

CHAPTER VII

PATTERN-DESIGNING AND DRAPING

Designing involves not only good technique but a knowledge of textiles and their manufacture; of historic costume, its value and use; and, to as great a degree, a working knowledge of the rules of design and color in their direct application to costume. In addition to this definite technical knowledge and much broad general information in allied fields, there must also exist an indefinite something which Mr. Paul Poiret has called a "sort of feeling." A detailed consideration of all the necessary elements is impossible in this book. An effort has been made, however, to present a few essentials regarding technique, textiles, and historic costume. In this chapter directions are given for the preparation and use of the dress-form and for some draping problems; a few general suggestions are also made for the critical study, discriminating and thoughtful observation, and research necessary to attain the appreciation and right feeling which, with much practice, form the basis for good work in design. Without this *feeling* and true appreciation successful designing is impossible. But while directions may be given for securing much of the required information, for that more intangible but even more necessary factor, feeling, it is impossible to do more than indicate in a general way various subjects which should be taken up and work which should be done to form the requisite background or base of supplies.

One of the most important factors in successful and original designing is the critical faculty. Thoughtful discrimination, which is appreciation, may be developed only through constant, conscious, analytical observation. It is really the power to see with the mind what is constantly presented to the eyes, to see not only that a costume, a

picture, a statue *is* good or bad, but *why* it is so. Only after such searching analysis does the critical faculty come into existence; nor can it function without a background, a base of supplies from which to draw endless examples for comparison and constructive criticism. To establish a background extensive knowledge of what has already been done in art is necessary, and especially in art as applied to costume. "Contact with the best works of art is an essential part of art education, for from them comes power and the stimulus to create." Costumes have been made and worn for many thousands of years. Nothing entirely new is conceived; the old serves as an inspiration and lends itself by skilful adoption or adaptation to meet any modern need. Consequently, these old costumes, of which there are numberless records, must serve as the treasure-house for the designer. These records exist not only in books on historic costume, which are somewhat difficult of access to the majority, but also, with the added charm of the artist's conception, in the costumes of practically all centuries which are presented copiously in sculpture, paintings, and engravings.

At the present time reproductions of many of these works of art and of many costume prints may be obtained without difficulty and at small cost. There are those which the newspapers and fashion magazines frequently present with their current fashions. In general, these are copies of the costumes of the earlier centuries which are most directly influencing modern costume at the moment. Inexpensive post-cards, copies of costumes, of portraits or statues, are sold in shops and in museums. Prints are issued in great numbers and at a minimum cost by such firms as the Perry Picture Co. and the Bureau of University Prints. Catalogues of these prints may be obtained upon request.

A collection of all such illustrative material should be made and, if arranged according to design or period in a scrap-book, proves of the greatest use.

Before the designing collection can be considered complete, representative textile fabrics should also be carefully

chosen and classified according to texture, flexibility, or wearing quality.

While many books on historic costume are too expensive and too difficult for the majority to procure, inexpensive reprints may frequently be obtained. Second-hand copies of originals may be purchased at sales if the market is watched. The regular and special catalogues of firms in large cities in America and Europe are always sent upon request, and by a careful perusal of these a good, if small, library may be selected.

The imagination is greatly stimulated by visits to the theatre and opera, where it is possible to observe not only faithful reproductions of attractive adaptations of period costume, but also skilful and extremely artistic color combinations. Nothing which stimulates the creative power should be overlooked in the training for designing.

The same conscious and analytical observation which is required in developing the critical faculty is as necessary in determining all the practical working details of costumes which are constantly seen by the worker in everyday life—such details as the grain of the material, the keynote to a successful execution of any design; the location of the necessary seams and openings; the finishes of all the edges, and the detailed arrangement of the decoration. Each part is an important factor in the making of the whole, and no detail, however minute, should escape the discriminating eye of the designer. Any observation is of little value which does not include a decision on the worth of the design and an analysis of the parts in which its real value consists.

In choosing a design for a costume there are many factors to be considered if it is to fulfil its purpose satisfactorily. The purpose of a costume is briefly to serve as a suitable covering for the body. "Right dress is, therefore, that which is fit for the station in life, and the work to be done in it, and which is otherwise graceful, becoming, lasting, healthful, and easy; on occasion splendid; always as beautiful as possible."*

* "Arrows of the Chase," J. Ruskin.



Silhouettes, 1812-1912

The individual—that is, the human factor and not the prevailing fashion—should be the dominant note in any scheme of costume. Costume should be appropriate. No design nor material should be chosen which is not suited to the intended purpose and does not bear a general relation to its surroundings or setting. All garments should allow perfect freedom of action. They should not in any way impede the movement of the entire body nor interfere with its exercise. The most artistic costume is that which indicates and in general follows the leading lines of the figure. No costume can be really graceful or beautiful, though it may be considered fashionable, interesting, or picturesque, which perverts the natural outline of the figure by the addition of various pads, humps, and puffings. In the designs it is usually possible to accentuate or emphasize the good points or lines of the figure and make the less desirable ones inconspicuous. To do this successfully it is necessary to give the silhouette careful consideration. The general scheme of the costume, with all details eliminated, should first be outlined and chosen. This will usually give greater consistency to the whole costume and bring it into closer relation to the figure of the wearer.

A costume should be made not only to give freedom of action to the body, or a graceful interpretation of its outline and movements, but it should also express the individuality and the personality of the wearer. This is a difficult problem, and unless the good taste of the designer is exercised the results may be an eccentric representation, inartistic or even grotesque. The result may be equally grotesque if no allowance is made for individuality. The latest fashion is often worn without any thought as to the fitness of that fashion for a particular personality. It is also a mistake to assume that a costume becoming to one person will necessarily be attractive on another and to choose a costume on that basis.

It is the skilful designer who detects and appreciates the good qualities, and emphasizes them, and yet makes the costume sufficiently fashionable to be inconspicuous. It is

equally unfortunate to be too much out of fashion. Both extremes lead to conspicuousness.

Simplicity in costume, in line, and in decoration cannot be overemphasized. Overelaboration and profusé decoration in general mark the work of the amateur. Mr. Paul Poiret has said that he has formulated only two principles in his art: the search for greater simplicity and the search for original detail. These both imply study and research in design and in historic costume. As a stimulus for original detail there must be constant contact with the best that has already been created both in design and in the costume of past centuries.

To secure good design there must be a general knowledge, simple yet workable, of certain fundamental rules in art governing line and color. From the point of view of design a dress may be considered as a composition. It is made up of lines, some necessary in the actual construction, others added purely for decoration. It has also color, the use of which involves not only the question of harmony but that of the proportionate amount to be used as well as its placing. Both these subjects are too complex and too important to be dealt with in any detail here. A few suggestions for line design are given, but they can prove of no value unless supplemented by the careful perusal of books by well-known masters of line and a study of fine old portraits, Greek statues, etc. Color is too difficult and intricate a subject, and too many factors are involved for more than a passing notice. General suggestions are in too many cases more harmful than helpful when adopted by the beginner. Careful study and observation of fine paintings, Japanese prints, etc., are absolutely necessary.

In all designs there should be unity; that is, there should be such a combination of the various parts as to give one general harmonious effect. All the lines of a costume should so work together that the design presents at once the one main or controlling idea underlying it. It should impress the beholder as the expression of one thought, not in fragments but unified.

