and velvet ribbon are also frequently used.

Cockades in some form or other are always more or less in fashion. The name and form of the cockade was first suggested by the cock's comb, and the first cockades pictured in historical head-dresses were twisted by the "coxcombs" of that period from the long "liripipe" attached to the early English linen head-dress. The cap formed the comb of the cockade, and the pendant liripipe was twisted round and round this to form the base (*Fig. 10*). As years passed the linen cockade gave place to more serviceable materials, and in later days we see survivals of it made of japanned leather and ribbon, worn for trimmings on ladies' hats and on the hats of coachmen and footmen as part of their liveries.

Fig. 11 shows a tiny round cockade such as is frequently the only trimming on a lady's tricorne or other close-fitting hat or toque. Fig. 12 is another favourite type of cockade, the three-quarter disc of which is finished with swallow-tailed ends.

The foundations of cockades are made of stiff net or muslin, the edge of the net being supported with filet wire buttonholed to it, the foundation then being neatly bound and covered with silk or muslin.

Knife or single box pleating makes the neatest and smartest cockades, and either loops or tiny ends of the ribbon usually conceal the finish of the pleating (*Figs. 11* and *12*). The centre

of a cockade is frequently formed of a feather boss or sometimes of a beaded circle, or one of fancy stitchery, with pleating to form the edge.

QUILLS similar to Fig. 13 having either a stem of feather, or simply a wire stem wrapped with the ribbon, can be made from $1\frac{1}{2}$ yds. to 2 yds. of narrow ribbon or lace. Sometimes, for a feather, two rows of pleating are used one above the other; the back, or under row of pleating should in that case be made of ribbon rather wider than that used for the upper rows.

The *ROSETTE* is another useful form of hat trimming that can be made of pleatings; fine straw plait and braid are frequently used for this purpose, and even strips of leather may be used when a sports or weather hat is in question.

Fig. 14 shows a single pleating mounted on a flat shape to which it is sewn round and round from the outer edge to the centre of a disc of net wired at the edge and neatly covered with muslin or silk of the same shade as the ribbon used. The working on the disc is always done from right to left, and a neat finish at the centre is provided by the pleating which is graduated off, the extreme end being drawn well down.

Fig. 15 shows a plainly-covered centre piece piped round the edge and one round of pleating sewn to the back of the disc. The centre is effective when covered with velvet of the same shade as the pleating, or with brocaded or brightly-coloured ribbon.

Fig. 16 shows a flat rosette made with two rounds of fancy pleating arranged as Fig. 7 in this chapter.

There are many other ornamental shapes that may be decorated prettily with narrow ribbon pleatings, such as the buckle shown in *Fig.* 17.

OTHER TYPES OF ROSETTES

If ribbon be chosen for gathered rosettes let it be light in texture so that no unnecessary weight shall be added to the headgear; and supple so that the rosette may be graceful in structure.



CHAPTER XI

The width of the ribbon for a gathered rosette is determined partly by the size of the rosette, e.g. if the size of the rosette required is about $2\frac{1}{2}$ in. in diameter, then 1 yd. of ribbon, 1 in. in width, will give good proportion if it is mounted on a circular foundation 1 in. in diameter. The ribbon chosen will, of course, vary in width from 1 in. to $2\frac{1}{2}$ in., so that, for a well-proportioned rosette of $2\frac{1}{2}$ in. ribbon, we require $2\frac{1}{2}$ yd. and a foundation $2\frac{1}{2}$ in. in diameter. If this simple rule is followed the rosette will be true in form and each succeeding round of ribbon will just overlap the previous one.

A circular foundation of twofold net or muslin neatly wired round the edge and covered at the back with thin silk or ribbon must be made for each rosette; this minimizes the amount of ribbon required and helps considerably in the formation. The method of making a simple gathered ribbon rosette is the same as that explained in Chapter VI except that where the piece-material in the latter is folded and gathered through two folds, ribbon is as a rule used singly, only one edge being gathered and drawn up.

Fig. 32 in Chapter VI illustrates a rosette with shirred edge, where the gathering thread is carried *over* the unfolded edge of the ribbon, a method of making that is often applied to ribbon when rosettes are being made for children's hats, etc.

A petal rosette (Fig. 18 in this chapter) has a foundation $1\frac{1}{4}$ in. in diameter. It requires $1\frac{1}{2}$ yds. of ribbon, $1\frac{1}{2}$ in. in width. Mark the length of 54 in. into eighteen parts, and between each of the marks run a semicircular gathering thread as shown in Fig. 20. The surplus pieces of ribbon between the scallops should then be cut away and the gathering thread tightened a little so that small petals are formed. Arrange the ribbon on the foundation, commencing at the outer edge and working round and round to the centre, placing the petals of each row between those of the previous row, and finishing quite neatly in the centre of the foundation (Fig. 19).

Small circular pieces of silk, ninon, etc. (Fig. 21), may be used



to form a petal rosette, similar to those shown by Figs. 22 and 23. Nine circles of material, 3 in. in diameter, are used for this rosette; the foundation is cut $1\frac{1}{2}$ in. in diameter, round the outer edge of which the petals are sewn, and the centre is finished with a padded button neatly covered with fancy silk, gold lace, or braided or beaded material. Fig. 23 shows another form of petal rosette made very similarly to the previous one, except that the circular petals are folded first in half, then over again into quarters, and the lower edges then gathered and sewn to the foundation.

When folding the petals for either of these rosettes the "cross" of the material must be along the fold, otherwise the appearance will be very set and stiff.

A looped ribbon rosette is arranged on a foundation. Fig. 24 has a foundation $1\frac{1}{2}$ in. in diameter, and $1\frac{1}{2}$ yds. of 2-in. wide ribbon are used. Mark the length of ribbon into twelve divisions of $4\frac{1}{2}$ in., then form each division into a loop. Arrange eight loops round the outer edge of the foundation, and the four remaining ones to fill in the centre.

Many other kinds of rosettes may be made, as, for instance, those of narrow straw plait, bébé ribbon or thick wool, but the same principles for making underlie them all. If lace, chiffon, tulle or other thin material is chosen, naturally much greater length of fabric is required to produce the same effect as that given by materials of a heavier texture.

CHAPTER XII

RIBBON BOWS

THE making of ribbon bows is, to many of us, the most fascinating branch of the millinery art, and there are very many beautifully woven ribbons from which to make our choice for the particular bow that has taken our fancy. There are, however, several points to consider when one is choosing the ribbon for trimming a hat—the style of the hat itself; the occasions for which it is required; the weight; and, to some extent, the colour of the ribbon. The colour of the ribbon depends not only upon the hat itself, but also upon the costume, frock, or blouse with which it is to be worn, and upon the season of the year when it will be worn.

The ribbon may be chosen to match exactly the colour of the hat, or to form a decided contrast with it; but if it is to be worn, in turn, with several costumes, blouses, etc., a ribbon of a neutral shade or one that has several colours woven in it will be the best choice.

If the accompanying blouse or dress is self-coloured and of plain material, a striped, checked, or patterned ribbon may be chosen; but the combination of a checked ribbon and a striped frock would not be considered smart.

A wide-brimmed hat will always carry a nice full bow of wide ribbon, but the general contour of the head and face of the wearer, as well as her height and carriage, should help to decide the size, as well as the style, of bow most suitable. When choosing ribbon for infant's and children's hats and bonnets, we must not overlook their washing qualities. Vegetable silk and cotton ribbons are obtainable in many widths and colours, and are much more satisfactory when constantly laundered than either pure silk or satin ribbon.
Taffeta, twilled and soft makes of satin ribbon, can be washed and ironed several times without becoming hard or splitting, but many heavier makes lose all their suppleness after ironing and cannot be made into pretty bows even after one washing.

In making a large bow of silk, satin, or velvet ribbon, the weight of the finished trimming must be considered. A heavy bow will overweight the hat and probably over-balance it.

Velvet ribbon is made with a cotton, silk or satin back, and the one with the silk back is usually thinner and of lighter weight. Ciré, or waxed ribbon, is stout and weatherproof.

Canvas, gauze and fine "tissue" ribbons look dainty and wear well in the warm months, but tinsel and metal tissues often tarnish and lose their brightness when worn in the fog and rain. A picot or fancy edge to the ribbon softens the outline of a trimming, especially on children's hats.

When making bows let the loops and ends be in good proportion to one another, as well as to the hat that is being trimmed. Support loops and ends with fine wire, tape wire, narrow flat straw, or muslin, if they will not stand against wind and weather otherwise, but remember that these props always add weight to the hat. Use strong cotton or silk to wrap the waist of the bow and avoid unnecessary stitching. Pleats should be even and the bow firm and taut with a neat wrap-over, well finished.

A bow having two loops and two ends made neat with a wrap-over is one of the most simple forms to attempt.

The quantity of ribbon required depends upon the width and the size of the bow. If the ribbon is 3 in. wide, 27 in. makes a nicely proportioned bow; if the ribbon is 4 in. to 6 in. wide, 36 in. is a better length for the bow.

In proportioning for a two-loop and two-ended bow, leave the ribbon $4\frac{1}{2}$ in. for the wrap at, say, the left end of a length of ribbon, and mark the remaining $22\frac{1}{2}$ in. equally into three divisions of $7\frac{1}{2}$ in. each—for two loops and ends.

Commence pleating at the right-hand end of the ribbon (Fig. 1),



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setting it into four or five even pleats, push the needle once through the pleats, then wrap them round firmly with the thread; form the first loop by passing the ribbon over the first finger of the left hand, setting it again into small pleats at the waist and wrapping it over firmly with the thread.

Repeat the pleating and wrapping to form the second and third loops (*Figs. 2* and 3). Cut through the centre loop diagonally to make the two ends, and arrange one to the right and one to the left of the centre of the bow; pleat the wrap over, twist it softly over the centre of the bow to cover the cotton wrapping, and sew it neatly, turning in the cut end of ribbon at the back of the bow (*Fig. 4*).

A bow having four loops and two ends will require $1\frac{1}{4}$ yds. to $1\frac{1}{2}$ yds. of ribbon if it is about 3 in. wide. Mark the ribbon into six divisions, 5 in. for the wrap-over, and the remaining length into five equal parts of 8 in. each for the four loops and two ends. Pleat and wrap the five loops as in the first bow (*Figs. 1* to 3), taking care to keep a firm, taut waist (*Fig. 5*), and not just a string of loops. Cut across the centre loop to form the two ends, and arrange these as in *Fig. 6*; pleat and sew the wrap-over.

A bow in the form of an aigrette can be made on the same principle as the two-looped and four-looped bows. A silk-backed velvet ribbon about $3\frac{1}{2}$ in. in width might be used for a bow to trim a hat of coarse satin straw. One-and-a-half yards of ribbon will make a medium-sized bow, with two upstanding ends and either four, six, or eight loops formed like a rosette at the base (Fig. 7).

For a six-looped bow, mark the ribbon from left to right as follows: 4 in. for the wrap, then three divisions of $6\frac{1}{4}$ in. each for loops, a division of $13\frac{1}{2}$ in. for ends, then three more divisions of $6\frac{1}{4}$ in. each. Pleat and wrap over the first three ($6\frac{1}{4}$ in.) parts into loops, then form the $13\frac{1}{2}$ in. division into one long loop; pleat and wrap over the remaining three ($6\frac{1}{4}$ in.) loops (*Fig. 8*). Cut the long loop diagonally across to form the ends, arrange the loops and ends and make the centre quite neat with the wrap-over, either as in Fig. 7 or Fig. 9. Velvet ribbon needs great care in its manipulation, for, if the edges of the ribbon are not very carefully managed and the pleats evenly set, the bow will look clumsy and badly made.

There are many ways of cutting and finishing the ends of ribbon bow, the diagonal cut being probably the most usual one. When the ribbon is very loosely woven and therefore apt to fray and become untidy when cut, the end may be folded over, and the cut edges sewn together to form a mitre shape (*Figs. 10* and 10a); or the ribbon may be folded down the centre and the cut edges of one end sewn together, on the wrong side (*Fig. 11*); then, if the ribbon is turned right side out and the folded edges lightly pressed with a warm iron, a mitre as *Fig. 11a* will be formed. When a well-woven and firm make of ribbon is being used the ends may be cut "fish-tail" shape, or, if preferred, "double fish-tail" (*Figs. 12, 13* and *13a*).

To fray the end of a wide satin ribbon, especially when making a large bow for a girl's hat, is another favourite finish; but it is a mistake to cut off the selvedge in order to do so. If the ribbon is just slit at the two edges for $\frac{1}{2}$ in. or even 1 in., and the loose strands all carefully taken out with a fine pin, the fringe will look quite nice and even. Sometimes ends are frayed for a depth of 2 in. to 4 in., and then knotted into a fringe or tassels.

When washing ribbon is used for bows on children's hats and bonnets, a fine open hem-stitching across the ends always looks dainty, and is most satisfactory for repeated laundering. Several useful and pretty bows are made without any ends, and of these perhaps the most useful is that copied from an Alsatian headdress. We see this form of bow worn across the front of nurses' straw bonnets, on children's large-brimmed and mushroom hats, and often made in lawn or muslin as a head-dress for maids and waitresses. This is a very neat and practical type of bow as there are no ends to get out of order. Sometimes the bow consists of four loops, sometimes of six; and, if very large and arranged to cover the crown of a hat, it has often as many as

eight loops. It is an evenly-balanced bow and has always the same number of loops on both sides of the wrap-over.

For a four-looped bow (Fig. 14), take $1\frac{1}{4}$ yds. of 4-in. wide ribbon. Allow 5 in. for a loose wrap-over, then mark off the remainder of the ribbon into four divisions—one of 12 in. at each end, and in 8-in. divisions in the centre. The two front loops will be 4 in. long when made, and the two back ones 6 in. long. Commence the pleating at the right-hand end, making a long and a short loop to right and left; then wrap the pleats over with strong thread, and finish off the centre neatly with a loose wrap-over (Fig. 14). A six-looped bow (Fig. 15) would require from $1\frac{1}{2}$ yds. to 2 yds. of 5-in. or 6-in. ribbon.

A "Quaker" or "Pump" bow (Fig. 17) is another type that is made without any ends. Petersham or velvet ribbon always forms nicely into a bow of this style. If a $2\frac{1}{2}$ -in. wide ribbon is used, about $\frac{3}{4}$ yd. will make a proportionate bow. Cut off 6 in. for the wrap-over and divide the remaining 21 in. into four loops, the two at the back being $3\frac{1}{8}$ in. and the two front ones $2\frac{1}{8}$ in. There are no pleats in the bow, therefore it is most suitable for a stout well-woven ribbon and for the trimming of weather and sports hats. A waxed moiré ribbon is a good one to use for this purpose, as it " comes up with a smile," even after being thoroughly soaked with rain or fog.

This is a simple style of bow to make but it needs care in measuring and stitching. The loops should be folded into place and pinned before they are sewn (*Fig. 16*), and the wrap-over evenly pleated, then lightly pressed and neatly sewn to cover the stitching, the cut ends of the ribbon being turned in at the back of the bow (*Fig. 17*). A plain band of ribbon and a "pump" bow, such as are used for trimming a schoolgirl's hat or a man's felt or straw, require each from $1\frac{1}{4}$ yds. to $1\frac{1}{2}$ yds., the usual width of ribbon for the girl's hat being 2 in. and for the man's felt or straw hat $1\frac{1}{2}$ in. to 2 in.

A "tied" bow, or a bow made without stitches, is one of the most graceful and satisfactory types. This bow should be



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commenced and finished with an end, and care must be taken to pass the ribbon from side to side of the bow, crossing its centre as each loop is formed, so that the tie-over will hold each fold of the bow in its place. Any length of ribbon from $\frac{3}{4}$ yd. to probably 3 yds. may be used in the bow, according to the number of loops and the size of bow desired.