Good proportion in a costume, as in a picture, is secured

by the correct arrangement of line. Again unity is the first consideration. There must be some general movement or rhythm of line. A repetition of lines or shapes, if well done, usually makes rhythm.

But repetition of itself does not create beauty; there must be fine spacing and harmony of line in addition. The chief danger in such an arrangement of line is monotony. The most usual illustrations of repetition in line are found in the decoration of shirt-waists, when lengthwise hems and plaits and tucks are used, and in skirts when a hem and tucks are placed at the bottom. In planning a shirt-waist, for instance, if the tucks are of the same width as the hem of the opening, the result is uninteresting. In any arrangement of tucks it is usually better to group the tucks and repeat the groups rather than to repeat the separate tucks.

While plaiting has repetition of line because of its movement when the figure is in motion, there is additional play of line and a constant change in the light and shadow which prevents any monotony.

Splendid examples of rhythmic arrangement of lines are to be observed in architecture. There are many buildings in which the height is divided into spaces by lines of windows or definite decorations and in which columns of good height are so placed as to give the desired effect of lightness, of space, of dignity, or solidity. A careful observation of such effects will be most helpful and suggestive.

For the amateur it is usually safer to try only bisymmetric line arrangement. The even balance of line which this gives produces the effect of completeness. Variation or an unisymmetric grouping requires great skill and the touch of a master of line.

Too many lines in opposition give an effect of violence which may be counteracted by the introduction of a few curved lines. A design which has lines placed in opposition requires, in general, skill in spacing, a careful choice of texture, and a good silhouette upon which to base the work. A common illustration of such an arrangement is found in the lengthwise straight box plait, or fastening, with a straight belt line or a straight yoke line placed at right

angles or in opposition to it. On a well-rounded figure of graceful outline such a placing of lines serves to enhance and set off to best advantage the curving lines of the silhouette. The use of the same lines for a flat figure, angular in outline, emphasizes the angularities and gives an unfortunate effect.

Designs in which there is a gradual transition from one line to another are more generally becoming. In such designs one line grows out of another and all corners or sharp angles are replaced or softened by curving and slanting lines. In this method the square yoke line is replaced by slanting or curving lines which flow into a straight centre-front line. The waist line, in turn, is curved rather than straight; such arrangements, in which sharp angles and contrasts are avoided, soften the outlines of the angular figure and enhance the curving lines of the more rounded silhouette.

In many designs certain lines are given special emphasis. This is frequently done to bring into prominence some good points of the figure. All the other lines of the design should be arranged to be in harmony with those main lines. They should not detract in any way from the central idea, but should be subordinated to it and should supplement it in such a way as to give added emphasis.

Of equal importance with the line arrangement are the spaces formed by these lines. As in repetition of line, there should be special effort to avoid monotony, which is generally caused by too even a division of space. For example, a skirt which opens exactly at the centre-front line, unless treated in some special way, is not as interesting as one which opens slightly to one side. A double skirt is not good if it has the bottom line of the upper skirt dividing the full length exactly in half.

The various divisions of space should always be well balanced. Too large a space may completely overbalance and obscure the smaller divisions. A skirt is very poorly designed which is divided so that a narrow centre-front panel is entirely overbalanced by two wide spaces on each side.

Greek costume shows many examples of good space relation. In general, the main masses are large and simple, while the smaller are made by the folds of drapery and are entirely subordinate to the large masses and supplement them in such a way as to make the design complete and satisfactory.



Greek costume showing good space relation

In choosing colors for a costume there are several factors to be considered: a good combination of color in the costume; the proportion and careful placing of the colors selected; and the general becomingness of the color or colors to the wearer.

To determine color combinations and color value successfully it is necessary to be familiar with the rules which govern them and to have had much practice in their use. As has already been said, if it is not possible to secure good instruction in color work much may be done by study and observation. Such a book as Munsell's "Color Notation" will prove exceedingly

helpful, if supplemented by careful, discriminating observation of good paintings and Japanese prints.

In testing for colors to suit the wearer no rules can be given; the problem differs with each individual. Satisfactory results can be secured only by a careful study of the individual, her style, and the details which go to make up the general impression conveyed. It is better to overstudy than to understudy and to experiment with various combinations before choosing any one.

Some colors may enhance the hue of the eyes by giving depth or strength to their color. This seems to be more frequently and evidently true of blue eyes than any others. Rather pale blue eyes may be much strengthened by the right shade of blue in the costume. This can be best determined by a trial of many different shades. Other colors may be chosen to give the skin clearness, while still others give brightness and better color to the hair. The designer must determine by a careful study of the individual whether eyes, hair, or skin should be emphasized. This decision should be, in turn, affected by another factor; that is, the purpose of the costume and when it is to be worn. If it is a street costume the wearer is subjected to the brightest light and it may be wise to enhance the skin. On the other hand, if it is for evening wear the desire is to give a good general impression. An evening dress is most frequently seen with many others of the same general character and should emphasize whatever individual characteristic seems most striking, probably most often the hair.

A demure person may easily be made to appear absurdly dressed if strong colors are used in her costume. She will be completely obscured and, if at all sensitive, painfully conscious of her too vivid plumage. On the other hand, the strong, distinctive personality should not attempt expression in pastel tones. A careful consideration of different personalities and their expression or lack of expression in costume proves not only interesting but helpful in a study of color.

There is a quality in material which is so closely allied to color as to be often confused with it; this is its texture. Texture may be defined as the surface quality of a fabric. It depends on the composition; that is, on the manner of making and arranging the threads and their finishing. It is this texture, or surface quality, that determines the way in which any fabric, because of its rough or smooth finish, absorbs or reflects the light and does or does not give variation in light and shadow. For example:

(a) *Cottons*.—There is great variation of texture in cotton materials. The crisp organdie, with its distinct threads

breaking up the reflection of light, serves as an excellent contrast to the batiste and cambric surfaces, which have unbroken lustrous surfaces from the use of mercerized threads or because of finish.

(b) *Wools*.—Some broadcloths, because of their smooth and polished surfaces, have a lustre which gives in drapery marked light and shadow; in contrast, serge, whipcord, or diagonal has, because of its distinct weave, an uneven surface which breaks up the reflections of light and has little variation in light and shadow.

(c) *Silks*.—The smooth surface and very high finish of satin give it a brilliant, almost metallic, high light and a very deep shadow; in contrast, *crêpe de chine* has a somewhat rough, pebbly surface which, by lack of reflection of light, gives a light and shadow without much contrast. In any folds or drapery the light melts gradually into the shadow. Ordinary velvet has scarcely any high light, while mirror and panne velvet have a strong light and correspondingly deep shadow.

(d) *Linen*.—Contrast is secured both by weave and finish. Some fabrics, such as those with a satin weave, have a high lustre, while many others with a plain weave have practically none.

Texture, as can readily be seen, is an extremely subtle quality and for that reason is often overlooked in the consideration of a costume. Its influence on color is very great, and it is in turn affected by color but must be considered and treated as a factor by itself. Because of its subtlety, the unconscious successful use or abuse of it frequently makes or mars an artistic creation. Gowns are often seen which have beautiful harmonious colors and grace of line, yet lack something for complete success. To the casual observer the lack will be indefinable, while the experienced designer will probably observe at once that the combination of texture is wrong. It is just as necessary for successful designing to have the proper combination of texture to secure a pleasing play of light as it is to have harmony of color. The kind of combination depends entirely upon the effect desired. As in color work, violent

contrasts may be made, or, on the contrary, the entire costume may be kept in the same tone. For one costume depth and richness may be required; for another, lightness and airiness. The great perfection of the textile industry has made available all varieties of materials, and with sufficient knowledge and experience any desired effect can be secured.

Contrasts are seen in such combinations as a dull-finished broadcloth and a lustrous satin; a serge and a satin; or, even more striking, a deep velvet and a brilliant satin. Combinations without contrasts are given by the use of the same dull-finished broadcloth and a chiffon or *crêpe de chine*. The most interesting results are in general achieved by extremes; that is, by great contrasts or by no contrasts whatever.

Very frequently the accessories give the desired play of light and shadow to the costume.

For cotton and linen dresses the right effect is often secured by the use of pearl, bone, or crochet buttons, of buckles, or of belts of leather, velvet, satin, taffeta, moiré, grosgrains, etc.

Many taffetas, which have no high lights or deep shadows, may be made exceedingly effective if fur, a velvet flower, or lace with a metal thread is combined.

When in keeping with the style of costume, artificial flowers of different textures may be used to give interesting combinations, or when accessories are not possible, shoes may be so chosen as to give the necessary note. Patent-leather shoes give a bright, lustrous surface, while calf or suède provide the opposite effect.

In general, it is safe to say that the stout figure should never be clothed in fabrics having a bright texture, as the lustrous surface reflects the light and increases the effect of size.

As in the use of color and choice of lines, for successful combination of texture there must be much experimenting based on careful study and thoughtful analytical observation. Merely following rules or suggestions will not make the successful designer.

Designing should not be attempted until enough work has been done in both drafting and fitting to form a basis for appreciation not only of the proper relations between the lines of the pattern and those of the individual figure, but also of good lines and proportion in patterns.

In the drafting, a flat pattern of the required number of pieces is made by following definite constructive directions. In following these directions there is nothing to indicate to the inexperienced the correct position of the lines or seams of this pattern on the figure for which it is intended. As the location of these lines and their relation to the lines of the figure is most important, this lack must be supplied. It may be satisfactorily done in the careful trying on and fitting of the pattern, which should always follow the drafting. There should be sufficient practice in fitting to familiarize the worker with the correct position and direction on the figure of the foundation lines of all patterns.

The designing problems should be such as require initiative and originality on the part of the worker. The first should be flat-paper work or pattern-designing done on the table in either tissue or drafting paper. Any desired style of pattern or design may be worked out, using as a foundation the flat patterns which have been constructed in the drafting. The second should be the more advanced designing or modelling—the construction of designs in flexible materials on the dress-form to suit the individual. For both the same general rules for direction of line and proportion are observed, but in the latter no patterns are used.

I. FLAT-PAPER WORK OR PATTERN-DESIGNING

I. Shirt-Waist Designs

The first designing which is done on the foundation patterns is usually applied to the shirt-waist.

1. **Tucks.**—The simplest designing is that of placing tucks in groups or in regular order for the back and front of a shirt-waist. Lengthwise tucks may be laid from the neck and from the shoulder. They should run with the

grain or thread of the material straight up and down the waist. They are designed before the waist is cut, and, consequently, careful planning is needed to make the shoulder tucks match perfectly when the shoulder seams of the waist are joined. It can be done only by a frequent placing of the pattern on the material as the work progresses. Tissue is better than stiff paper for this work. This problem must be considered from the standpoint of good design quite as much as from that of good technique. Careful joining of shoulder tucks cannot give beauty to the waist if the rules of design in relation to space-filling are ignored.

2. **The Gibson Plait.**—The Gibson plait is often a difficult problem because the plait is not included—that is, stitched flat, as are other plaits—in the shoulder seam. It is so made as to form a continuous plait from the front waist line to the back waist line, running with the straight of the material in the front but slightly on the bias in the back, to give good proportion to the figure.

To design the-plait the shoulder seams of the foundation shirt-waist should be joined. Another waist is made on it in tissue in which a plait is laid both back and front, the desired depth, and carefully matched at the shoulder. After the plait is pinned in place the shoulder seam should be distinctly traced and its seam allowance made. The plait and the shoulder seam are then opened and the shoulder seam is basted together exactly on the traced lines. These lines will not be straight because of the plait. When the plait is relaid and pinned, it should lie flat its entire length and fit the shoulder closely.

3. **Yokes.**—Shirt-waists may be designed with applied yokes of various shapes into which the material is usually gathered or plaited. With these any desired amount of fulness may be used in the lower part of the waist, while the shoulders are kept perfectly flat.

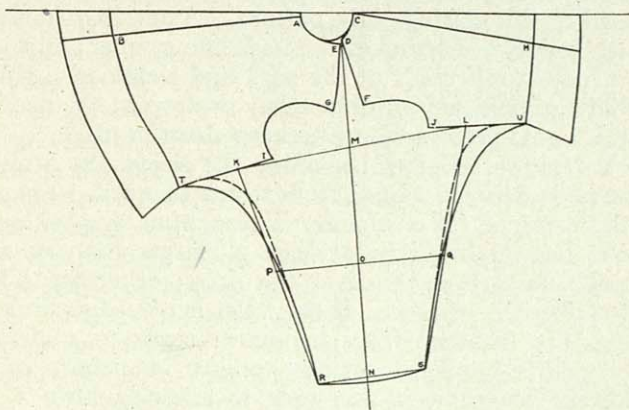
(1) A yoke may be used only across the back, extending to the shoulder seams. The technique of this arrangement is very simple, especially if the centre back of the yoke is placed on a lengthwise fold. It is a little more difficult if striped material is used and by making a seam in the

centre back the stripes are so placed as to give a herring-bone effect. In either case the neck and armseye lines and the desired shape of the yoke are traced directly from the shirt-waist pattern and the lower part of the waist planned. Not much extra material is added, as fulness in the back is not generally becoming. The problem in such a yoke is the designing of a good line across the back.

(2) In general, yokes are more attractive and becoming when they extend a little over the shoulder seam and form a straight line in front from neck to armseye into which the fulness of the front may be gathered. The location of the line in front and the direction of that at the back must depend on the taste of the designer and the figure to be suited. Before designing a yoke which is to extend over the shoulder it is necessary to join the shoulder seams of the shirt-waist foundation. The yoke material must be carefully placed at the centre back of the pattern but may fall as it will at the front. The centre back is usually on a lengthwise fold, but a seam may be used for a special design. After the placing of the material the cutting of the yoke is simple. The armseye and neck lines of the yoke are traced; then the fulness for the lower part of the waist may be arranged.

4. **Collars.**—Flat collars of all shapes may be made in the same general way as are the yokes. If they are not cut to have a slightly bias edge over the shoulder they may sometimes require a little extra fulness there to give them sufficient spring. To secure this fulness the shoulder seams of the foundation waist are not brought together when the pattern is made, except at the neck. At the armseye they may be $\frac{1}{4}$ " or $\frac{1}{2}$ " apart. The centre back of the pattern is placed on a lengthwise fold of material, unless a special design is to be made, and the desired neck line and shape of the collar are traced. The neck line and the shape of the collar should depend entirely upon the face and figure of the wearer and should have correct relation to any other lines in the costume. A high, round neck is seldom becoming. A slightly lowered curve or a point at the centre front is better suited to the majority.