In Fig. 18, $1\frac{3}{4}$ yds. of 4-in. ribbon is used; the bow is commenced with an end, about $4\frac{1}{2}$ in. in length, and when completed there are four loops. A second end is tied over the waist of the bow where it is knotted and drawn tightly to hold the bow firmly together. The tying of this bow must be practised several times before perfection is gained, for it needs very careful handling; the loops must be pleated neatly at the base and be well arranged, especially at the edges, where they are always inclined to look clumsy and show the back of the ribbon. If the ribbon is not reversible it will be necessary to give each loop as it is pleated a sharp twist over to keep it on the right side.

A bow of the cabbage order, very similar to a large loop rosette, is shown in *Fig. 19*; this is usually termed a "chou bow"; it is just a succession of loops, all equal in size, firmly wrapped at a common centre with strong cotton. From $1\frac{1}{2}$ yds. to 2 yds. of 6-in. to 8-in. ribbon will make a nice full bow, but care must be taken to choose suitable ribbon which should be preferably of soft satin or taffeta silk.

Bows of soft satin and bows that are intended to stand upright frequently need the support of wire, muslin or straw. Very fine gauze and chiffon ribbons are supported by fine tie-wire, which can be bought in many colours, either on small reels containing 3 doz. yds. or on large ones holding 12 doz. yds. This is sewn with a very fine needle and silk to the back of the ribbon either along the centre width (*Fig. 20*) or along both edges (*Fig. 21*).

Lace bows, etc., are wired in the same way as fine gauze ribbon, but heavier makes of ribbon are supported by "filet" or "lace" wire, to match the shade of the ribbon; or by "tape" or "ribbon" wire, which is obtainable only in black or white.



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Another method of supporting bows is to sew to them flat "bandeau chip" or a cheap flat straw-plait, which is perhaps more satisfactory than tape-wire as it is lighter in weight and more supple.

Tape-wire or straw-plait are sewn at the back of the ribbon (Fig. 22), only very tiny stitches being taken through to the



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right side of the ribbon where necessary. When wide soft satin or silk ribbon is used, a strip of leno muslin cut narrower than the ribbon and used to interline the loops will be found most satisfactory. There are several good methods of supporting ends of ribbon; one method is shown in *Figs. 23* and *23a*, where the wire is wire-stitched at the extreme edge of the ribbon, and supports the end right to the point. Hide the wire by rolling it over on the ribbon until it is covered, and put a stitch at each end to keep the silk in position and the end quite neat. A second method is shown in *Figs.* 24 and 24a, where the wire is sewn on as in *Fig.* 23, but about $\frac{1}{2}$ in. from the edge, where it is afterwards hidden in the folds of the ribbon.

A third method shows the wire being slip-stitched under a tiny roll of the ribbon near its edge (*Fig.* 25).

A bow similar in type to those of "The Empire" period (Fig. 26) would be made from 1 in. wide satin or velvet ribbon and wire-stitched along its whole length before the bow was made (Fig. 26).

Fig. 27 illustrates another method of sewing fine wire into a ribbon loop; in some cases this is satisfactory, but it is apt to give a hard, stiff look to the folds of the loops. The wire is carried only half the length of the loop of ribbon.

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SPORTS, WEATHER, PULL-ON, RIBBON, AND FUR HATS

WHEN choosing materials for sports, weather, and pull-on hats, we must remember that they will be subjected to all conditions and to rough usage in packing. The materials must therefore be well woven, yet light in weight, and must not easily spoil with frequent rolling and crushing. Probably the only foundation material that one can rely upon for this purpose is fine French canvas of good quality. If this requires support round the brim edge, light-weight linen tape may be used to bind it. Hats and caps of oil silk, oilskin, or fine rubber sheeting are much lighter and more practical if made without canvas.

For the outer covering material for winter wear, there is a choice between tweed, cloth, gabardine, covert coating, cravenette, serge, frieze, velveteen, suede, and ciré satin. All these fabrics can be obtained rainproofed and light in weight.

For warmer weather there is a much larger selection from which to choose a hat that need not be waterproof—tussore, chiffon taffeta and glacé silk; alpaca, tennis flannel, linen, drill, sponge and casement cloths; fine woollen materials such as thin serge; piqué and stockinette.

For head linings, when the heavier goods are used, polonaise, sarcenet or silk are quite the best. For hats of linen and other washing goods, an interlining of batiste is the most practical. If any trimming is required other than stitchery, beads or a badge, waxed ribbon, or small decorations of the oil silk are probably the most durable for the weather hats; and either petersham or cotton washing-ribbon for the cotton hats and caps. Whatever the choice may be, let the interlining and material be well shrunk before it is cut, and allow a little extra size in the head-part of all of these hats as, if the fitting is too tight, they are most uncomfortable and are frequently the cause of headaches and other troubles.

Sports hats and caps are very frequently made of either crocheted or knitted silk, wool, or mercerized cotton, and have the advantage of being easily washed; and if stretched over a block to dry, they do not require any pressing after the washing processes. There are many books devoted to knitting and crochet giving full particulars for the making of these hats in all the latest styles.

Soft hats of material are very varied in shape, and they conform to fashion's changes as frequently as do the stiffer shapes and more dressy hats. A more or less perennial type is, however, illustrated in *Fig. 1*, a cloth hat with rolled brim, four-sectional crown and straight narrow head-band.

The method of drafting the pattern is described in Chapter III, Fig. 17, showing the rolled brim, and Fig. 30, the sectional crown.

Fig. 2 illustrates a sailor shape with flat brim and gathered or pleated crown; and Fig. 3 a hat with tricorne brim, curved side-band and oval top to the crown. All of these shapes are suitable for making in rainproofed materials, or in taffeta or glacé silk, and Figs. 1 and 2 are also suitable in piqué, casement cloth, etc., for tennis, golf, or other sports wear.

Fig. 2 is particularly useful in oil silk, as the brim can be cut in single material, supported at the outer edge with cane and neatly bound, no interlining being required.

Fig. 3 is perhaps more suitable for an older face, and would be most comfortable for motoring if worn with a veil. This is not, however, the best shape for a weather hat, as the brim is almost close-fitting, and gives little protection from sun and rain.

Interlining.—The brims and bands of Figs. 1 and 3 are usually interlined with canvas, the parts of the pattern being planned on it as in Figs. 4 and 5. Fig. 4 illustrates the planning of the hat with a rolled brim. The brim is cut in two parts, thus having

a seam at the right and left sides. Fig. 5 shows the planning on canvas of the tricorne brim and curved side-band for Fig. 3, the method of drafting the pattern being given in Chapter III.

Turnings of not less than $\frac{1}{4}$ in. must be allowed for on all seams, and $\frac{1}{2}$ in. round the head-part of the brim-pieces, as shown by the dotted outlines on the diagram. All centre points of the pattern should be marked. If the patterns are not planned on the exact diagonal of the canvas, the hat will neither wear well nor roll up well, and much of the graceful curve of the brim will be lost.

When firm and well-woven materials are chosen it is not advisable to interline the crown, as the canvas adds considerably to the weight of the hat, and hats and caps that are intended for sports wear should be as light as possible, and to afford ventilation should have a few eyelets worked or inserted round the head-part. If interlining the crown and side-band with canvas, place the centre of each pattern on the exact cross.

Figs. 1 and 3 are usually lined with silk, satin, or polonaise, and just a strip of interlining inserted in the head-band.

Fig. 2 is frequently made of two materials and, being reversible, may present oil silk to the rain, and silk or satin to the sun.

PLANNING ON MATERIAL.—After cutting out the canvas plan the patterns on the material, arranging all parts on the cross as shown in *Figs.* 6 and 7. Velveteen 24 in. wide is shown for the sectional hat (*Fig.* 6), and tweed 44 in. wide (*Fig.* 7) for the placing of the tricorne shape, the side-band of which is planned in two parts. Great care must be taken to plan the patterns with regard to (a) shade, and (b) cross of material. From the illustration of the pattern pieces on the velveteen, the position of all parts can be ascertained, and it is evident that a continuous dark shade runs from the front of the hat to the back.

STRIPED AND CORDED MATERIALS.—When planning on striped or corded material the brim-pieces must be cut in two parts and have a seam at the sides, and in this instance it is usual to plan each piece of crown and brim with the centre point



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parallel to the stripes, so that the cords or stripes form a \bigvee -shape at the seams. If the brim-pieces were planned as *Fig.* 7, the stripes would form a very ugly angle at the back of the brim-piece.

Turnings of $\frac{1}{2}$ in. should be allowed round the head-part curves, and $\frac{1}{4}$ in. at all other parts of the patterns, and fitting lines and centres marked. The head lining is planned and cut by the pieces of the crown pattern, but no turnings need be allowed for as the completed lining should be just a little smaller than the crown so as to fit smoothly inside it.

CONSTRUCTION OF HAT.—When making a sectional crown, the pieces should always be pinned, tacked, and machined from tip to base, and if they are first joined in pairs, the tackings removed, and each piece well pressed or steamed, the crown is much more satisfactory when completed. Fig. 8 illustrates the method of joining. Tack the material just within the fitting lines and machine exactly on them, using silk or cotton that matches the material in colour, and take care not to stretch the curved edges. After pressing, join the two halves of the crown together, being careful to obtain a perfect centre at the junction of the seams (Fig. 9), and press the centre seam.

Brim.—Join the interlining of the brim-piece, making the seams at the sides (Fig. 1) or at the centre back (Fig. 3), and after machining them press open as flatly as possible. Join the brim-pieces in the same way, and either press or steam them to make the joins quite flat.

Binding.—Take the linen tape, fold it in half lengthwise down the centre, then press it well, and it will be ready for binding. In binding a rolled or curved brim place the edge of the canvas right up into the fold of tape; hold the tape tightly, ease the canvas slightly into it and tack it into place; machine along the edges of the tape and press well. If the canvas edge is at all stretched in the binding process, the brim-edge will fall into flutes, or lose its roundness of shape. If the brim is a flat one do not ease the canvas into the tape, but keep it perfectly even all round. COVERING WITH MATERIAL.—Fit the upper brim-piece of material first, pinning it carefully into all the curves of the canvas. Tack well and at intervals round the brim to keep the material in place for the rows of machine stitching. Either turn the material over the edge of the canvas and catch-stitch to the underside of canvas (Fig. 10), or, if it is to be bound with ribbon or braid, cut the edge down to the size of the canvas brim and tack to it.

Fit the under-brim piece next, stretching it carefully and smoothing it outwards from the head-part to the brim-edge with the ball of the thumb, until it fits the canvas exactly. Tack it well to the shape, pare down the brim-turnings to about $\frac{1}{4}$ in., and turn in edge to edge with the upper brim. On no account allow the material of the under brim to drop below the edge of the upper brim. Leave the material unturned at the edge if it is being bound.

The brim-edge may be machined three or four times round leaving a $\frac{1}{4}$ -in. space between the stitching, or the machining may be continued row by row to the head-part. Every row of machining adds firmness to the hat and makes it more durable for stormy weather. Press the edge of the brim after stitching it.

BINDING WITH RIBBON, ETC.—Corded ribbon, braid, or a strip of suede or leather may be used to bind the brim-edge; this must be carefully tacked into place so that one row of machining will stitch down both edges of the bind. The crown bands of canvas and material should be joined up to size separately, and the joins opened and pressed. Turn in the edges of the material band to the fitting line; tack, machine, and then press them well.

Fit the canvas band to the head-line of the brim-piece, pin it securely, then stitch it at the lower edge. The sectional part of the crown can then be fitted and pinned to the upper edge of the head-band, and neatly and firmly stitched to it. Slip the material band over the canvas and slip-stitch to the hat along both edges. An expert worker may machine-stitch the band to

both the brim- and the crown-pieces, but this is not a safe method for the amateur machinist.

A small bow of the material, a badge, an ornament, or a ribbon band and bow or cockade will finish the hat, while the inside is completed with a head lining.

HEAD LINING.—The head lining for a sectional crown is made in exactly the same way as the material crown. Press the seams of lining, fit it inside the crown, turn in its upper edge and neatly slip-stitch round the head-curve to cover all the raw edges of material after the brim-piece has been attached to the crown.

The tricorne brim (*Fig. 3*) is made in the same way as the rolled brim just described, except that it has one seam only at the centre back. The side-band is cut in material and canvas, unless the material is so firm that it requires no support to keep it in good shape.

The canvas and material band should be joined to the headsize, the seams opened and well pressed. Tack the material and canvas bands together; fit and tack to the oval crown-piece with right sides of material facing. Machine the edges on the fitting lines, turn the crown right side out, and with a small iron press the crown-seam—this is done from the inside of the crown. If a block is to be used for pressing, the crown should be placed on it wrong side out. Turn the lower edge of the band to the fitting line, and catch-stitch the material to the canvas, then firmly slip-stitch round the head-line of the crown to the fitting line of the brim-piece.

The head-lining is cut by the crown pattern, without any allowance for turnings, and after being joined, is slip-stitched inside the crown. If the side-band is made without an interlining, it may be machined to the head-lining, as this helps to keep the crown a true shape.

Fig. 2, if made as a reversible weather hat, should have a brim-band and crown cut in oil silk, thin rubber sheeting, cravenette, or other rainproof material, and in silk or satin.

The brim materials, i.e. the oil silk and silk, should be tacked

together round the brim and head outlines, then a fine piece of basket-cane be wire-stitched round the brim-edge to keep it taut and firm. A bind of either waxed ribbon or piece-silk, cut on the cross, is then slip-stitched to the brim to make it neat.

The crown materials should be pinned together and the edges be gathered to the head-size, then the band materials joined separately to size also. Fit the oil silk to the head-part of the brim-piece, and sew by hand or machine round the head-curve. Fit the crown to the top of the band, sew it into place, then arrange the silk band to make all the edges neat. Finish both bands with a flat pump bow to cover each join.

TAM-O'-SHANTER CROWNS.—Circular tam-o'-shanter crowns cut as in Figs. 28 and 29, Chapter III, may be more suitable for girls' hats than the crowns just described; they are cut from a large circle of material, the edge of which is gathered, pleated, or darted to the head-size and set into a narrow band. More material is used than for a sectional crown, and the hat is consequently a little heavier.

RIBBON HATS, TOQUES AND CAPS

These are always worn during the autumn and spring seasons; sometimes of one kind of ribbon, sometimes of another. Frequently the crowns are made of strips of ribbon joined together, their edges forming lines from front to back of the crown as in *Fig. 11.* In others the line runs round the head of the crown and brim; or the ribbon is basket-plaited, forming checks all over the crown (*Figs. 12* and 13).

A band of stiff petersham belting ribbon is perhaps the best foundation side-band for these soft hats and caps, as, being firm and light in weight, it affords sufficient support for a well-woven ribbon, which is the essential of this type of head-gear, a poor quality ribbon being most unsatisfactory. The petersham band is joined to a slack head-measure, and both the hat-crown and brim, if any, are mounted on it. Ribbon is adaptable to almost any type of crown that is not too high, and now that a stiff quality

of petersham can be bought 4 in. to 6 in. wide, even taller crowns are satisfactory.

Tam-o'-shanter and the rounded French type of crowns keep their shape, and look quite fresh after much hard wear. These hats and caps are quickly made, and if neatly and well sewn and finished inside with a firm head-lining, they serve their purpose as *demi-saison* millinery to perfection, being inexpensive, yet quite suitable for wear with either costume or coat-frock.