5. **Kimono Waists.**—As a more difficult problem in designing, the shirt-waist may be used as a foundation for the making of kimono blouses. The general style and amount of fulness desired determine the various ways in which this may be done. One simple method is suggested here which gives the rather full, free kimono, especially becoming to a tall, slender figure. A few directions are added as a guide for alterations, if less fulness is desired.



Kimono waist designed from a shirt-waist

(1) *Placing the Foundation Pattern.*—To design the kimono waist the shirt-waist pattern is placed on some firm material, either stout tissue-paper or cambric, about a yard and a quarter in length. (a) The shirt-waist front is placed first, with the bottom of the pattern to the cut end of the material; the centre-front line at the neck, point A, should be $\frac{1}{2}$ " in from the lengthwise edge of the material and its waist line, point B, 2" in from the same edge. (b) The back is so placed that its centre-back line at the neck, point C, is on the lengthwise edge and its shoulder, point D, is $\frac{1}{2}$ " away from the front shoulder, point E, and as nearly as possible in line with it. The end of the back shoulder line, point F, should be 2" or 3" away from the end of the front shoulder line, point G. This brings the

waist line of the back, point H, about $2\frac{1}{2}$ " to 3" from the lengthwise edge. These measurements may of necessity vary somewhat if the shirt-waist pattern used has been drafted to measures which are far from normal. A little experience soon teaches the proper adjustments.

(2) *Constructing the Kimono*.—After the shirt-waist is pinned in this position the lines for the kimono may be constructed. The work proceeds as follows:

(a) *Neck*.—It is not wise to follow exactly the neck line formed by this placing of the pattern. A new line should be drawn inside, which makes the neck line smaller and somewhat higher, especially at the back and shoulder. Kimonos have a tendency to draw away or drop at the neck, as they have no fitted armseye to keep them in place.

(b) *Armseye*.—Before beginning the sleeve the armseye must be located as a basis from which to work. The size of the armseye for a kimono is somewhat a question of choice, but it should be at least 2" larger than an easy armseye measure taken over the dress; otherwise it will be too close for comfort. If the waist is placed as directed above, the distance from underarm seam to underarm seam, points J and I, is usually about 6" too short; to get additional length it is necessary to measure down 3" on each underarm seam, to points L and K. A line should be drawn between these points and its centre marked, point M.

(c) *Sleeve*.—From half-way between points E and D on the neck line, through point M, a line should be drawn the intended length of the sleeve. The measure for this is taken from the neck line down over the shoulder and the arm to the desired point. For a full-length sleeve, which it is wise to make in this foundation pattern, the measure will probably not exceed 28" or 29". Point N should be marked to indicate the length, and from this point the length of the arm from elbow to wrist, point O, should be measured back on the line. At the elbow, point O, the sleeve should be 2" more in width than the elbow measure. This gives points P, Q, which are measured an even distance each side of point O. The width of the sleeve at the wrist averages 9"; this amount is to be measured at point

N, using it as the centre; points R, S should be marked. As guide lines, points K and R, L and S, and R and S should be connected.

(d) *Underarm and Sleeve Seam*.—If a full waist is desired the lines for the sleeves may extend from the waist line of the foundation pattern, points T and U, to the bottom of the sleeve, points R and S. These lines should form continuous curves passing a little inside the straight sleeve lines above the elbow. If the curves as indicated in the illustration give too much fulness they need not be drawn from the waist line, but from a point several inches above, as shown by the dotted line.

(e) *Waist Line*.—The waist lines in this pattern should be traced accurately; they are necessary not only in more elaborate designing, but they also serve as guides in basting together the waist. The basque should also be traced before cutting out.

(f) *Centre-Back Line*.—If the centre-back line of the shirt-waist, CH, is used as the centre back of the kimono blouse it does not give sufficient width. On the other hand, if the straight of the material from C is used as the centre-back line it generally gives more fulness than is desirable. A new line may be drawn from C to within about 1" or 1½" of point H. This gives a medium amount of fulness.

(g) *Centre-Front Line*.—If the waist opens in the back the centre-front line must of necessity be on a straight fold of the material; otherwise the amount of fulness and its arrangement may be determined by the taste of the designer.

If the kimono is designed for a sloping shoulder the pattern should be so placed that there is less distance between points I and J, as less length is required over the shoulder. This may be accomplished by swinging in the back of the shirt-waist pattern and bringing the points G and F closer together.

This flat kimono pattern may be adapted to an endless variety of designs, for which costume prints and fashion sheets offer many suggestions. Better results will be obtained if tissue rather than stiff paper is used.

II. Sleeve Designs

A few designs may be made in flat paper from the shirt-waist and the tight-fitting sleeve patterns. The majority of sleeve designs are, however, more satisfactorily executed if made on a stiff paper or a padded sleeve. They are, in consequence, considered under II. *Designing and Draping on the Dress Form.*

1. **Shirt-Waist Sleeve.**—Some of the fulness may be removed from the shirt-waist sleeve below the elbow. It is done in various ways:

(1) By placing a seam from the wrist to the elbow. This must be done with care or the sleeve will be ugly at the elbow. The seam should be placed on the under side of the sleeve to extend from the point of the elbow to the wrist in a line with the little finger. This new seam does not affect in any way the regular sleeve seam.

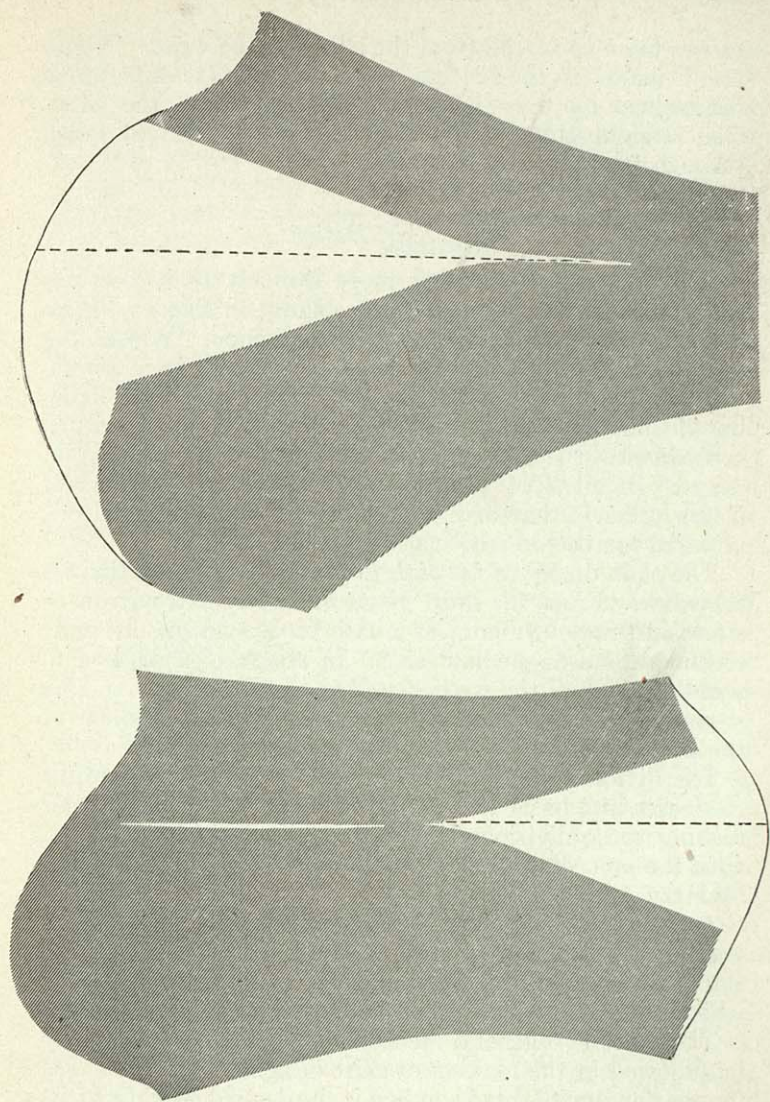
(2) By drawing up the material on the under part of the sleeve and arranging it in tucks near the bend of the elbow. The seam line on the under part of the sleeve from elbow to wrist and also the bottom line of the sleeve should then be reshaped; the seam line of the upper part of the sleeve should remain unchanged.