FUR, SKIN AND FEATHER

CHOICE OF FUR.—The shorter-haired furs, i.e. mole, squirrel, chinchilla, ermine, beaver, mink, seal and Persian lamb, are considered more adaptable and suitable for millinery purposes than are the longer-haired varieties such as fox, skunk, etc.

Other skins, as, for instance, those of the grebe, merle duck, pheasant and peacock, are used from time to time, as well as the down of the swan and the eider-duck.

FEATHERS.—The feathers of many birds are used as millinery trimmings, as, for instance, those of the ostrich, emu, owl, heron, eagle, argus and hawk, in addition to those of the ordinary farmyard birds, including the duck and goose. Egrets and ospreys are from the long-winged birds of the heron family, also from birds of paradise.

SKINS.—The skins of sheep and goats are dressed, dyed, and prepared for the making of hats, caps, and gloves, more especially for sports and motor wear.

The making of suede hats, caps, gloves, bags and wallets is a new feature in many millinery syllabuses.

TOOLS.—A sharp penknife, bayonet-pointed needles, and strong sewing silk matching the colour of the skin or fur, form the necessary equipment.

SHAPE.—Fur may be mounted over a suitable shape of either blocked cane, or of unbacked espatra, supported with fine cane, at the outer edge; wire should never be used in connection with fur or skin, as it is too harsh.

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When small soft caps or toques are being made, an interlining of fine French canvas is frequently used in place of a shape.

The shape, or the interlining, must either be wadded or carefully padded with domette before the fur is mounted over it; the soft padding protects the skin and gives a softly-rounded effect to the finished hat.

WADDING.—Wadding and fur add considerably to the height and circumference of a shape and decrease the size of the headpart. The domette should be cut to the shape of each part of the hat; or if wadding is used it must first be warmed in front of, but well away from, the fire, to fluff it out to its full depth, then be parted in thin layers, one layer being left the full size of the pattern and the remaining layers each decreased in size so as to avoid a thick seam of wadding round the crown-edge. The band, or side of the crown, is wadded, only the first layer being taken into the head-part.

The wadding should be lightly, yet firmly, tacked through the shape, care being taken to mould it skilfully, so that the clear outline may be kept. A soft, fine piece of muslin should be tacked over the wadding to prevent the silk from entangling during the later sewing processes.

A narrow rolled edge or brim is wadded in the same method as the side-band.

When French canvas is used in preference to a shape, each part is wadded before the pieces are joined together, so that all raw edges are inside the cap.

PLANNING AND CUTTING.—Patterns of the shape are planned on the skin side and carefully outlined with French chalk, care being taken to "lay" them correctly, i.e. the fur smoothing from front to back of the crown and round the brim of a shape similar to Fig. 14.

CUTTING.—When cutting the skin, get a second person to hold it taut with the fur side downwards, then with a sharp penknife just cut the skin through along the pencilled outline of the pattern, taking care that the knife is never pushed roughly through the skin to tear it or injure the fur. If a second person is not available, nip the skin up inch by inch along the pattern line, then with sharp seissors just shave off the skin sufficiently to cut it through. On no account must fur be laid on a flat surface to be cut, for much hair would be detached in the process and the edge of the fur in consequence be impoverished.

Each piece of fur—and there will be many if careful shaping is done—must be oversewn finely to its neighbour, the stitching being sufficiently tight to draw the edges together, but loose enough to allow of the edges lying flat and uncockled when the fur is made up. During the sewing the hair on both sides of the join should be pushed down and held out of the way of the cotton by placing a piece of thin card between the pieces of fur and just below the skin. When the whole fur covering is made, each part having been fitted and sewn as neatly as possible, it is ready to fit over the shape.

If the shape permits the brim and crown-pieces to be joined together before mounting, the task is easier and the finish is neater; when this is not possible, the brim-piece should be sewn down first, and the crown-piece makes it neat round the headcurve; no stitches must be visible at any joining points.

A lining of either satin or polonaise is cut to the shape of the crown-pieces, made as explained in Chapter X, and slip-stitched inside the head-part.

SUEDE HATS.—The parts of suede and other skin hats are joined either by machine—as described in the chapter on Sports and Weather Hats—or by means of narrow strips of skin, threaded through punched eyelets, as in Fig. 15. These hats require a head-lining, but shape and interlining are both unnecessary, as the skin is firm and will keep its shape.

CHAPTER XIV

HARDWEAR AND FRUIT AND FLOWER HAT TRIMMINGS

ODDS and ends of ribbon, wool, silk, cloth, velvet, beads, straw, lace, leather, etc., may all be made into either head-wear or dressy little trimmings.

RAFFIA TRIMMINGS.—Raffia, either in its natural colour or when dyed, makes effective and useful hat bands, buckles, flowers, large-headed pins, etc.

HAT BAND.—Fig. 1 illustrates a pretty hat band which has two-fold leno muslin for a foundation, on to which the raffia is couched down with thick black or coloured silk. The colours here shown are blue, green, and natural; the blue forms the waved central band, the green the straight borders, and the natural shade fills in the spaces. Other shades would be equally pretty, say, pink, mauve and purple, or perhaps brown, flame and lemon.

RAFFIA FLOWERS.—Daisies, similar to Fig. 2 can be made of either narrow or wide raffia. A circular disc of espatra covered as for a rosette (see Chapter VI, Fig. 30) forms the base, and long loops of raffia are arranged round and round this for the daisy petals, the centre being filled with either raffia couched down in tiny stitches, or with glass or wooden beads. Pleasing colours are—natural for the petals, with blue, green, and red for centres; or petals of pink and centres of yellow would be pretty for a very little girl's hat.

HATPINS.—The hatpin should be strong, and not more than 6 in. long. Push the pin through a small cork to keep it from slipping, then cover the head with cotton wool and mould it to shape. Fasten the wadding firmly in place by a covering of leno drawn well down into shape and bound with cotton tightly



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to the pin. Fig. 3 (a, b, c) illustrates several good foundation shapes; for A, a large flat cork was chosen and the crocus-yellow raffia was couched round and round it from the centre, to cover entirely both sides of it, small wooden beads in several shades of blue and stone colour being dotted over the flat surfaces.

B was covered from tip to base with pale yellow raffia and darned in and out with other bright colours across its centre.

C has raffia wound spirally from end to end of the pin head; the centre is in flame colour, and the remainder is brown; the raffia is fastened with couching stitches.

STRAW TRIMMINGS.—Fig. 4 shows a straw buckle mounted on a foundation of espatra, wired round the edges, and covered quite plainly with either silk or ribbon. The model is of nigger-brown tagel plait, with pale blue lattice work, and tiny rosettes of pale blue and pale pink tagel, each made of one strand of the plait $\frac{1}{4}$ in. wide and 3 in. long.

Fig. 5 is also made of tagel plait, $\frac{1}{4}$ in. wide; the outer part is nigger-brown and the centre jade-green. The circular foundation is $1\frac{1}{2}$ in. in diameter and is prepared as for a rosette; the plait is gathered in scallops (Fig. 5a) and then sewn to the foundation.

Fig. 6 has leaves cut in stiff net; the edges are wired and a short stem of wire is left for mounting purposes; each leaf is backed with brown silk and the front is covered with an outer and inner rim of fine nut-brown plait centred with a rim of bright green. A small piece of the brown plait is wound over the wire to make a stem. The acorns are first formed of cotton wool, then covered with muslin to make them firm; the nut is covered with gold plait, and the cup with brown, small loops being left at the top of the cup for mounting the acorns to the leaves.

A dragon fly (*Fig.* 7) is easily made from $\frac{1}{4}$ -in. wide flat satin straw; the body of the fly is a piece of wire bent as in *Fig.* 7*a* and wrapped thickly with brown and blue silk in alternate bands; beads are sewn on for the eyes. The wings are loops of the pale blue straw. A small safety pin sewn to the body of the fly makes the attachment easy.

BEADS.—These look rather hard as a hat-trimming when worked solidly on either a flat or rounded foundation, and are inclined to be heavy when used to cover the whole of the padded head of a pin. If they are employed in this way, the finest and lightest weight beads look quite the best.

Fig. 8 is a simple beaded motif, the design being obtained by placing a penny in the overlapping circles or other positions desired, and pencilling round it. The foundation is of stiff net covered with sarcenet or silk; the tiny centre is worked in small lemon-coloured glass beads; the outlines are of rather larger beads in a dark shade of mole, and the remainder of the design is beaded with a pretty mauve shade. Thread five or six beads, sew them quite flat to the foundation, or, if preferred, use a long string of beads loosely threaded and couch them down a few at a time as the design requires them. Care must be taken to keep true the curves of petals, etc., by working in semi-circular curves from the outer edge to the centre; beads never look well-managed if stitched down in a haphazard fashion, without a thought as to direction and drawing of design.

Fig. 9 shows two leaves and three well-padded balls covered with (a) small gold beads, (b) blue beads, (c) cherry coloured beads, each berry finished at the end with one or two black beads for "eyes." The leaves are cut in muslin and are covered with green beads, dark ones forming the veinings, and a lighter shade of green the body, of the leaf. After the beads are sewn down, the back of the leaves are covered with silk.

Fig. 10 is a raised disc cut in espatra, and covered; the three small circles (a) pale blue, (b) pink, (c) gold, are worked in small beads, the ground being filled with small grey or black beads. To shape the foundation, cut a circle of espatra, damp it well, and, with the fingers, press up the centre into a nice dome; leave it to dry, then wire the edge and cover front and back with silk, ready for the beading. If a whole beaded *motif* seems likely to

be too heavy, the grounding may well be worked in coarse vegetable silk or raffia couched down, beads being used only in striking places to give life to the design.

LEATHER, SUEDE, ETC.—For glacé, suede and similar trimmings small geometrical forms as Fig. 11, a, b, c and d look best. The edges of soft materials are, however, apt to be limp and look unfinished when cut, so the outline should be softened either by blanket or other stitching in thick cable silk or mercerized cotton; or if no silk finish is desired, the cut edge may be tinted with soft shades of water-colour stain or paint. A fine wire may be sewn to the back of the skin if it is required. Designs, if elaborate, should first be cut in paper, coloured, and pieced together to give an idea of the whole before the leather is cut.

Fruit and foliage cut from glacé leather and *appliqued* to a crown form a most effective and durable decoration. Sometimes the best parts of long suede or kid gloves may be utilized for this type of hat ornament, as white, lemon, grey and other pale shades always look dainty.

CLOTH, VELVET AND SILK.—Large flowers, such as the lotus lily, are most effective if cut in cloth, stout silk, skin or velvet of two or three different colours, or of the same colour worked with fancy stitchery in various designs, and applied flatly as the ornamentation of a hat band (*Fig. 12*). Fancy silk and plain cloth used judiciously together often form a very happy choice for such a trimming.

A simple interchange or inlaid design (Fig. 12a) when carefully cut from stout well-woven cloth, such as box or Melton weaves, may be flatly couched down round the side-band of a crown, or ribbon crown-band, or a cloth band may be slit at intervals and interlaced with ribbon.

Leaves or petals cut in cloth, silk, or velvet, arranged alternately to form a wreath round a band, or brim, are bright in appearance and economical (*Fig. 13*).

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foliage can be most daintily made from small pieces of ribbon, silk, lace, net, or chiffon. The methods of making leaves and petals are given in Chapter XI.

The petals may be of any suitable size, according to the pieces of material available. The petals are formed of circles of three sizes, say of $\frac{3}{4}$ in., $1\frac{1}{4}$ in., and $1\frac{3}{4}$ in. in diameter, folded on the cross (Fig. 14a (1) and (2)), the folded edges being gathered and drawn up (3). For the rose centre, gather the edge of a small circle of material, pad the end of a piece of wire with cotton wool, first bending over the end of the wire to hold the wool in place; place the centre over it (Fig. 14b (2)), draw up and secure the thread, then mount the petals round it (3, 4 and 5), overlapping each a little, and securing each to the stem with a bind of tie-wire, or the cotton. Large or small roses may be made at choice. If large ones are desired, further sets of larger circles will be required for the outer petals. To finish off the stem neatly, bind it round with green mallard floss, splitting the thread and using one strand only. Wind the floss round from the flower to the lower end of the stem which should be bent up sharply with the nippers to prevent the silk unwinding. Cut a tiny circle of green silk, and pass the stem through the centre, drawing it up to the base of the flower to form the calvx and cover all raw edges (Fig. 14b (5)).

The leaves are made of soft green silk or ribbon. For a spray of five leaves (*Fig. 16*), cut one $2\frac{1}{2}$ -in. square, two $3\frac{1}{2}$ in., and two $4\frac{1}{2}$ in. Fold each square cornerwise (*Fig. 15* (1)), again into quarters (2), and gather across the cut edges in a semicircle (3); bend over the extreme end of a fine wire, insert it between the folds and draw up the gathering thread (4). The leaves can be stitched, after folding, to resemble the veining of a natural leaf.

To mount the leaves (*Fig. 16*), bend over one end of a 5-in. length of wire and push the bend up into one of the smallest leaves; then draw up the gathering thread of the leaf and bind it tightly round the wire. Cover the stems of the remaining



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four leaves with coarse mallard floss divided into two strands; hold the leaf in the right hand, take a strand of the floss, lay one end 1 in. from the leaf, then wind the silk evenly and tightly over the raw silk edges right down the stem; turn up the extreme end of the stem and nip it tightly to fasten off. Place the two smallest leaves 1 in. or so down from the central one, bending their stems down the central one for $\frac{1}{2}$ in., and binding them with fine cotton or tie-wire into place. Arrange the next size larger leaves 1 in. lower, in the same way, then bind the central stem from leaf to lower edge with the floss, nipping the extreme end to fasten off. Sprays of leaves should look compact, so the side stems should not be more than about 1 in. from the central one.

A narcissus may be formed by folding the squares for petals cornerwise in halves and quarters, gathering them up and sewing them round a tiny disc the size of a sixpenny piece (Fig. 17, a, b, c), the centre being formed of narrow soft silk ribbon gathered along one edge, drawn up and rolled (d), then sewn firmly to the disc, making the base of petals quite tidy. A beaded centre is a pretty alternative, lemon-coloured petals being centred with deep orange-coloured glass or chalk beads.

A dahlia can be formed very similarly to the narcissus, but the material should be folded in quarters as in *Fig. 18*, which gives double edges down the centre of each petal instead of to one side as in the case of the narcissus.

OIL SILK.—Tiny scraps of oil silk will make quite pretty bunches of crushed raisins and leaves, e.g. brown fruit and green leaves—for a storm or a sports hat of suitable colour. The leaves are made as suggested above, and the raisins are of circles of the silk folded in half; the raw edges are gathered together, drawn up and mounted each on a very short wire covered with brown silk, and bunched in a rather flat close spray with a few short-stemmed leaves.

KID.—Tiny discs of white kid and leaves of black kid, suede, or cloth, cut as in Fig. 19, a and b, will make a hard-wear mount



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as Fig. 20. They can be mounted on a silk-covered foundation of stiff net, or, by *applique*, straight on to the hat-crown or band as desired.

WOOL.—This may be used to form pretty sprays of leaves and berries. Cut a leaf-shaped piece of muslin, as in Fig. 21, and blanket-stitch it over with green wool to make pretty foliage; wrap a piece of tie-wire round with fine wool to form the centre veining and stem, and catch this down to the leaf. The berries are just wool pompoms made by wrapping fine darning wool over and through two cardboard discs as in making children's balls, and then cutting the edges of the wool round between the cards and tying the centre tightly round with cotton. Fig. 22 was worked in reseda green, with white and pink berries, and used as trimming on a schoolgirl's dark green felt hat.