(3) By placing a series of small tucks extending upward from the wrist. They should taper to a point toward the elbow.

2. **Tight-Fitting Sleeve.**—A one-piece sleeve with fulness at the top or bottom may be made from the tight-fitting pattern.

(1) For fulness at the top the upper and under pieces of the sleeve are placed with the outside seams together from the elbow to the wrist. This placing causes them to spread from the elbow to the top. The curve at the top of the upper should be extended to join the top line of the under, the size desired determining somewhat the direction of this new top line. The straight of the material should lie from the point of the elbow straight up.

(2) For fulness at the bottom of the sleeve the same seams are brought together from the elbow to the top; this



Making one-piece sleeves from the tight-fitting pattern

causes them to spread from the elbow to the wrist. A new line is made for the bottom of the sleeve. Its direction is determined by the size of the puff desired at the wrist. The straight thread falls from the elbow straight down through the centre of the puff.

III. Skirt Designs

Skirt designing is rather more difficult than that for waists and sleeves, because skirts change in shape and size and line so greatly and with such frequency. Waists and sleeves, no matter what the fashion, conform in a general way to the outline of the figure. Skirts cover the figure but do not necessarily take their outline from it, and in consequence there is greater opportunity for change in shape. In all skirt work, in addition to the problem of fitting there is that of hanging as well. Much practice is required for the execution of successful designs.

The plain drafted skirt pattern is used as a foundation for the work. From the draft given in this book a narrow or a full skirt may be made; as a basis for the designs it is wise to choose one of medium size. In adapting a pattern to suit the figure of the wearer, and at the same time making it conform to the general requirements of the fashion of the period, many excellent problems are provided.

The dividing of a skirt into gores of various sizes forms the necessary basis for skirt designing. If directions for making these divisions have not been given in connection with the preceding drafting work they should form the preliminary work in designing.

As has been said, mere technique without reference to good design is of little value. The work of dividing a plain skirt into gores suiting the figure of the wearer is a problem which necessitates a knowledge of the rules of good spacing.

There are two general methods of procedure which may be followed in the making of skirt designs. For both, the foundation draft is made and on it the desired gore divisions are worked out according to the drafting directions, the extra fulness at the waist is determined, the seam lines are

trued, and, when finished, all the necessary lines are plainly indicated on the pattern with a heavy pencil line.

(1) The skirt may be left whole and tissue-paper used over it for the designing, as the indicated seams can easily be seen through.

(2) The skirt may be cut apart into the indicated gore divisions and the designs made by combining the gores. For this either heavy or tissue paper may be used, as the separate gores are placed in any desired position on the paper to serve as guides in the making of patterns.

If the first method is followed and the foundation pattern is not cut apart into gores, it is necessary to remove some, at least, of the surplus fulness which has already been indicated by the darts and gore divisions at the waist. This may be done by pinning in a few shallow darts where the fulness is shown. It may not be possible to make them deep enough to take out all the extra size, but a sufficient amount may be removed to make the pattern a good shape and satisfactory to work with.

As can easily be seen, if the skirt work is to be done in the full size and the patterns used for cutting in materials, more accurate results are attained by the second method—that of the separate gores—as by this method the exact amount of fulness at the waist is removed and the pattern made the correct size. For this work the six-gore division is excellent when made with a centre-front and centre-back gore or panel and two side gores. The same skirt may have a four-gore division by using a dart over the hip rather than a seam. The centre front and back gores will not require changing for this.

When possible, both methods of procedure in making or designing should be tried, as they give variety of practice and one is frequently found to be better suited than the other to certain styles of skirts. In all skirt work great care should be taken to indicate on all patterns and all pieces of a pattern the correct location and direction of the waist and hip lines.

1. **Centre-Front Decoration.**—Many skirts are cut to have a seam at the centre front. This offers opportunity

for a variety of simple designs, as the placket, or skirt-opening, is usually placed in the seam and requires an attractive finish. Either a slot seam or a lengthwise tuck of any width desired may be used. The exact location of the opening should depend somewhat on the decoration. A slot seam should be in the centre, while a tuck should, in general, be placed a little to the left.

2. Designs Based on the Four or Six Gore Division.—

As has been said, the four or six gore division makes a good foundation pattern for a variety of designs, using either method of procedure. For example, the centre-front and centre-back gores may be treated as panels with tucks or other decorative finishes at their seams. The side gore or gores may be arranged in an even greater variety of ways.

(1) The dart may be used for a plain four-gore or an undecorated seam for the six-gore. A tuck is not used at this seam generally, as it will not lie flat over the curve of the hip. It is seldom wise to emphasize this seam line by using any kind of decoration.

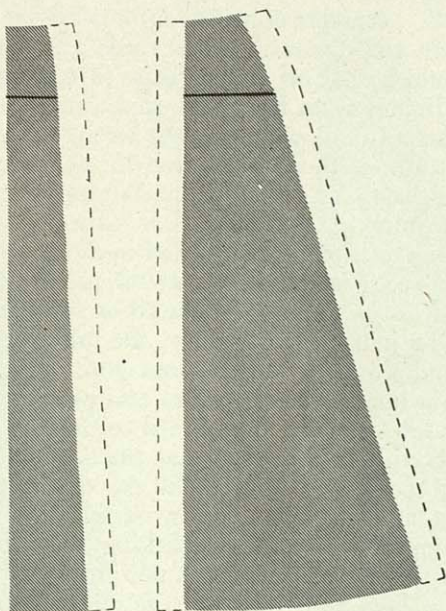
(2) Gathers may be used in place of the dart or seam to draw the fulness in at the waist. These gathers may be covered with a strap or belt placed near the waist line and variously finished.

(3) Fine tucks, rather than gathers, may be made. Care should be taken to taper them to nothing near the hip line; otherwise too much fulness will be taken out below or at the hip, and the skirt will not look well nor will it fit.

3. Tucks.—The simplest work in designing is that of using tucks at the seams of a gored skirt. Either of the methods of procedure suggested above may be followed. In both, careful attention should be paid to the placing of the straight of the material. In general, it should fall at the centre front, at the front edge of each gore below the hip line, and, if a panel back is used, at its centre.

(1) Tucks are placed at the back edge of gores, except at the centre back where there is a plain seam or an inverted plait as desired. If there is a centre-back panel, however, the tucks can be used by placing them at each edge and turning them toward the front.

(2) In adding material to the gores for the tucks an equal allowance is made on the back edge of one gore and the front edge of the next. This does not add width to the gores, but leaves them their original size and merely gives enough extra material for the under side of the tuck, so that



Adding material to the gores of a skirt to form a tuck at the seam

the stitching may be as far in from the original gore line as is desired to form the tuck. As can easily be seen, if the width of the tuck is added to the original size of each gore the size of the skirt will necessarily be much increased or the back gores made so small as to be entirely out of proportion to the rest of the skirt divisions.

(3) The work proceeds as follows:

(a) The front gore or panel is planned first. The centre front is placed on the lengthwise straight and its back-

seam line indicated on the paper. Beyond the seam line once the width of the tuck plus the seam allowance is added. The lines forming these should be exactly parallel to the original seam line, as the tuck is of even width its full length. The width of the tuck is a matter of choice. It should not be too wide. The seam allowance should be $\frac{3}{4}$ " or 1". Whichever width is decided on should be kept uniform throughout. After these are added to the gore, it should be cut off and its edge turned back exactly along the original seam line; this turns one width of the tuck and the seam allowance to the wrong side.

(b) The same method is followed for other gores which are to have the tucks. The seam allowance and once the width of the tuck are added to each seam line of the gore. The back edge of the gore is turned in along its seam line, but the front edge is allowed to extend, as the back edge of the gore in front of it must be placed on it in joining them together. To join them correctly, the folded edge, which is the original seam line of the front gore, is placed to the original seam line of the next gore and pinned flat.

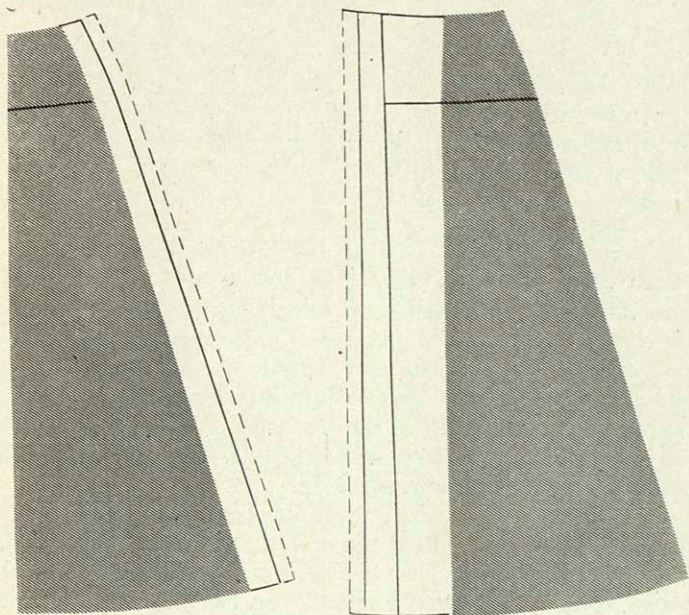
(c) After the two gores are pinned together, if the wrong side is observed, it will be seen that the lines indicating the width of the tucks on both gores fall exactly together, ready for stitching, and that the two raw edges are also together. By employing this method of making tucks the edge of the tuck on the right side is not a new line, but the original drafted seam line, and the gores are unchanged in size or shape. In consequence, the lines are more easily kept straight and the gores in good proportion.

4. **Inverted Plaits.**—Many skirts have inverted plaits added at the seams for decoration or to give additional width in walking. At the centre back, where such plaits are most often used, or at the centre front they generally extend the full length of the skirt, but in finishing are stitched flat for some distance below the waist. On other seams they are frequently made not more than 8", 10", or 12" in length.

To make these plaits, extra material must be added to the seam lines of the gores. This is not done in the

same way on all seams; their position in the skirt determines the exact method of procedure.

(1) For a plait at the centre back of a skirt an equal amount—twice the width of the plait plus the seam allowance—is added to the adjoining seams of the two back



Adding material to the gores of a skirt to form an inverted plait at the seam

gores. Then, when the plait is laid, the seam line falls at the centre back where the plait meets, exactly as it would without the plait.

(2) For a plait, whether full length or not, placed between any other two gores an equal amount is not added to the adjoining seam lines of the gores. When the plait is laid, the seam should not be in its original position—that is, exactly in the centre, as without the plait—but concealed at one side in a fold of the plait. To place the seam correctly the material is added in this way: to the back edge

of the front gore once the width of the plait plus the seam allowance is added; to the front edge of the next gore, which is usually straight below the hip, three times the width of the plait plus the seam allowance is necessary. This brings the seam in the fold of the plait of the front gore.

(3) The work proceeds as follows:

(a) The front gore is placed on the correct grain or thread and its back seam line indicated on the paper. Beyond the seam line once the width of the plait is added. This plait differs from the tuck in that it is not of equal width its full length. The desired width should be measured over at the hip and a proportionate amount at the bottom. A usual proportion is one and a half times the hip at the bottom. The points at the hip and at the bottom should be connected with a straight line. This line should be continued from the hip to the waist in a curve which exactly parallels the curved seam line of the gore. The usual seam allowance should be made the full length of the gore. When both the plait and the seam allowance are added, the gore should be cut off and its edge turned back along the original seam line; this turns one width of the plait and the seam allowance to the wrong side.

(b) To the front seam line of the next gore three times the width of the plait at the hip and at the bottom is needed. The front edge of the gore is placed on the correct grain or thread and its seam line indicated on the paper. Beyond this seam line twice the width of the plait is measured over at the hip and bottom lines. These two points should be connected and the line continued *straight* up to the waist. From this new line once the width of the plait should be measured over at the hip and bottom lines. These two points should be connected and the line continued to the waist. Beyond this the seam allowance should be indicated. The back edge of this gore should be treated like the back edge of the front gore and the gore cut off. After this gore is cut out its front edge is turned back along the original seam line. To lay the plait the original seam line is then folded over or brought to the centre line of the

plait. This requires twice the width of the plait. One width of the plait plus the seam allowance is thus left and extends beyond the gore.

(c) In joining the two gores the original seam-line of the front gore should be placed to the original seam-line of the back gore. This brings together the edges of the turned-back width of plait on the back seam of the front gore and the extending width of plait on the front seam of the back gore and also the two seam allowances. As in making tucks, the lines of the gores and their proportions are unchanged. When a gore which has three times the width of an inverted plait added to its front seam is placed on material for cutting, the original front seam should always be placed on the straight lengthwise thread.