Fig. 23 is a diamond-shaped wool mount, on a silk-covered muslin foundation. The wool is couched down in various patterns along the edges and in the centre.

DECORATIVE FRUIT.—A branch of millinery that requires skilful fingering is the making of decorative "fruit." This can be made from small, brightly-coloured pieces of velvet or satin and tinsel, often veiled with georgette or aerophane, and mounted into suitable bunches or trails. The fruit is moulded in cotton wool in the form desired, i.e. as grapes, apples, oranges, currants, or cherries, the shapes following as exactly as possible those of the natural fruits (*Figs. 24* and 25).

Bend over one end of a piece of fine mounting wire into a small hook and over this firmly attach the padding, as in Fig. 24, a and b. Cut a circle of fine, soft muslin, and neatly gather the edge (Fig. 24c); slip it over the mould (Fig. 24d), then draw up the thread and fasten it tightly. Cut the outer covering and sew and fit it in the same way.

A few knotted or looped stitches must be added to form the crest (*Fig. 24, e*). Pass the stitches right through the middle of the fruit, draw them tightly down to curve in the fruit, and fasten them securely at the base. Wrap the stem round with



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green thread or silk, as described in flower making, turning up a tiny loop of the stem at the end, and nipping it down tightly to prevent the silk from unwinding.

An outer covering of diaphanous material such as gauze or chiffon softens the effect and gives an appearance of the bloom seen on natural fruits. This outer covering should be cut and made up with the covering. Water-colour tinting on the gauze or pale tinted silk or velvet, if well done, certainly adds charm and finish to these fruits, but a novice would do well to try her skill on odd pieces of material before attempting her finished fruit.

Odd pieces of patterned brocade, ribbon or muslin, in bright colourings, may be arranged to cover the fruit as in Fig. 24, f, when a natural appearance is not desired.

The silver and gold tinfoil wrapping paper from chocolates make pretty under-coverings for tulle, aerophane, etc., as they throw a metallic glitter through the outer covering, which is most attractive in artificial light. A bunch, trail or mount should contain fruits varied in size, and a few leaves help to break up monotony of shape or colour.

The fruits and leaves may be mounted quite flatly, as in Fig. 24, or on a stem of thick satin-covered wire bound round tightly with muslin, wrapped with either fine, narrow China ribbon, or raffia, in a dull green or brown colouring, as shown in Fig. 25.

EMBROIDERED HAT BANDS.—These are most effective when worked on stout ribbon. Silk, petersham and corded silk ribbons look and wear best. Either embroidery or cable silk, chenille or raffia may be used, according to the fashion of the moment.

Fig. 26 shows a silk petersham ribbon embroidered in silk. The leaves are worked in satin-stitch, the stems in stem-stitch. This is most effective for a small girl's cloche Tuscan straw hat, the ribbon being of medium lavender blue, with pale blue, pink and lemon berries, reseda leaves and stems. Many


equally pleasing combinations will, of course, readily suggest themselves.

Fig. 27 is worked with yellow and flame-coloured cable silk on a band of nigger-brown corded ribbon. Chain-stitches are employed for the whole design; ladder chain for the petals of the flowers, and ordinary chain for the stems.

Fig. 28 is in cream ribbon embroidered in China blue. A band of cloth or suede might be ornamented with the design, well cut in fine cloth or kid, done in *applique*, in which case no working would be necessary at the edges.

CHAPTER XV

LACE, NET, AND TULLE WORKING; CAPS AND BONNETS

THE lightest and daintiest handling is required for lace, net, and tulle working, as well as a good knowledge of the most suitable qualities and designs obtainable for the particular purpose in view.

CHOICE OF MATERIALS.—Lace and lace net must be carefully selected for millinery, or the consequent appearance of "agedness" given to the wearer of a hat or bonnet will be most disappointing. The finest designs in Valenciennes, Mechlin, Chantilly, Alençon, and other makes are the safest ones to choose. Plain sprigged, spotted, ringed and filet nets are also good choice if the mesh is fine and the colour good. Tulle is always dainty and, if rainproofed, keeps crisp and fresh looking even if worn in a damp atmosphere.

There are, however, many varieties of lace other than those just named that can be used for millinery purposes. Laces made of crinoline or horsehair are of a springy nature and admirable for a large transparent hat brim. Tinsel, aluminium and laces with threads of gold or silver interwoven are useful for covering shapes, and for trimmings. Laces made of very fine Tuscan straw, twisted and woven into a lace design, are much used for children's hats and bonnets.

FOUNDATIONS.—Lace, tulle and net usually have either a whole foundation of stiff net or wire, or else wire supports are sewn to the material and hidden in folds of the lace or net.

The preparation of a wire shape is explained in Chapter V. Filet wire, of the same shade as the material, is used when supports are needed and the very finest silk or cotton are necessary for all sewing.

PLAIN COVERING OF SHAPES.—Net and tulle should be rolled, and carefully pinned in layers as required before being cut into strips, as they are most difficult materials to cut singly. They are not often cross-cut, but are frequently cut along the length rather than across the width when long strips are required. The methods of cutting and covering are the same as those explained in Chapter VII, excepting that tulle, and sometimes very fine net, are put on to the shape four, five, six, and even ninefold; these layers are cut together, never singly, so the tulle is folded accordingly before the patterns are planned on to it.

Alternate layers of fourfold tulle, in several soft shades, as heliotrope, pink, blue, or in flame, lemon, or saxe blue, make a pretty variety in colouring. Several folds of black tulle over a plain covering of gold or tinsel is also pretty and suits many faces.

BRIM-EDGES.—The brim-edge of a tulle hat is not finished as is one of heavier material. Very frequently the edges of tulle project from 1 in. to 2 in. beyond the outline of the shape, and are simply cut evenly with very sharp scissors, a few tiestitches being made through the tulle to the shape, to keep the folds from shifting out of place.

Sometimes fine lace or crinoline edging is sewn to the cut edges of the tulle, to weight them a little. Occasionally the finest cross-cut binding of silk finishes the edge of the tulle, or chenille is carefully whipped over it. Tulle cannot be hemmed in any way, and lengths are always joined by being well overlapped at their edges and temporarily pinned or lightly tacked.

Net is treated in the same manner as tulle, but having a little more substance and less stickiness, it may be pressed with a warm iron when a single turn is essential along an edge.

Net makes a pretty covering when gathered and *some* qualities may be cross-cut, and set into folds by an experienced worker.

Plain Brussels net makes a very nice "cased" hat (see Chapter XVI) if it is finely run and mounted on fine wires.

Ringed and spotted nets and those having a tiny sprig powdered over them can be used for plain covering, but the outer



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edge of the brim must have a good finish of narrow lace or other dainty edging.

Heavier makes of piece lace and net are often mounted plainly over a wire frame that is well bound at the brim-edge without any undercovering; or the lace is lined with single chiffon made up with it and the under brim faced with chiffon, plain or slightly gathered.

Tulle, net and length lace may be kilted by machine, and then supported by fine wires and formed into frilly hat brims. These frills are often mounted on a wired head-band of stiff net finished with a tam-o'-shanter or puffed crown. Any of these fine laces and nets will make pretty folded and draped toques if the points stated in Chapter VII on "Full Coverings" are borne in mind.

JOINING LACE.—Lace and patterned nets should be joined invisibly, after the design that covers them has been carefully matched. To do this, pin the pieces of lace over one another on a piece of paper and either finely run or overcast the outlines of pattern together, making the join unnoticeable. Cut away the net on both sides of the join, and then press it well with a warm iron. The more open patterns of machine-made lace are often difficult to join neatly, as the mesh is open and unevenly woven, and so require careful work.

VEILS.—Net is used for confirmation caps and veils, as well as for bridal veils.

Cotton net, suitable for the making of confirmation caps and veils, is obtainable from 27 in. to 45 in. in width, and that for bridal veils as wide as 72 in. and 90 in. Confirmation veils have usually a hem varying in width from 1 in. to 2 in. all round them, and a 3-in. or 4-in. hem is not considered too deep for a bridal veil.

The corners of the net can be either folded, as Fig. 1a, or mitred as Fig. 1b or Fig. 1c. When folded, the under layers of net should be cut away to prevent a clumsy corner. Two or three strands of mercerized cotton or filoselle are used to fasten down the hem, a tacking stitch, as in Fig. 2, being usually employed. To avoid the silk "kinking" in working, thread the needle on one end of the skein, and do not take the needle out of the material until the hem is run entirely round the veil. The thread must, of course, be drawn through the net as the running progresses. The veils can be either arranged simply on a covered band of stiff net, or thrown gracefully over the head and held in place by fine hairpins.

Fig. 3a illustrates a net cap, mounted on a band of tape wire. The crown is oval in shape and the frill is a length of folded net, cut across the width. A full quilling—as shown in Chapter XI will suit many faces even better than this narrow frill, especially if the hair is plainly dressed.

The centre of the veil usually falls to the waist when this style of cap is chosen.

Orange blossom is generally used to hold a bridal veil in place.

LACE AND NET STRINGS FOR BONNETS.—These are sometimes put on elderly ladies' bonnets. They may be cut from insertion lace with rather plain, firm edges, the ends being cut and finished as in Figs. 3 and 4. Here, an oblong is cut up into the lace lengthways far enough to allow the side edges to meet together in the centre (Fig. 4), the raw edges being neatly lapped or oversewn. Narrow edging lace is often used as an alternative for finishing the ends of the insertion. If strings are cut from lace with scalloped or fancy edge (Fig. 5), the upper edges must be sewn together and the ends mitred as shown.

Lace, net, spotted net and tulle are useful for thin strings for summer bonnets, the ends of tulle strings being evenly cut and left unhemmed; those of net may be edged with fine Valenciennes lace.

KILTED LACE AND NET.—Narrow kiltings of lace or net make a pretty finish to a hat brim, and are sometimes used for the whole of a hat or toque. The kilting is done either by machine or by hand, as explained in Chapter XI on pleating and ruching.

Wider kilted lace forms a pretty fan or coquille if wired at

intervals across the width and then pleated or kilted (*Fig.* 6). Kilted lace or tulle will make pretty rosettes and ruches, the principles of construction being the same as for other materials except that a greater length of thin material is required to avoid a poor appearance.

Black and white, or green and black tulle, combine prettily in the making of neck ruches as well as of rosettes.

LACE TRIMMINGS.—Wings, butterflies, quills, and many other pretty shapes may be cut from pieces of net or lace.

A wing made as in Fig. 7, wired along its outer edges and if necessary down its inner length, and edged with sequins, beads or chenille, makes useful trimming; two of these wings may be arranged across the back, side, or front of a large hat. A lace butterfly, well wired at the edges of the wings, and mounted on a filet wire stem, as in Fig. 8, is another pretty trimming.

Quills of lace or net edged with fine crinoline or lace, as in Fig. 9, are also light and dainty.

Lace motifs make pretty insertions for hat or toque crowns, and insertion lace, wired at the edge, can be made into smart hat bows, as in Fig. 10.

Flowers of net and lace can be made from very small cuttings of materials, and lace veils are often used for covering crowns, draperies and trimmings.

A length of fine spotted net, with its raw edges folded inwards and loosely knotted, makes a pretty trimming for a hat of fine crinoline plait.

CAPS for elderly ladies are usually made of lace or of some form of lace net with the addition of ribbon, tinsel, flowers, feathers, etc. The foundations of these caps are of stiff net, or of muslin wired at the edges. Either a covering or a binding is required to prevent the net of the shape from clinging to the hair of the wearer; no head lining is put in, so neat workmanship is essential throughout. Widows' caps are often made of tarlatan muslin, and the foundation shape consists of several folds of the muslin neatly wired and bound.



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Maids' caps are usually made either of cambric or lawn, sometimes quite plain and sometimes embroidered, and have a foundation of lawn or batiste supported with washable cotton bonnet cord. The style should be simple and easily laundered and re-shaped; *Figs. 15* and *16* are favourites. Caps, or "head-dresses," for elderly ladies are often cut in

Caps, or "head-dresses," for elderly ladies are often cut in stiff net, as in *Figs. 11*, a and b, and 12, the head edge being bound with cross-cut velvet, after the net has been wired all round, as described in Chapter IV.

Saxony lace about 5 in. in width is, perhaps, the most usual and economical for these head-dresses, if the lace is chosen with a well-woven edge; $1\frac{1}{2}$ yds. to 2 yds. will make an average-sized cap. If a gathering thread is finely run along the edge of the lace, the draping of it is made easier. Both caps and bonnets require most carefully arranging round the face-line; sometimes a series of box pleats, either single or double ones, give the necessary height and softness at the front; at others, a softly-arranged falling lace seems more becoming. In all cases the lace should droop from the shape to the head, not stand out or away from it.

The back of the shape must be completely hidden by the lace which also covers the crown and hides all deficiencies of hair when on the wearer. The general arrangement of the lace drapery is more a matter of skilful, light handling than of technical detail, and must be left to the individual worker. Most workers find that running a gathering thread the length of the lace, and easing it along the face-line, then drawing the remainder up tighter and draping it, waterfall fashion, to and fro over the crown towards the back, is the simplest and most graceful arrangement. Tiestitches here and there keep the lace in place, and narrow bébé ribbon, tiny flowers, marabout, and other soft feathers, form useful accessories; tiny pearls sewn on the lace look dressy.

 $MOB \ CAPS$ for old ladies are cut as in Fig. 13, a and b, the net being pleated to the size required to fit the head comfortably, and the head-edge supported with tape-wire. A little gathered



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edge of velvet softens the outline of the shape and adds to the comfort and fit of the cap. Lace about 3 in. to 4 in. wide, with a good edge, and a fine dainty design rather than a heavily massed pattern upon it, is quite the most satisfactory; about 3 yd. would be required.

A cap for a very old lady would be most comfortable and becoming if made as in *Fig.* 14 in two pieces, (a) the fitting part of the cap, (b) a platform, wired at the edges, to raise the front and prevent its receding; a bag of Brussels net, drawn in with elastic, is both a comfort to the wearer and a help to the worker when arranging the lace at the back of the cap. *Fig.* 14c illustrates the completed foundation.

Narrow lace, either black or cream, is usually arranged to fall very softly over the front of the cap, where the wired-net support serves to throw it much more forward than would otherwise be the case; the remainder of the lace is used to cover the net bag. Small flowers or ribbon rosettes are also useful to add a little colour and contrast to the lace. Lace lappets and $1\frac{1}{2}$ -in. good quality silk ribbon, or ribbon velvet ends, may be added at each side of the front.

BOUDOIR CAPS.—Some of the daintiest and most practical caps are made of lace net, narrow insertion lace, edging lace, and silk or satin ribbon. These caps must be large enough to cover the hair and ears when worn; a foundation shape is not practicable, as they should be washable and easily ironed. A band of firm slot insertion lace may be cut to fit the head quite loosely, the back being mitred on each side just behind the ears to let the insertion droop in a panel a few inches deep at the back, as in *Fig. 17*, the edging lace and net crown being whipped to the upper and lower edges of this band, which is then threaded with a dainty length of ribbon finished with bunch rosettes on either side.

Fig. 18 illustrates a rather different style; the crown is of flowered muslin, and the frill of kilted plain muslin, set into a narrow double band of the plain muslin, cut to fit the head. A

twist of pale-coloured ribbon and loosely-tied bow finish the band. If the ribbon tones with the colour of the flowers on the muslin crown, the effect is tasteful.

After washing, most muslins require starching, and in a cap like this the frill would need goffering each time the cap is laundered. If, however, organdie muslins are used they are most satisfactory for they do not crush in wear or in packing, and need not be starched to keep them fresh and crisp.

Other fancy head-dresses consisting of filet bands, covered with tinsel and gold tissue, having an osprey, floral or feather mount, or a simple twist of pearl beads, are general favourites for theatre wear, etc., as also are the tiny Juliet caps of tinsel thread and sequins. These are just dainty little creations which, in the case of the bands, consist often of tape wire covered with silk, or bound over with ribbon, to which the fancy mounts are attached.

BONNETS FOR ELDERLY LADIES

The making of bonnets is one of the most difficult branches of millinery, and a "bonnet hand" is one of the rare assistants to obtain in the retail trade.

The study of face and head enters largely into this part of the art. Many milliners have, quite instinctively, the ability to suit faces and to mould comfortable bonnet shapes, at the same time producing a smart and becoming bonnet; some have made a special study of this particular branch, which is closely allied to that of toque making.

A close-fitting shape, such as a bonnet or a toque, is much more trying to the wearer than is a hat with a brim, and the face-line requires most careful study; the front of a bonnet must be neatly managed as it fits so closely round the face, but it is quite an easy matter when doing this to obtain a "cappy" and dowdy appearance.

TRIMMINGS.—Receding trimmings must be avoided, a rather projecting osprey or feather is frequently just the saving feature of an otherwise unbecoming bonnet.

POSITION WHEN WORN.—Bonnets are worn at quite a different angle from hats; they form a coronet round the face, and usually fit just above a twist or coil of hair at the back, the strings tying comfortably under the chin, or a little to the left side of it.

As the wearer's hair becomes thin over the temples and in front of the ears, the bonnet should be moulded to disguise the shortage, so a point—similar to that on a "Marie Stuart" shape —added at the centre front of the shape, and an additional inch in depth at the sides, will be more becoming and comfortable for an elderly wearer than will a tiny shape, however up to date it may be.

FOUNDATION SHAPES AND COMFORT.—The shape may be of wire, or of stiff net or soft espatra wired according to the rules stated for shape-making, but the fitting line must be made soft and comfortable, and must not press on the head. Velvet bindings, either plain or puffed, are comfortable, and a tiny cross-cut fold of velvet, slip-stitched into the bonnet after it is lined, will often prevent the "back slipping" that is so objectionable.

COLOUR AND MATERIAL.—Colour cannot be used indiscriminately for elderly people, but black, mole, wine, amethyst, and some shades of blue are usually most suitable. Materials should be soft in texture; velvet is always a favourite, so are softly-finished silk and straw plaits. All materials should be of the best quality obtainable; strings of poor quality are not really economical, as they soon cut along the folds.

WEIGHT.—The completed bonnet must not be at all heavy and any weight that exceeds $\frac{1}{4}$ lb. is almost sure to cause discomfort.

MEASURING THE HEAD.—Take into consideration the shape of the head and the method of hairdressing; a long, narrow head will require a long front-to-back measurement, and a broad, square head a wide side-to-side measurement. The back arch of a bonnet varies considerably, both in shape and in size, and



frequently the sides of the head at this part of a shape should be made quite unequal in measurement if the bonnet is to retain its balance on the head.

Plainly-dressed hair and a long thin face must have fullness given to them in the shape and trimmings of the bonnet; probably the brim of the shape might be widened a little at the sides; while, on the other hand, a broad full face and softly-dressed hair might carry a higher centre front or a high point on the left front of the shape.

SHAPE-MAKING.—The method of making a wire bonnet shape is fully described in the chapter on wire shape-making, and the measurements stated, being good average ones, might be used for the making of shapes in either soft espatra or stiff net.

A very comfortable shape is shown in Fig. 19 (a, b and c), the side-band being shaped just as for a hat; the first radius taken is the face measurement, 16 in., and the second radius 16 in. +3 in. =19 in.; or a little more or less, according to fashion. The band is cut off along the outer curve exactly to the face measurement. The horseshoe crown is $6\frac{1}{2}$ in. $\times 6$ in. and curved away to 3 in. at the back. The mushroom-shaped brim—which is adaptable to a "rolled" brim, if preferred—is first curved on about quarter of the face measure = 4 in., the second and outer curve being $1\frac{1}{2}$ in., 2 in., $2\frac{1}{2}$ in., or 3 in. greater radius than the first; the inner curve is cut to the face measure.

The crown is fairly large and can be eased or pleated to the top of the side-band.

If the side-band is steamed and moulded to curve outwards a little before the shape is wired, there is less likelihood of the shape's springing away from the head when the strings are tied, as the head fits comfortably into the rounded shape.

SHAPE DRAFTS.—(1) The methods of planning, cutting, and wiring these shapes are the same as for hats, except that the side-band is not joined at the ends, and the wires supporting the edges are nipped over the outline wire of the bonnet at the back after the parts are built together; the outline wire is

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commenced and finished at the centre of the back, and it supports the whole of the bonnet edge. The brim of this little bonnet may be attached to the side-band 2 in. or 3 in. above the face line. If preferred, a blocked crown of espatra may be made, instead of a pleated or a flat one.

(2) Another useful draft is given (Fig. 20, a, b and c); the band is curved first on a 15 in. radius, i.e. the face measurement, and second on 15 in. +3 in. or 4 in. = 18 in. or 19 in.

The outer curve is cut to the face measure 15 in. + 4 in. =19 in., and curved at the ends to form the back arch of the bonnet; the points A and B being joined together. A small circular top, 5 in. in diameter, forms the crown.

A rectangle 15 in.—or the face measure—in length by the brim depth, +3 in., is the field for coronet draft; this is shaped to fit the lower edge of the side-band as shown.

This shape is more like a hat in its construction, the sideband being joined in part at the centre back. The brim is wired along the outer edge, the wire being cut sufficiently long to complete the back arch, the face-wire of the band being hooked over the outline at the back.

COVERING THE SHAPE.—The same methods apply to bonnets as to hats; plain covering is quite usual for the crown part, but soft, full covering is usually more becoming to the face. The whole of a bonnet may be beautifully draped, or folded from a large corner-shaped piece of softly-finished velvet, if the principles named in the chapter on full coverings are well studied and practised. The cross-cut edge should be arranged in this instance in gathers or small pleats into the face-edge of the bonnet, and the folds set round in horseshoe shape to the back.

A very popular method of arranging velvet on the crown is to form a large box pleat from back to front, finishing it in a puff at either side.

The softly-finished straw and chip bonnet shapes for very old ladies can still be obtained from first-class houses; they are

usually trimmed with good black silk lace, and either tiny heliotrope flowers, violets, or soft feathers.

Soft, silk ribbon strings 3 in. to 4 in. wide are the favourite ones, and these are sewn quite forward on the face-line, so as to protect the ears of the wearer.

Flowers and soft feather edgings are useful to a bonnet milliner in helping to lend a softness of outline; ospreys and small feather mounts are indispensable, as they suggest added height to a short figure, and give dignity to the headgear.

Strings of either velvet, silk, or satin ribbon should be supple, and of a quality of ribbon that will remain tied; they must be neatly arranged to fall either from the centre back, or the ear corners of the shape, and well sewn with neat, firm stitches. The pleats in the ribbon strings must always turn towards the front.

WIDOWS' BONNETS.—These are usually very small and neat, and are most frequently made of evenly-folded lisse, ninon, or good chiffon.

The foundation shape should be covered with a layer of domette or one or two of net, before the finishing folds are laid on, for if not well covered the effect is hard and most trying to the wearer. A carefully-folded and knotted cross-cut strip of material is a popular "finish" to the front of this type of bonnet. The knot is arranged in the centre front, the ends being carried round the sides to the back.

Narrow white cap fronts and white washing ribbon strings and veil are usual additions; the white strings being sewn or pinned just a little way in front of the black ones, as they so frequently require washing and renewing. The little cap front is usually just a length of white lisse frilling; it can, however, be made from a length of cross-cut muslin or lisse if preferred.

The veil is generally made of the same material as the bonnet, unless this is of crape, when it is more often of net edged with a cross-cut hem of crape running all round it, or just along the lower edge. A whole veil of crape would not only look very

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heavy and old-fashioned, but would drag the bonnet down at the back.

A veil is usually a 36-in. square of net arranged cornerwise on the bonnet, one corner coming over the crown in even folds, the opposite one falling down the back of the wearer. A double folded hem, 1 in. to $1\frac{1}{2}$ in. in width, is turned up on to the right side of the square, and neatly slip-stitched down, as described for the making of a confirmation veil (*Fig. 1, a, b, c* in this chapter).

A cross-cut applied hem or deep binding of crape is more difficult to manage than the hem turned from the veil, and crape is not easy material to handle. Careful cutting, pinning and tacking are quite necessary if the hem and the corners—which should be mitred (Chapter XV, *Fig. 1b*)—are to look at all professional when completed.

The veil requires most careful manipulating as it is arranged on the bonnet, otherwise it will have an awkward appearance, especially where it leaves the shape at the back; it is necessary to pin it in place when the shape is on the head in order to judge exactly how it will fall. Often if it is drawn rather more tightly round the sides than at the front, it will prevent the veil from throwing out in ugly sweeps at the sides.

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INFANTS' AND CHILDREN'S MILLINERY

IN considering infants' and children's millinery there are three main points to be remembered, viz.—

COMFORT—which depends upon lightness of weight, comfortable fit, position of strings or strap, hygienic qualities of material, softness of finish;

BEAUTY—which depends upon simplicity of style, simplicity of material, clearness of colour, good fit and finish, suitable width and quality of strings;

EASE IN LAUNDERING—which depends upon the materials chosen, and the facility with which hats, bonnets and caps can be ironed; suitable materials such as linen, cotton, silk, and fine woollen goods; draw-strings that flatten for the ironing process; detachable crowns and trimmings.

This ideal head-covering should be as light in weight as possible, yet warm enough for the season, but never padded or weighted sufficiently to cause perspiration. It should just fit the head comfortably, being neither too tight nor too slack in measurement. Friction should be avoided by seeing that all materials are softly finished and no hard knots or seams are allowed. Strings should be carefully adjusted either by sewing, or by buttons and loops, or by clips or hooks set in the exact place for holding hat or bonnet comfortably on the head.

Rather soft washable silk or muslin ribbons are the best to choose for the small folks; wide strings are always out of place beneath little fat chins.

For baby's wear choose white or simple clear colours, such as pink, cream, or blue; these are the most suitable for a delicate complexion. Soft cosy finishings of lace, swansdown, etc., and dainty hand-worked stitchery are all in good taste for children's millinery.



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Infant's headgear requires such frequent washing that this point is generally a deciding factor in the purchase of materials and in the method of making.

Where fullness is required, insert a draw-string, and when at all possible, make detachable crowns and brims so that the labour of washing and ironing is minimized. For each bonnet several pairs of strings, just ready to be attached to it, and two or three loose cap fronts neatly bound are quite essential.

Bonnets for infants are softest and most satisfactory if crocheted or knitted in silk, soft wool, or mercerized cotton.

HANDKERCHIEF BONNET.—A tiny bonnet for summer wear may be folded and shaped from a 10-in. square fancy handkerchief; one having a lace or embroidered edge looks the most dainty.

Fold the handkerchief in half with the edges towards the worker, then fold down the two top corners quite level with the lower edges (Fig. 1a); fold the two points back from the centre till their lower edges meet the side fold (Fig. 1b); bend down the top point to meet the two central folds, and catch it down invisibly with a stitch or two. Open the two lower edges and take the under one to form the back of the bonnet where it must be either pleated or gathered to fit into the baby's neck (Fig. 1). Catch down the corners with dwarf safety pins; make tiny rosettes of bébé ribbon and sew one to each ear-corner, and a few to the centre front. Fasten on washing ribbon strings $22\frac{1}{2}$ in. long and $1\frac{1}{2}$ in. wide. As they require such frequent washing they are better attached by a loop to a button on the outside of the bonnet, or attached to the rosette and slipped through a buttonhole, made in the bonnet. As a pretty finish make a tiny pleating of soft muslin or lace to fit the face of the bonnet, bind the edge of the pleating with soft muslin and tack it inside the bonnet front.

BABY BOY'S HAT.—To make a simple little hat for a baby boy, cut a circular piece of silk, muslin, or woollen material; another of soft lining 10 in. to 12 in. in diameter, and two head-bands, one of material and the other of lining, each 17 in. to 18 in. by 1 in. wide—on the straight of the stuff. Gather or pleat the material and lining together for the crown, mark the quarters, and after joining the head-band, set it to the crown, stitch it, and finish the inside of the cap neatly with the band of head lining (*Fig. 2* and 2*a*).

A narrow band of swansdown—the make sewn to calico is the best—or a full soft ruching of Valenciennes lace, or washing muslin, should be tacked inside the head-band all round the cap, so that it is easily removed for washing. Washing strings of silk, muslin, or ribbon about $22\frac{1}{2}$ in. long are sewn or clipped at each side of the head-part, a little towards the back of the cap. Occasionally soft ribbon rosettes are added at the left front of crown, and to cover the ears.

MILLINERY FOR TINY TOTS

Twelve Months to 3 Years of Age.—The same points must be noted as for infants' bonnets and caps. Close-fitting, cap-like bonnets, as the American, Dutch and Juliet type are the most becoming to little girls' faces. The foundations for these must be quite soft, and in no way press on the head, which still feels little hardnesses most acutely. Outlines must be soft and dainty, and fine lace, muslin embroidery, fur, swansdown, ruches of silk and ribbon, may all be called upon for these purposes.

AMERICAN SHAPES.—Fig. 3 illustrates a small American bonnet suitable, if cut to the correct measurements of the head, for a girl of any age up to 4 years. Three measurements are required as seen in Fig. 3a—

(1) Round the face from ear to ear.

(2) From the forehead to the nape of neck.

(3) Round the back of neck.

AVERAGE SIZES .- For a girl of 12 months, the measurements are-

(1) 13 in. to 14 in. (3) 9 in. to 10 in.

(2) 9 in. to 10 in.

In Fig. 3 the second measurement is divided between: (a) depth of bonnet piece at front; (b) circular crown; (c) back seam; the completed measurement equalling 9 in. The bonnet piece is drawn 16 in. in length, made up of the face measure 13 in. + 3 in.; and 6 in. in depth; the tiny crown piece is $2\frac{1}{2}$ in. in diameter. The points marked A and B are joined to form the back seam, and the edge of bonnet piece marked C is fitted to the circular crown (Fig. 3a).

The pattern may be laid on either the cross or the warp way of the material, according to the method of making, and $\frac{1}{4}$ in. turnings allowed round all edges. If the shape is cut in single linen, muslin or silk, and threads are to be drawn along the face line for a strip of open handwork, then the warp threads *must* run round the face of the bonnet, as they are more easily removed than the softer weft ones. If a bonnet is constantly being laundered, the selvedge threads retain the shape better than cross-cut warp and weft ones do.

HEAD-LININGS.—A bonnet of linen, silk, or organdie muslin, open-hand-worked is prettier if made up without lining, but a silk or woollen bonnet for colder weather should have a lining of soft silk or cotton muslin, cut by the same pattern as the bonnet, and slip-stitched into it along the face and neck edges.

METHODS OF MAKING. — A linen bonnet handembroidered, either by Broderie Anglaise, Teneriffe, or Irish methods, is dainty. If a transfer pattern for the design is used, press it off on to the right side of the linen using a moderately warm iron, then work it with mercerized thread. Stitch, or run and fell the back seam, then hem the raw edges of the bonnet all round. The crown-edge of bonnet piece (c) can be gathered or pleated to fit the small circular crown, or the tiny crown may be neatly piped round the edge, then slip-stitched firmly to the bonnet piece, the inside afterwards being made neat by another small circle hemmed down to cover all edges.