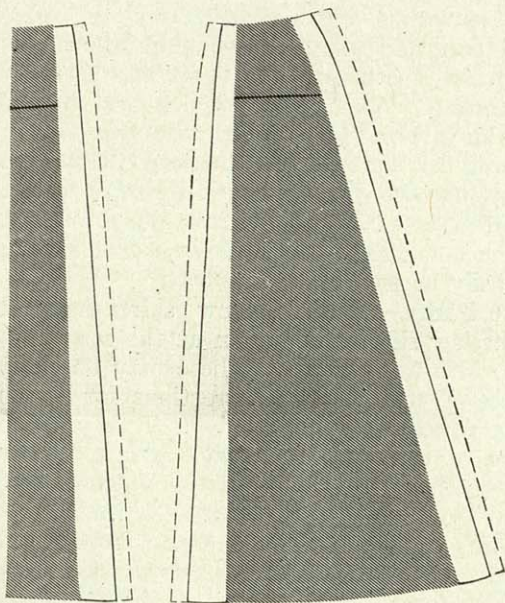
Care must be taken to cut these plaits with the proper length and curve at the waist line so that they can be included easily in the belt.

5. **Side Plaits.**—Many narrow skirts have short and rather shallow side plaits set in at the seams to give additional width for walking. These may be easily worked out in tissue, following the directions for making tucks. Sufficient width is generally given if they are placed at each side of the front and back panels. Eight or ten inches is the usual length, while the width or depth of the plait may vary according to the choice of the wearer. These plaits should always turn away from the centre of the panels and, if placed on the side gores, they should be backward turning, as are tucks. If desired the plaits can be arranged to show only when the skirt is in motion, by not allowing them to extend beyond the edge of the gores. Either narrow side or box plaits may be used, however, to give not only fulness but decoration as well, by extending them over the next gore and giving them an ornamental finish.

6. **Plaited Skirts.**—Plaited skirts may be developed from the plain foundation skirt. This is done in various ways, depending on the material used, the prevailing fashion, and the choice of the wearer. Plaids, checks, and stripes, when plaited, usually need special treatment; otherwise the result

is unsatisfactory. There are two general methods of designing plaited skirts, both of which may be varied somewhat.

(1) In the first method the foundation pattern is cut into a number of gores and a plait of required depth is made on the back edge of each gore.



First method of making a plaited skirt

(a) These plaits are made by the same general method as are the tucks. There are slight differences in detail, however.

(i) As has been said, tucks are of even width their full length, while these plaits, like the inverted, are wider at the bottom and require more material.

(ii) In finishing, tucks are generally stitched flat their full length, while plaits are left free some inches up from the bottom and give additional fulness.

(b) The number of gores used in making a plaited skirt depends entirely upon choice. The more gores the greater will be the number of plaits and the consequent fulness at the bottom. For instance, an eleven-gore skirt will have six plaits on each side of the skirt, the two at the centre back meeting, if desired, to form an inverted plait.

(c) The method of procedure is alike for each gore and is as follows:

(i) The front gore or panel is planned first. The centre front is placed on the lengthwise straight and its back seam-line indicated. To this seam-line is added once the width of the plait plus the usual seam allowance. The width of the plait is determined as in making an inverted plait; that is, by measuring the required width at the hip and at the bottom and connecting these two points with a straight line. This line should be continued from the hip to the waist in a curve which exactly parallels the original seam-line curve. After the usual seam allowance is made the full length of the seam the gore should be cut out. This added amount, the width of plait and seam allowance, is turned to the wrong side, the original seam-line serving as a guide.

(ii) The same amount is added to the front seam-line of the second gore, but it is allowed to extend as in making the tucks.

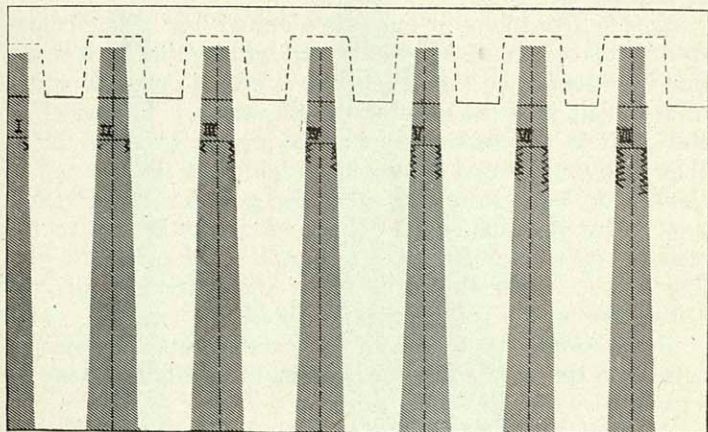
(iii) The fold of the back edge of the front gore is placed to the original seam-line of the front edge of the second gore and the first plait is made.

(iv) An inverted plait at the centre back may be made as already suggested. The gores are unchanged in size or general proportion.

(d) In adding material to the gores to form any of these plaits, care must be taken to have it cut sufficiently long above the hip line to continue the curve of the gores and form a good waist line.

(2) The second method of making plaited skirts is one which is much used for short skirts and is especially suitable for checks and stripes. Straight breadths of material are joined and the pattern is so placed that the bottom of

the skirt and the centre of each gore are on the straight threads. The material for these straight plaited skirts is generally used lengthwise, but may be crosswise if desired, if it has sufficient width and no defined up and down. It is usually found, however, that the lengthwise material hangs better and presses better. In this method as many gores are used as desired; the more gores the greater the



Second method of making a plaited skirt

number of plaits. The number does not in any way affect the method of procedure, which is as follows:

(a) In planning the gores the foundation skirt is divided into equal parts. (i) At the bottom, beginning with the front, where, as usual, only half the width of the gore is measured. (ii) At the hip, beginning with the front. In order to give the plaits good direction over the fulness of the hips, the gores which form the side front and side of the skirt should be a little wider on the hip line than those at the back and side back.

(b) After the skirt has been divided into the required number of gores (i) each gore should have its hip lines at 6" and 10" carefully marked; (ii) the gores should be numbered and corresponding edges notched, beginning at

the front, and then cut apart for placing on the material; (iii) the lengthwise centre of each gore should be distinctly indicated by a tracing. The direction of this tracing is easily secured by folding the gore lengthwise so that its bottom line falls together.

(c) (i) The material is joined in lengths and folded along its lengthwise centre to give an even amount for each half of the skirt. (ii) The centre of the front gore is placed on this fold and pinned. (iii) The bottom of each gore must be placed upon exactly the same crosswise thread of the material. This will bring the lengthwise tracing of each gore on a lengthwise thread. (iv) The gores should be placed at the bottom of the skirt at equal distances from one another, that distance depending upon the depth of plait required. The first designing by this method is somewhat simpler if the distance between every two gores at the bottom equals the width of the gore. If this makes too shallow a plait the distance may be increased to one and a half times the width of the gore.

(d) When the gores are placed in order, according to their numbers, they should be pinned and traced. These tracings must indicate the seam-lines and the hip, waist, and bottom lines of each gore. For the stiff paper, which is the most satisfactory medium for designing the first plaited skirt, the tracing-wheel may be used.

(e) After the tracing is finished (i) the separate gores may be removed and some of the surplus material may be cut out to make the skirt less clumsy at the waist and hips. The material should not be cut out for more than 6" below the waist until the skirt has been plaited and tested. (ii) A seam allowance of $\frac{1}{2}$ " is required at the waist line beyond the tracing and 1" where the lengthwise seams are to be cut. In making a skirt of this kind, the amount which may be cut out in the finishing depends entirely on the length to which the plaits are stitched flat. Where the plaits are securely stitched only a 1" seam allowance is necessary.