A tiny frill or ruche of the material, edged with fine lace, or hand scalloped and embroidered, will soften the face outline; the frill must be cut three or four times the length of the face measurement, pleated or gathered to size, then whipped to the bonnet edge, or tacked just inside it.

GATHERED, TUCKED AND CORDED BONNETS.—An American shape (Fig. 3) makes a comfortable foundation for gathered or corded bonnet, for which either muslin or Japanese silk is suitable. Foundation and lining are cut by the same pattern but are made up separately, the lining being slip-stitched in when the bonnet is finished. The foundation shape may be cut in either washing muslin, or batiste.

For a gathered bonnet, cut the material the warp way, allowing twice the face measurement, + 6 in., in length; and the measure from face-line to centre of bonnet, + 2 in., in depth. For a tucked and gathered bonnet allow extra depth for tucks, i.e. bonnet depth $6\frac{3}{4}$ in. to crown centre, $+ 1\frac{1}{2}$ in. for six $\frac{1}{8}$ -in. tucks $= 8\frac{1}{4}$ in.; $+ \frac{1}{2}$ in. (for turnings) $= 8\frac{3}{4}$ in.

Material for a corded bonnet would be calculated in the same way.

It is better to put in the tucks, gathers or cords before joining the back seam.

When the full piece is prepared, pin it to the foundation shape at the centre front and along the face-line; draw up and regulate the fullness, while moulding and fitting it to the shape; fasten the cords and gathering threads as explained in the Chapter on cording hats; gather the fullness neatly at centre crown and finish with a small covered button; pleat the raw edges along the face-line of the shape, turn them inside, and make neat by slip-stitching the turnings of the head-lining over them, or add a puffed and gathered binding of the material cut in strips on the cross.

A little brim or turnback piece is often added round the front of a bonnet; this may be cut from a strip of material 13 in. \times 4 in. as in *Fig.* 4, *a* and *b*, *c* or *d*. To cut the pattern, take a strip of paper 13 in. \times 4 in., curve a line from the two lower edges to a depth of 2 in. in the centre—this gives the face-edge of the brim: $1\frac{1}{2}$ in. above each of the corners run another

curve to the top of the paper, keeping a nice rounded edge at the top. Slant the corners off to give $1\frac{1}{2}$ in. in depth, and the pattern is completed, and measures 13 in. long, 2 in. deep in the centre front, and $1\frac{1}{2}$ in. at each end. *B* is from the same pattern with the top edge scalloped; *C* with the centre cut in a V-shape measuring 2 in. across the top; *D* with wide scallops and curved front opening.

The brim can be covered plainly, gathered, pleated or corded as fancy dictates. When completed it is sewn firmly inside the bonnet and made neat with the head-lining. Rosettes are frequently added at the ear-corners of these bonnets, and either a pair of strings or a chin strap will be required.

DUTCH SHAPE.—The little shape (Fig. 5, a and b) is cut from one piece of material, and the two short seams, points 1 and 2, at the back, are laced or seamed together with fancy stitchery.

Cut the pattern from a piece of paper 14 in. \times 10 in. Fold it in half, widthways, and each side of this central front-to-back line measure off 3 in., from this measure draw two parallel lines 6 in. long and join them with a horizontal line (*Fig. 5a*) to form a 6-in. square. Take the measurements of the child's neck, and allow a third of this for the width of back and for each side of the pattern.

The most simple method of making the bonnet is to cut the material by the pattern, allowing $\frac{3}{8}$ in. turnings on all edges. Hem all round the edge, including the seams, using for preference simple decorative stitchery, such as blanket-stitch, in any variety of pattern as suggested by *Fig.* 6, *a* and *b*, or chain-stitch as in *Figs.* 7 and 8. The seams may then be joined by a lacing stitch taken alternatively over and under each edge, drawing them together as in *Fig.* 9. This method of making the bonnet is suitable for thin washing silks such as Japanese and Shantung, and for thin muslins. If linen, piqué, or casement cloth is used, the front and neck edges look more dainty if scalloped and button-holed round after the side seams have been run and felled, or



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hemmed and laced together. A simple daisy design, as shown in Fig. 10, a and b, might be arranged round the face of the bonnet.

HORSESHOE SHAPE.—A foundation cut in three pieces as Fig. 11, a, b and c is more suitable for the second size of bonnet with average measurements of—

(1) 14 in. to 15 in.—round face from ear to ear;

(2) 10 in. to 11 in.—round back of neck;

(3) 10 in. to 11 in.—from forehead to nape of neck.

The horseshoe crown and front piece of the bonnet, when joined, are equivalent to the third measurement.

The face measurement, e.g. 14 in., decides the length of the front piece, and the depth equals half the back-to-front measurement, e.g. $5\frac{1}{2}$ in.

The crown equals half the back-to-front measurement, e.g. $5\frac{1}{2}$ in., $+\frac{1}{2}$ in. = 6 in., in length; the width is usually a little greater than the length; in this shape it is $6\frac{1}{2}$ in.

The turnback front is the face measurement, i.e. 14 in. in length, by twice the finished depth of turn back, i.e. 5 in. in width; for other methods of shaping the turnback piece, follow the suggestions made in Fig. 4, b, c and d.

INTERLINING.—The three pieces of the pattern are planned on (a) material, (b) interlining, and (c) head-lining, and $\frac{1}{4}$ -in. turnings allowed round all edges; the turnback will require two pieces of material.

Fig. 12 shows the bonnet pattern placed on 27-in. wide silk; if the bonnet is made of linen, poplin, casement cloth, or stout silk, both interlining and head-lining may be omitted, and in this case the three pieces would be cut on the straight of material, the selvedge, or warp way running round the face, as it is much the stronger way, and therefore keeps in shape after frequent laundering. When the bonnet is arranged with an interlining usually of lawn or fine batiste—the material is tacked to it, and the two are made up together, the lining being made apart and slip-stitched into the bonnet to make it quite neat and comfortable inside.



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After tacking the horseshoe piece of material and interlining together, as well as the front piece and its interlining, fix the points marked A-A, B-B, and C-C together, material sides facing each other, and either hand-sew or machine the two parts round the curve; then press the seam quite flat and open; turn in the $\frac{1}{4}$ in. allowed round the neck and catch-stitch the edges to the interlining; no stitches must appear on the right side of the bonnet.

TURNBACK FRONT.—Place one piece of material, wrong side down on the table, then place the second piece right side down over it, and the piece of interlining above them; pin all carefully together, keeping the interlining well strained when pinning. Tack the outer edges, except the face-line, and either hand-sew or machine through the three folds of material; turn it outside in, so that the interlining lies between the material pieces, and press the edges well.

Fix the points D, E, F together and sew round the face, turning the raw edges inside the face-line of the bonnet, snipping them to make them lie flat, and then catch-stitching them neatly down. Slip-stitch the head-lining all round to the face and neck curves, about $\frac{1}{2}$ in. inside the edge.

The bonnet may be prettily stitched round the coronet edge, as in *Fig. 12a*, giving the effect of a hand-embroidered insertion, or trimmed with narrow pleatings of silk or lace; or a little gathered edge of the silk may be put on as a full binding round the coronet and neck, to soften the edges. A full pleating of the silk will usually be required as a cap-front round the face, unless the wearer has curly hair.

CAP FRONTS.—Fig. 12b shows a pretty method of making the pleating. It is a cross-cut strip of material folded but not creased down its length, with the raw edges together, and pleated in three single pleats at each end, then in four single box pleats, and again in eight double box pleats which form the centre of the cap. The edge of the cap must be neatly bound with a strip of cross-cut silk before it is tacked into the bonnet.

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Strings of Japanese silk look and wear best; they should be cut the selvedge way of the silk, and be neatly machined or roll hemmed; the ends usually have a 1 in. hem, or sometimes a tiny hem is open-stitched to make them more dainty.

READY-MADE STRINGS.—These are quite suitable in cotton, linen or muslin bonnets, as they are usually made of fine lawn, or muslin, and have neatly finished ends. It is sometimes possible to obtain a narrow silk tie, and cut it into two strings for a little bonnet. Cash's washing ribbons make nice strings and rosettes for those little bonnets and it is quite possible to draw the threads and hem-stitch the ends of the strings.

BOYS' HATS AND CAPS.—A little hat for a baby boy of 6 months could be made with a saucer-shaped brim and a gathered crown; either with or without an inner shape, or an interlining, just according to the material being used. Soft silks and muslins keep a better shape if mounted over a thin interlining, which gives the hat a little more substance, but corded silks and poplins simply require a soft mull muslin lining.

DRAFTING THE PATTERN.—To draft a paper pattern for a little hat as in Fig. 13, three pieces will be required : (a) the crown, a circle 12 in. to 13 in. in diameter; (b) the headband, a straight strip 18 in. to 19 in. $\times 1$ in.; (c) the brim, 23 in. to 24 in. $\times 2$ in. or $2\frac{1}{2}$ in.

Lay the patterns on lawn or muslin for the interlining as in Fig. 14, with both bands on the cross of the material, and cut out, allowing $\frac{1}{4}$ -in. turnings on all edges. Lay the patterns on the covering material and cut the crown and crown-band as shown in Fig. 14, but cut the brim piece twice the width of the pattern, $+\frac{1}{2}$ in. on each edge for turnings.

METHOD OF MAKING.—To give the brim the rolled effect necessary, the outer edge of its interlining must be well and evenly stretched all round, joined, and either corded with fine cotton bonnet cord, or bound with soft tape to keep it firm. If the edge has drawn out wider in places, cut it in a nice even curve before binding or cording it.

Tack interlining and material crown-pieces together, and pleat the edge to the size of the head. Join the interlining of the head-band, open and press the seam, cord or bind lower edge, then sew the crown to the upper edge.

Now join the material that is to form the brim, and after pressing, open the join, pin it over the interlining brim-piece, stretching the folded edge to fit the shape where it is corded; gather the three edges (a) material, (b) interlining, (c) material together, and draw up to the size of the head-band. Set the brim to the lower edge of the head-band, sew the edges neatly inside, and later slip-stitch the head-lining over them. Slipstitch the material crown-band to the outside of the hat, finishing it with a small flat rosette.

A cap-shaped head-lining of soft washing silk or muslin, made as described in Chapter X on head-linings, should be stitched inside the head-part to make it quite neat and comfortable. Additions of strings and caps are usual for these small-sized hats, and either a pleating or ruching of ribbon or silk will soften the brim-outline. A rosette of ribbon, on the left of the crown, gives it a pretty finish. A chin strap may be substituted for the strings, if preferred.

A LINEN HAT FOR A CHILD 12 TO 18 MONTHS.—A hat made in three parts is illustrated in Fig. 15, a, b and c. The crown is cut from a circular piece of linen and has six V-shaped pieces cut out at the edge to reduce the circumference of the crown-piece to the head-size, i.e. the size of crown-band. The brim is a simple roll shape with seam at the centre back. In Fig. 15c the $1\frac{1}{2}$ -in. brim is seen drafted on a circle one-quarter of the head measurement. Reference to the chapter on pattern drafting will make clear the varieties of this type of shape. The head-band is cut twice the finished depth, $+\frac{1}{2}$ in. for turnings.

A narrow hem may be turned all round the crown-piece and held down with blanket-stitch, as in *Fig. 16*, a, b or c, or with any other simple form of suitable stitchery which will look well after frequent washing and ironing. Twelve buttonholes must be



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worked as indicated (Fig. 15b), so that the crown-piece may fasten to small buttons sewn to the head-band, and be easily detachable for washing.

The brim is better cut two-fold; the back seam in each piece being joined and pressed open; and the outer edges of the brim turned in once to face each other, and then pressed. After the two parts are well tacked together, they should be machined several times in rows of stitching $\frac{1}{4}$ in. apart, which will help to keep the brim firm and shapely. Arrange, fix and tack the headband to bind the raw edges of the head-part of the brim, then machine it all round. Button the crown on to the head-band, and sew on a chin-strap of single or double material, or an elastic band to keep the hat in place.

This little hat, which is suitable for a girl or boy, can be cut from $\frac{1}{2}$ yd. of linen, and it looks dainty if made of a pretty blue, pink, or green, with stitchings of white mercerized cotton.

HAT FOR A CHILD OF 2 TO 4 YEARS.—Another washable hat that can be worn by either a girl or a boy is illustrated by Fig. 17; it is suitable for piqué, linen, etc., or tussore silk, which latter material will require the support of an interlining of batiste.

The crown (Fig. 17a) is again of circular shape, and has eight darts, each taking away one-eighth of the surplus material, and reducing the circumference of the crown-piece to the head-size, which is the length of the head-band (Fig. 17b).

The brim is drafted on a radius of half the head-measure (*Fig. 17c*, see also *Figs. 14–17*, Chapter III). It can be curved so that it rolls slightly; it can be worn to shade the eyes at the front and roll well at the back; or simply to roll evenly all round the edge. Cut the brim in double material.

After cutting the crown in piqué, or linen, sew the darts neatly and overcast the cut edges; the lower edge of the crown may be scalloped as in *Fig. 18*, or just plainly blanket-stitched as in *Fig. 19*.

The brim is made in the same way as for the previous hat



CHAPTER XVI

(Fig. 15), the head-band, making neat the raw edges, and forming a platform for buttons or press-studs, by which the crown is attached. For a girl's hat the raw edges of the brim may be tacked together, then scalloped and embroidered to match the crown, instead of being finished with rows of machine stitching, which are more suitable for a boy.

HAT FOR BOY OF 4 TO 6 YEARS.—A boy's hat always more or less in fashion, and suitable for washing material, such as linen, holland, drill, gingham, or for velveteen or fine tweed, is cut with the crown drafted as for a four-sectional one (Fig. 30, Chapter III), but the pieces are not cut separately. The four darts reduce the circumference of the crown-piece to the headsize. The head-band is quite straight, and is cut the selvedge way of material if the hat is washable; but on the cross if it is made of tweed or velveteen.

The brim is a cross-cut strip, about 4 in. longer in measurement than the head-size of the hat. Plan, cut and make the hat as stated in Chapter XIII on "Sports Hats for Adults," and see *Figs. 30–32*, Chapter III.

The head-part of the brim is gathered finely and drawn to the head-measurement; this makes the outer edge of the brim roll a little. The covering for the brim may be cut in two parts when an interlining of canvas is used, and the outer edge bound with corded ribbon. A band and bow of corded ribbon, or of the hat material, will finish it neatly.

When the crown is larger, and the head-size of the hat exceeds 20 in., it must be cut in four or six sections rather than taken into darts, which produce an ugly point when the amount taken out by each exceeds 3 in. to 4 in.

SOFT CAP WITHOUT BRIM.—Fig. 20 shows a simple soft cap for a boy or girl. It can be cut from a piece of stockinette or cloth, or it can be a knitted strip $26 \text{ in} \times 11 \text{ in}$. Fold the material in half with wrong side out; stitch up the seams down from the fold on either side to the depth of 8 in., i.e. points A-B and C-D; turn the material right side out and stitch the remainder of each seam on the right side; fold up the lower edge of material to a depth of $2\frac{1}{2}$ in., then fold it over again, thus forming the double rim. Catch the crown corners down with buttons, tassels, or small pompoms.

GIRL'S HAT, 4 TO 6 YEARS.-Fig. 21, a, b and c, illustrates a simple washing hat with circular crown, the head-band straight, and the brim of either the cloche or rolled type. The crown may be cut from single linen, piqué, muslin or sponge cloth, the outer edge being scalloped, suitably trimmed or stitched, pleated here and there, and fastened securely down to the head-band. The head-band is cut double, as it is for the previous hats. The brim-edge is either machined, scalloped, or trimmed with lace; it may require an interlining of muslin or batiste, unless it is cut twofold of linen, etc., and starched to keep it from falling. This hat is dainty when the foundation is made of twofold washing net, well supported with stiff washing cord, and the outer covering is of alternate rows of washing ribbon and lace $\frac{3}{4}$ in. wide (Fig. 22).

A narrow edging lace eased on to the brim-edge, and used to form small rosettes is one of the prettiest trimmings, or a narrow satin ribbon and little spray of flowers are equally pleasing. Either strings, elastic, or a chin-strap will be needed to finish the hat.

A POKE BONNET.—This may be worn by a child from 2 to 4 years of age (Fig. 23). To draft the brim-pattern (Fig. 23a), take a strip of paper 19 in. \times 9 in.; curve a line from the centre of the upper edge to a point 3 in. below the top on each side; measure from this point (the outer edge of brim) down to a distance of $5\frac{1}{2}$ in. and 2 in. from each side, and draw a line for ends of brim. Curve a line from each of the lower corners to meet in the centre 3 in. above the lower edge of the paper—giving the lower edge of brim measuring 16 in. For the crown (Fig. 23b) take a piece of paper 14 in. \times 12 in., draw a central line down its depth and width, and two guiding lines from this centre to the two top corners. On each side of the lower corners mark a point 14-(2236)
$1\frac{1}{2}$ in. in from the edge, and on the centre parallel line, a point 1 in. up from the lower edge; draw a curve through each of these points—forming the neck line of back of pattern. Three inches below each top corner mark a point on each guiding line, then draw a curve from lower edge to lower edge to complete the bonnet back.

Corded silk, satin, and crêpe-de-chine are suitable for the covering of this little bonnet, and so also are soft, woolly and satin plaits.

The crown of the shape may be cut from single stiff net, but the brim must be cut in two thicknesses of net, and have the edge wired to keep it in shape. If the bonnet is to be of washing material, such as muslin or embroidered lawn, etc., a foundation of muslin or batiste will be needed, the edge of which must be corded.

The material for upper-brim and crown-covering is usually cut by the foundation pattern and put on plainly, the underbrim being full and soft, i.e. either gathered, pleated or corded, as explained in Chapter IX on "Brim Linings."

DUST CAP OR BONNET.—This may be cut as Fig. 24, a, b and c, the size given, i.e. crown-back 16 in. \times 12 in. will fit a girl of 10 to 12 years; or if the front be cut 18 in., and the back 16 in. \times 18 in., it is quite a good size for a dust cap for an adult.

The front piece is cut two-fold, the pieces being pinned right sides to face, then tacked and machined along the ends and curved upper edge; turned right side out and pressed. The curve of the horseshoe crown is gathered, and set between the straight edges of the front; the lower edge of back is hemmed to form a slot for the draw tape or elastic. If elastic is used, buttons must be sewn to the bonnet at the two back corners, and a loop worked at both ends of elastic, so that it is easily removable for washing. Strings or a chin strap may be required.

BOYS' HATS.—Boys aged 1 to 2 years may wear either linen hats or those of cotton materials machined over a padding



CHAPTER XVI

of cord. These hats can always be bought ready-made; if made at home they are similar to the Liberty hats for girls, except that the cords are fastened in by machine; the brims usually turn from the face like a Breton sailor shape, and have no fulled edge to the brim. Fine straw hats are worn by boys in the summer, these being usually of saucer or sailor shapes.

 $MAN-O'-WAR \ CAPS.$ —Boys and girls alike wear these caps, usually with reefer coats and sailor suits. (Fig. 25, a and b.) The cap is suitable in serge, cloth, nap cloth, linen and drill.

French canvas is the best interlining for upper and undercrown pieces, and jute buckram for the head-band. When washing materials are used, batiste is the best interlining for the crown, and linen for the head-part. For the head-lining, polonaise, sarcenet, light-weight sateen, or mull muslin are best.

When drafting the pattern, cut a circle 9 in. in diameter for the crown top; for the under-crown piece take a strip of paper 12 in. \times 5 in.; from a point 2 in. from each lower corner draw a curve to meet in the centre at a point $2\frac{1}{2}$ in. from the lower edge; at each side of the paper mark a point $1\frac{1}{2}$ in. up from lower corner and draw a curve from each point up to centre of top edge of paper; draw a straight line from the point marked on side of paper to that on lower edge to form the ends of the pattern—comprising half the under-crown piece. For the head-band cut a straight strip 21 in. $\times 1\frac{1}{2}$ in.

Cut out the under- and upper-crown pieces in interlining and material; tack material and interlining pieces together, machine and press the side seams of under-crown piece; fix upper and under pieces together at centre back and front, the right sides facing; machine outer edge, turn to right side, press. Join the stiffening for band, and cover the outside with material.

Fix the right side of band to centre front and back of undercrown, the right sides facing; sew firmly all round, turn to right side. Make head-lining for the crown by same patterns and in the same way as the outer cap; arrange it inside the crown to the head-band and tack. Finish with a narrow cross-cut strip of lining and slip-stitch this inside to make all edges neat. Trim with simple ribbon band and bow, or tag ends, or with the printed hat bands which can be obtained from a good hat shop or children's outfitting department.

GIRLS' HATS.—Shapes of stiff net are much the best for hats which are to be covered with plait, or gathered silk, etc., as they are softer in outline than are buckram shapes. The method of making up stiff net foundations is given in Chapter IV on shape-making.

Fig. 26 is a favourite shape for a girl about 5 to 7 years of age; the head measure, taken slackly, will vary between 20 in. to 22 in., and the brim should be about $2\frac{1}{2}$ in. to 3 in. in width, the head-radius for the brim being a quarter of the head-size, and the one for the brim outline 3 in. greater, e.g. head-size 20 in., first radius 5 in., second radius 5 in. + 3 in. = 8 in. (Fig. 26, a and b). The measurement over the crown is $13\frac{1}{2}$ in. to $14\frac{1}{2}$ in.

Fig. 27 is drafted to the same measurements, except that the back of the brim is narrowed to 2 in.; and Fig. 28 has only a 1-in. brim at the centre back, the back piece being cut away like the curved back of a lady's bonnet. A wide back brim is not at all pretty when the hair is short, but often the wider shape (Fig. 27), just rolled a little at the back, will be most becoming.

Figs. 26, 27 and 28 may be made as in Fig. 21 if a washing hat is required. For school wear the hat is very useful made in velveteen, in which case the brim should be interlined with French canvas, and the crown cut into four or six sections.

CASED OR DRAWN HATS.—These drawn hats (Fig. 29) are always more or less fashionable made of silk, muslin, or lightweight velvet. Those made of washing materials are supported with cotton cord, and those of darker shades of velvet and silk are drawn over wire. A paper pattern of the shape should be prepared as a guide for the shaping of the brim; very frequently this is a flat type, similar to a sailor shape, e.g. Fig. 6, Chapter III.

The material may be cut either on the cross or along the warp way. When cross-cut, there are more joins to be considered,

and the seams of these joins must not be opened and pressed in the usual way; but should all be pressed in one direction, so that cords or wires may run easily through the slots. There are two ways of casing: (a) by putting gatherings through twofold material, leaving a space for the insertion of cord; (b) by forming small tucks and passing the cord or wire through them. The first method is termed "flat," and the second method "raised," casing or cording; the first method is often employed for the brim of a hat, and the second for the crown.

A hat with a $3\frac{1}{2}$ -in. wide brim, and measuring 22 in. round the head, and 40 in. to 41 in. round the outer edge of the brim, will require a strip of material about 80 in. \times 9 in. as the material must equal at least twice the outer brim measure; the width allowed must be twice the width of the brim, i.e. $3\frac{1}{2}$ in. + turnings, and a small heading for the brim-edge.

The crown-piece should measure 44 in., i.e. twice the head measurement; and, in width, the measure from the centre top of crown to base, $+\frac{1}{2}$ in. for every tuck and turning, e.g. measurement of crown = 6 in., + six tucks = 9 in., + turnings of 1 in. = 10 in.

Join the brim-piece into a ring, leaving 4 in. open (Fig. 30) so that the wires can be easily and neatly joined at the centre back: mark the quarters of material with cotton. For running the casings choose strong cotton or silk according to the material chosen, and a short needle that will carry the thread along easily and rapidly; thread the needle on to the reel, but do not break the cotton. Fold the material in half as in Fig. 31, and after pinning it to keep the fold in place, commence fly-running it about $\frac{1}{4}$ in. below fold. When the first running is completed draw the material out quite straight in readiness for the second running, and secure the ends of the cotton of the first. Put in the next running about $\frac{1}{4}$ in. below the first one, leaving ample space for the insertion of a folded end of wire.

N.B.—If cord is being used it is much easier to place this just below the first running, holding it in place with the second



running thread, than it is to insert the cord later; but the cord must be cut sufficiently long to allow the flattening of the work before the second gathering is run. Continue the casings at $\frac{3}{4}$ in. to 1 in. distances apart, or group three quite close together, and leave a space of about $1\frac{1}{2}$ in., just as fancy dictates, but do not spare the work or the brim will not be firm and shapely. Cut wires, measuring them by the paper pattern and allowing at least $1\frac{1}{2}$ in. for overlapping. Before inserting, turn a tiny hook over at one end of each piece of wire and press it flat, so that the travelling through casing is made smooth and easy.

Put in the longest or outer brim wire first, and continue to the head-ring.

Pin the brim securely to the paper pattern at the four quarters, distribute the fullness evenly, fasten the outer wire neatly, as for wire shape-making, and draw up the gathering threads. Continue until all wires are secure, then fasten off each gathering thread, at the same time making the back join at the seam quite neat.

Cross wires, bent to shape of crown and brim, may be inserted between the folded material of the brim to hold it taut, and form a platform for the crown. These must be placed, previous to the drawing up of the gathering thread, and hooked firmly to the brim-edge wire.

CROWN.—Join the material into a ring and commence running the first $\frac{1}{2}$ -in. tuck about $\frac{1}{2}$ in. above the edge, as *Fig. 33*; after marking the quarters, leaving $1\frac{1}{2}$ in. ungathered at the seam to make the fastening of wires easy. Run the first tuck, leaving space for a folded wire to run easily through, or insert the cord between the runnings, as in the brim. Flatten out the material at the completion of each running. Space the tucks evenly at the same distances apart as the brim-casings, or arrange them in groups.

N.B.—Consider the shape and outline of the crown when spacing the tucks—if a dome shape, see that a nice centre finish is produced; and if a flat-topped crown, a casing should outline it. When the gatherings are completed insert the head-wire first, and join to size; draw up and fasten off the thread. Continue to insert the wires, and either mould the crown to shape (a) in the hand, or (b) over an old crown or a block, or (c) over the wire platform attached to the brim.

Fasten all wires, cords, and threads neatly at the same time as completing the gathering at the seam. Pin the crown into position round the head-part of brim, drawing up the brim material tightly into place, and sew the crown down firmly; finish head-line either with a neat facing, binding or head-lining. If the brim material is not drawn up tightly to the head-wire it will droop too much when the hat is worn.

TAM-O'-SHANTERS are always suitable for school wear and can be carried and packed quite easily. Woolly caps, in self colours, and tartans are easily washed and kept in good condition.

The blocked cloth French "berri" cap, very like a tam-o'shanter, is also a general favourite of the schoolgirl. The methods of drafting patterns of tam-o'-shanters is explained in the chapter on sports hats. Caps of soft plaited straw, and of wool, are usually worked over a foundation of leno, or very fine French canvas.

A tam-o'-shanter crown and narrow rolled brim, as in Fig. 32, will suit many girls about 15 to 16 years of age, and a satin straw plait (10 yds.) of mixed colours, e.g. blue, brown and green, will cover this little shape quite nicely and make a useful summer cap; while a 10-yd. length of a woolly plait would look warmer for a cap for winter.

Choose simple trimmings for girls' hats, and those that will keep in good condition; feathers, quills, wings, etc., are rarely suitable, neither are they loved by the average schoolgirl to-day who prefers a plain band and bow of ribbon, a simple ruching or pleating, or little bunches of bright-coloured berries or beads.

CHAPTER XVII

MILLINERY RENOVATIONS

MILLINERY which has lost its first freshness may often be renovated with great advantage and economy. The renovation may involve the unpicking, cleaning, dyeing and remodelling of all the materials of which the hat is composed, and even of remaking of the shape itself in an entirely different, and possibly a more up-to-date, style.

STEAMING.—Steaming is probably the best means of freshening and renewing many millinery items, and it may be done in three or more different ways, as described later on. If a velvet, felt, or straw hat has been out in a shower of rain, steam will often restore the velvet by raising the pile and obliterating the spots. It will also freshen and restore the nap of a velour, beaver, or hairy felt, as well as cleaning it, and most dark coloured straws are both cleaned and stiffened by being held so that the steam from a kettle of fast boiling water passes through it, from the wrong side to the right.

A trimmed hat which has been thoroughly brushed to remove the dust may be subjected to this treatment with the greatest advantage, providing that there are no tarnishable ornaments or trimmings on it. Materials that can be restored by steaming include (a) velvet and other fabrics having a pile on their surface; velvet ribbon; velvet flowers and foliage. (b) Lace, net, mourning crape, tulle, feathers and feather trimmings; quills, ospreys. (c) Dark-coloured smooth and rough felts, if not made very damp; velour felts, beaver felts, and many classes of cloth. (d) Satin straws, Dunstable straws, Tagel plaits, Liserette, wheat and other plaits with a smooth surface; chip-plaits, and plaits made of rush or grass.

Method 1.-To steam successfully, put a small quantity of

water into a kettle, and when the water boils, hold the article to be freshened over the spout of the kettle; do not hold it in the same position for many seconds, but keep turning it about so that all the parts are made quite damp.

CREPE.—Crepe and crepe embroideries very readily spot under the steam treatment, unless they are constantly turned over, or are moved to and fro in the steam. Such items as crepe, lace and tulle are more successfully restored if, after being carefully brushed to remove the dust, they are fastened on to a piece of cardboard or a roller; the points of the lace can then be pinned flatly down to prevent them curling when moistened by the steam. After steaming leave pinned on to the card or roller until quite dry.

Method 2.—Make a flat-iron very hot, invert it, or get someone to hold it firmly upside down; lay a very wet cloth over the iron to produce the steam. After brushing the velvet, plush, etc., to be renewed, hold the back of it down close to the cloth, and move it from side to side over the iron until all marks are removed. A soft velvet brush, or a pad of leno muslin lightly brushed against the pile during the steaming will help to raise it and remove obstinate marks. When the steaming is complete, remove the cloth and pass the back of the material to and fro over the iron until it is quite dry. If it is not well dried before it is used or put away the marks where the pile was "plushed" will probably return.

All felted and woollen materials are liable to shrink and thicken when subjected to the steaming process, so great care must be taken not to make them very damp. While steaming these, rub constantly with a clean cloth to remove the dust.

Steam softens the size and gum used in the finishing of many straw and other plaits, and this may cause the centre of the crown of a hat, or wide brim, to fall out of shape; if, however, the shape is carefully pressed as suggested below, either on the table or over a block before it is quite dry, it will become quite hard and shapely in a short time.

WASHING.—Many materials such as light-coloured silks, ribbons, muslins, lace, chiffon, crepe-de-chine, georgette, sarcenet, woollen materials, embroideries, woolly plaits and beads, may all be carefully washed in warm water and soap in the usual way, and, after rinsing, be rolled in a clean cloth to extract some of the moisture before being pressed. A little methylated spirit about a tablespoonful to 1 qt. of water—put into the last rinsing water will slightly gloss and stiffen silk and ribbon. A handful of salt dissolved in the rinsing water will help to fasten a loose colour. Thin starch water—about half-a-teaspoonful to a pint of water—or a few drops of liquid gum arabic to a pint of water will slightly stiffen lace rinsed in it.

Black or dark coloured lace, net, chiffon, ninon, lisse. etc., may be freshened by being rinsed in blue water, milk and water, cold tea, or ammonia and water, and stiffened with gum arabic.

IRONING AND PRESSING.—When lace and raised embroidery are being pressed dry they should be placed right side downwards on a soft thick towel or blanket, so that the pattern may be well raised. Tissue paper or muslin laid over the back of the lace will prevent the iron marking or glossing the surface.

Ribbon and silk, if inclined to stiffen considerably under the iron, should have a piece of muslin laid over them before ironing. If only slightly creased, ribbon should be dusted, then ironed between tissue paper.

To press felt hats, place the felt between two damp cloths and press with a warm iron, always in one direction, i.e. with the nap, and continuing until the felt is dry; pull the cloth off the wrong way of the nap to raise it.

TO RENOVATE

SATIN RIBBON—Damp it on the right side only, turn it on the wrong side, hold an iron firmly in the right hand, place it firmly on one end of the ribbon, then with the left hand draw the ribbon slowly from under the iron. The iron must, of course, be wide enough to cover the whole width of the ribbon. STRAW HATS.—To clean a slightly-soiled straw hat, moisten a nail brush with water, dip it into ordinary table salt, and brush the hat well until it is clean, then rinse in cold water. The cleaning should be done as quickly as possible, as straw, when damp, soon loses its shape. When brushing the crown-top support it underneath with the left hand, and place the hat flat on a table or board when brushing over the brim. To dry it, press out the water gently between two cloths; place the hat on a dry cloth with a second one bunched up in the crown to support it if necessary, and leave in a current of air, or a warm room to dry. It may be pressed inside and out with a hot iron while still damp.

To clean very soiled or discoloured light straw hats, mix together lemon juice and sulphur to make a thin paste, brush this well into the straw, and rinse when clean in cold water, using a brush to remove the powder. Dab off the superfluous moisture, place the hat on a very thick blanket, and from the wrong side press it into shape at once, or, if preferred, the pressing can be done when it is almost dry.

Black chip hats should be well brushed, then rubbed over with olive oil, and the oil then be rubbed off. This will restore the freshness and pliability of the chip.

FELT HATS.—White, Light Grey or Fawn can be cleaned by one of these methods. (a) Sprinkle the hat with powdered pipeclay, leave several hours, then beat and shake it out. (b) Rub the white felt with crab's-eye powder (care must be taken in using this as it is poison), shake and brush it out. (c) Stand bran in a warm oven until it is thoroughly hot through, rub it into the hat, being careful to rub with the nap, never against it; brush or shake out the bran, and if necessary repeat the process with more clean, hot bran. (d) Rub the hat lightly over with soft flannel dipped in powdered magnesia; leave three or four days, shake out powder and repeat if necessary. (e) Make a thin paste of powdered pipeclay, French chalk, or magnesia, brush it over the hat, leave to dry thoroughly, and brush out. The paste may be made by mixing the powder with plain water or petrol.

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Black felt hats should be brushed thoroughly the way of the nap, then be rubbed the way of the nap with a cloth steeped in ammonia, benzine, or petrol. As the latter are very inflammable, never use them near a flame or in very strong heat.

GILT TRIMMINGS and ornaments that are tarnished may be restored to much of their brightness by being brushed over with powdered ammonia.

STEEL TRIMMINGS which have gone rusty may be brushed and rubbed well with crocus powder.

Beads should be tied in a thin muslin bag before being washed in a lather of warm soap, and rinsed in clean, warm water.

DARK COLOURED AND BLACK RIBBON, LACE, CHIF-FON, VELVET, SILK, FELT, STRAW AND SATIN may be cleaned, and the colour to some extent restored, if a tablespoonful of liquid ammonia be added to a quart of warm water, and the article be either (a) sponged, (b) washed with it, or (c) pressed under a cloth wrung out of the mixture.

FURS—dark—shake and beat the fur to remove the dust; stand bran in the oven until thoroughly hot, rub it into the fur, then shake it out. If the fur has not regained its gloss and freshness, repeat the process with more clean, hot bran.

Light furs may be rubbed with hot bran or flour, as above, then well shaken. White fur may be covered with a paste made of raw starch and water to which a little blue is added. Spread this gently over the fur with a sponge, leave it to dry thoroughly, then shake it out. Do not damp the skin unnecessarily as wet tends to harden it.

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FRONT AND NECK.—Deal with the wearer's left-hand side of the front opening as described under the left-hand side of front opening of a nightdress, *i.e.*, face it under with a false piece 1 in. wide.

Deal with the wearer's right-hand side of the front opening and with the neck as follows. Turn a narrow fold on to the *right* side of the material completely up the side of the opening and round the neck. Take a piece of the crossway material $1\frac{1}{2}$ in. longer than is necessary to go up the right front and round the neck, allowing for mitred corners. Turn under a narrow fold on to the wrong side along each long edge of this crossway piece. Face this down on to the right side of the front and tack it in position, leaving an end projecting for 11 in. at the bottom of the front opening for forming a pointed finish. When the neck is reached, arrange the turning in the form of a mitred corner, and continue to place the facing round the neck portion, making a mitre at each angle of the neck. When the neck has been faced all round, cut off any extra length of the crossway piece remaining, leaving only 1 in. at the end, which will be turned under and tacked down. Tack the inner edge of the crossway piece flat to the garment, round the neck and down the front. Arrange the centre of the bottom end of the facing in the form of a point. Cut away some of the material turned under to form the point, to prevent the work being too bulky. Tack the pointed end to the garment. Machine the crossway piece to the garment completely round each edge, including the point and the end at the left-hand side of the neck.

Finish off the bottom of the front opening as follows. Cut across the under or left-hand side of the opening at the bottom of the false hem as far as the machining stitches. This will leave the lower end of the opening sufficiently free for the upper piece to lap over the under one a distance of 1 in. Complete the opening by sewing the *under* part of the upper side of the opening to the *top* part of the under false hem at $\frac{1}{4}$ in. above the cut edges, and without allowing the stitches to show through on the right side. Neaten the wrong side by means of a piece of tape $1\frac{1}{2}$ in. long, turned in at each end, and hemmed down so as to cover the cut edges.

FACINGS OF SLEEVES AND LEGS.—Place the facing round each sleeve and round the bottom of each leg, joining neatly at the seams. Machine down all these facings at both outer and inner edges.

FASTENINGS.—The front will be fastened by means of four buttons and button-holes. The button-holes may be cut horizontally, and will present some difficulty,



Fig. 157. Swimming Dress for a Girl 13 to 15 Years

Children's Garments:

Their Planning, Cutting and Making

BY EMILY WALLBANK AND MARIAN WALLBANK

Head of the Needlework and Dressmaking Dept.: The National Training School of Cookery and other Branches of Domestic Economy Head of the Needlework and Dressmaking Dept. of the Training College of Domestic Science, Liverpool; formerly of Aberdeen

CONTENTS I. GARMENTS FOR CHILDREN AND GIRLS.—II. BOYS' GARMENTS. III. THE MAKING UP OF CHILDREN'S UNDERGARMENTS.

Realizing that simplicity and daintiness, rather than elaboration, is the aim of every children's dressmaker, the authors have shown how the simplest of patterns and styles may be cut and adapted to any variations needed by individual taste or prevailing fashions. Two or three patterns are used as foundations from which many can be quickly drafted and cut, and full-size flat patterns of the most useful patterns for boys and girls of varying ages are enclosed in the envelope of this helpful book.

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The Misses E. and M. Wallbank have given a book which undoubtedly meets a need, and should be of great service, both to the young teacher of needlework, and the home worker.... This book should find a place on the bookshelves of our schools."

In foolscap 4to, cloth, 142 pp. Price 7s. 6d. net. [Specimen page opposite.]

Needlework for Student Teachers

(Intended for Teachers and Students of all grades)

By AMY K. SMITH

This book, which has run through ten large editions, is written primarily with the view of assisting students in their preparation for the Government Examinations in Needlework, whether as student teachers or students for the Certificate. Each portion of the Government Syllabus has been dealt with, and the appendix includes all information in the Education Code relative to needlework, and several years' questions and exercises set at Government Examinations for pupil teachers, candidates for admission to training colleges and certificate students.

In demy 8vo, cloth, 260 pp., with nearly 200 diagrams. Price 7s. 6d. net.

A CHILD'S DRESS WITH A SADDLE YOKE.

To Set the Skirt into the Yoke.

(1) The Front.—Place the upper edge of the skirt between the two yoke pieces, the latter having the right sides facing, and the raw edges of the three pieces being together. (Fig. 8.) Tack and stitch in the fitting line $\frac{1}{4}''$ below the raw edges. Turn up the yoke pieces into position and baste together along the centre.

(2) The Back.—Place the upper back yoke pieces with the right sides facing the right side of the skirt, and stitch $\frac{1}{4}$ " below the raw edges. Place the lining into position, turn in to the line of stitching, and fell. (Fig. 9.)

On the right side, the yoke may be machine-

stitched or ornamentally worked as desired. The back edges would be turned in to face one another, and may be slip-stitched or finished with machine stitch or embroidery to match the lower edges of the yoke, as desired.

The material of a skirt is sometimes gathered with a heading, and attached to the yoke by means of stitching in the line of gathers.

(3) When the yoke is of single material, the "join" may be arranged in one of the following ways—

(i) The turnings of the yoke may be left wider when cutting, the yoke and skirt stitched together, and the turnings of the yoke felled over the raw edges of the skirt on the wrong side.

(ii) The turnings of the yoke and skirt may be made neat with a narrow binding.

(iii) The yoke may be attached to the skirt by means of scalloping or beading.

The Neck.

This may be turned in edge to edge and stitched; it may be scalloped or trimmed with lace; or it may be finished with a little turn-down collar.

The Turn-down Collar.—This is cut from the yoke pattern, following the outline of the neck at the upper edge from the centre front to $\frac{1}{2}^{"}$ in from each edge at the back. The lower edge of the collar may be shaped as desired. (Fig. 10.)

To Make and Set on the Collar.

(i) If *double*, place the right sides to face and stitch round the outer edges, turn, press the join to the edge,

and tack. To set on, place in position on the yoke, pin to the upper side of the



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FIG. 9.



PRACTICAL PLAIN NEEDLEWORK.

BUTTONHOLING.

Buttonholing is worked round the raw edges of buttonholes to prevent them from fraying and wearing away. Considerable practice is required to produce a regular stitch with even knots. It is best to learn on a folded edge of *firm* material, using coarse cotton or even flax thread, so that the stitch may be observed clearly. Canvas is too loose a material to bear the strain of the stitch.

POSITION OF WORK.—The material is held in the "horizontal under-hand" position (Diagram 1, Fig. 3); the edge to be buttonholed is held along the first joint of the left fore-finger. The stitch is worked on the right side, from left to right (*i.e.*, the contrary direction to that for oversewing), and on double material.

THE STITCH.—Pass the needle between the folds and bring it out on the edge where the first stitch is required, *i.e.*, at the left-hand end of the edge to be buttonholed ; leave an end between the folds. As the stitch is very strong no other fastening is required (Diagram 25, Fig. 1). Then insert the needle from back to front of the material, bringing out the point $\frac{1}{2}$ or $\frac{1}{10}$ of an inch below the edge, and the width of the needle to the right of the starting-point (Fig. 2). Buttonholes are often spoiled by arranging the stitches too far apart or making them too deep. Pass the needle through for 1 inch or so, then let it rest in the material. Next take the double cotton as it comes from the needle eye; pass it under the point of the needle from left to right, i.e., in the direction in which the stitch is being worked (Fig. 3). Then draw the needle completely through and upwards, pulling the cotton up firmly and slightly outwards at right angles to the edge of the work ; the twisted cotton then forms a knot at the top of the stitch made. Insert the needle for the next stitch a little further to the right (Fig. 4). If the buttonhole knot is examined before it is quite finished it appears as in Fig. 5; when the next stitch has been made it appears as in Fig. 6. The knots resemble knobs at the upper ends of upright bars, and are connected with one another by strands of cotton; the whole stitch when coarsely worked may be compared to a row of palisades with knobbed tops. The "knobs" are essential, a simple twist of cotton (made by passing the cotton round the needle from right to left) is not firm enough to wear well.

A BUTTONHOLE.—Fig. 8 shows how to begin. Leave an end between the folds; bring out the needle at the extreme left-hand end of the buttonhole. For a buttonhole on a band begin at the inner end and work outwards; this often necessitates holding the band upside down to begin. Work as far as the outer end. Here a "round end" is made to accommodate the round stem of the button. Fig. 7 shows how to arrange the stitches. These are made without knots, and are usually nine in number. They are carefully graduated; the first is made on a level with the side stitches, the fifth is in a line with the buttonhole itself, the ninth is on a level with the stitches of the second side worked. Insert the needle each time at the extreme end of the buttonhole, and bring it out at the foot of the stitch, being careful to make all the stitches the same depth as those of the side. Gradually turn the work, and after the ninth stitch resume the making of the knots, and so complete the second side. At the inner end of the buttonhole a "square end" is worked ; this brings the edges of the buttonhole close together and strengthens it. After completing the last side stitch, insert the needle at the foot of the first side stitch

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Author of "Needlework for Student Teachers; Diplômed of the London Institute for the Advancement of Plain Needlework; late Examiner in Dressmaking and Needlework to the City and Guilds of London Institute, Secondary Schools, and Schools of Domestic Economy.

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KNITTING WITHOUT SPECIMENS.

MAKING UP.—Turn the circular piece of knitting on to the wrong side, flatten it out, and sew the two bottom edges neatly together where the knitting was first cast on, thus forming a bag. Turn this bag on to the right side. Now make two plaits or crocheted chains of knitting cotton, each 14 in. long. Thread a bodkin with one of the plaits, pass it through all the holes, and then join the two ends neatly together. Do exactly the same with the second plait, joining its ends at the opposite side of the work. Two plaited handles now project, one from each side of the bag. It will be found that when these are pulled simultaneously, the bag closes up in an efficient manner.

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FIG. 85. LUNCH BAG FOR CHILD'S OWN USE.

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Illustrated by Typical Designs

By JOAN H. DREW

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(Mrs. G. ANTROBUS)

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GOOD AND BAD DESIGNS.

that the pattern should cover, as it were, a definite space or shape, thus forming a block which shows up against a plain background. Further, it is important that this block should be *well* filled. (See Fig. XII.)

A good design never straggles across the material in an aimless way. Though a clever designer may make her curves and branches break out from all sides, yet, if these are studied, it will be found that they are nevertheless disciplined,



FIG. XIII.

TUDOR ROSE.

and that there is order and method in their luxuriance, though these qualities may often be skilfully hidden. Another rule is that a good design should never be realistic. In the past many of us, in the working of our flowers, have tried to make them look as though they could be picked off the material, thus rendering the work realistic or naturalistic. This, however, is not good art, nor what a good designer would do. On the contrary, she would take her flower or leaf forms and conventionalize them; that is to say, in selecting and rejecting from Nature, she would flatten and spread out what Nature made round. This is why leaves lend themselves so readily and easily to treatment in design, and why some flowers are not so suitable as others for needlework. The chrysanthemum, for example, does not submit to this flattening process, whereas the rose does. Yet how often do we see the chrysanthemum drawn

An Embroidery Pattern Book



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" FOR GOOD LUCK "

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