(f) In laying the plaits the work should begin at the front. (i) The back edge of the front gore should be brought

back to the front edge of the second gore, matching seam-lines, waist, and hip lines perfectly. (ii) The back edge of gore two must be brought back to the front edge of gore three, and so on. As the paper has no right nor wrong side, this work may be done from either side. In using material the right side of it should be toward the worker in order to bring the plait to the wrong side.

In explaining these two methods, only plaits laid in regular order have been suggested; but with these methods as a foundation the grouping of plaits may easily be worked out.

7. Gathered Skirts.—Gathered skirts may be made in various ways, the method chosen depending on the general effect desired.

(1) The simplest method is that in which straight lengths of equal width at the top and bottom are used and the fulness is gathered in at the waist line. If the skirt is very full this gives a large amount of material at the waist. Such a skirt requires little skill in designing, except in the placing of the gathers to give a becoming arrangement of fulness at the waist.

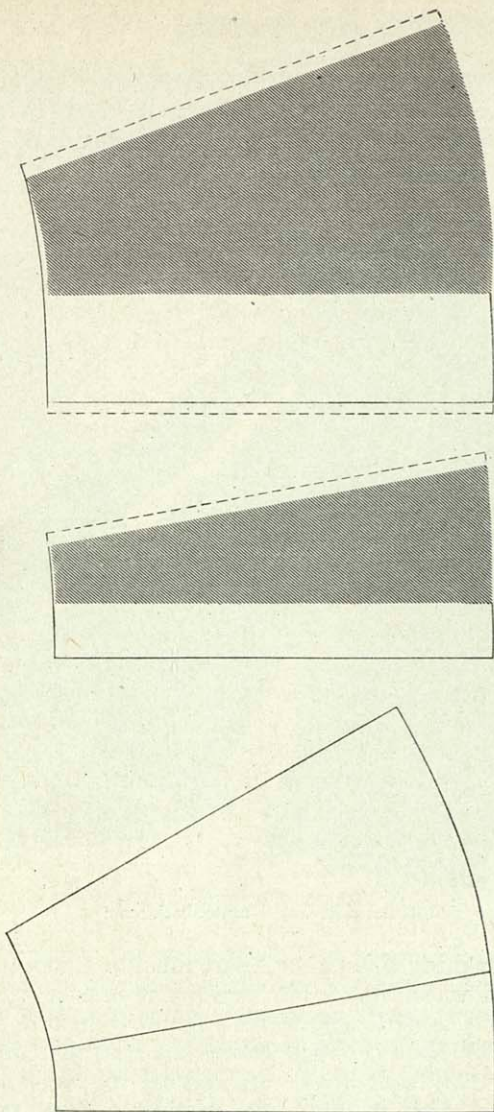
(2) In general, a more satisfactory method is that in which some of the fulness is removed at the waist line of the skirt by goring it out on the seams.

(a) In designing a skirt of this kind the plain foundation pattern may be used, drafted to measure about two yards around the bottom. The pattern should be evenly divided into gores, the number of gores depending entirely on the width of the material to be used in making the skirt. For a material of average width, three gores of equal size may be used.

(b) The work proceeds as follows:

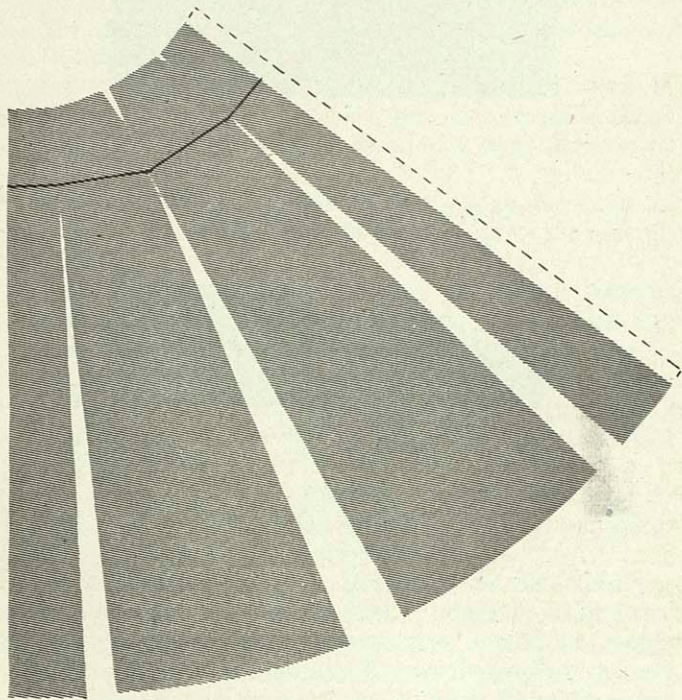
(i) The pattern is divided at the waist line and bottom line into three equal parts, or gores. The points indicating these divisions are connected by straight lines along which the skirt is cut apart. This gives three gores of equal size, the front edges of which should be placed on the straight lengthwise thread in designing the new pattern.

(ii) In making the gathered skirt from these the desired



Making a gathered skirt from a two-piece pattern

amount of fulness is secured by setting the straight front edge of each gore a little back from the edge of the material. The amount added in this way depends on the size desired for the finished skirt.

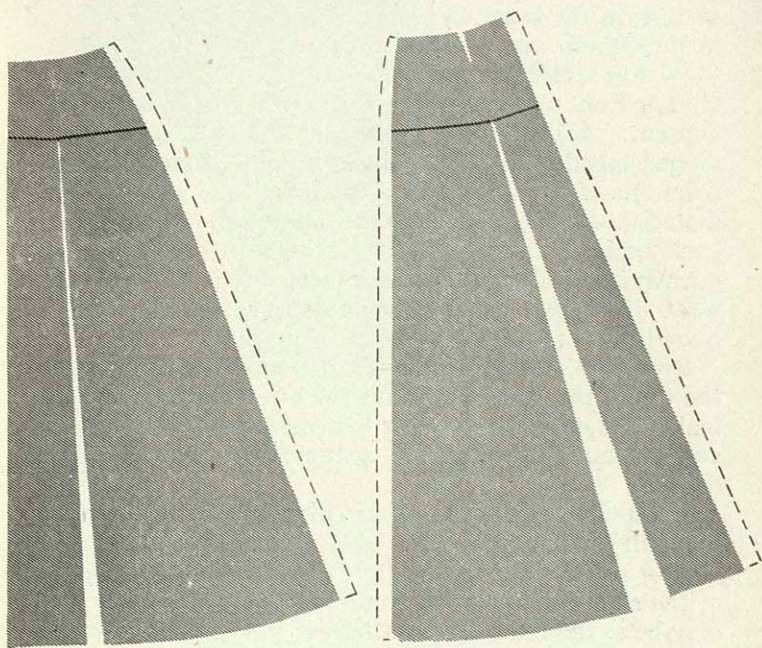


Circular skirt with a centre-back seam

(iii) In making this pattern care must be taken to maintain a good waist line. The new front line of each gore should be the same length as its original front line, but the new waist line should not be formed by a straight line connecting the two front lines. In shaping the waist line for the enlarged gore it must rise gradually from the new front line, going above the original front line, until it joins the old waist line at the back edge of the original gore. In this way height or length enough is given to arrange

or push the fulness from the front of the gore along its full width as required to suit the figure.

8. **Circular Skirts and Tunics.**—Circular skirts and tunics may be made in two general ways.



Circular skirt with centre-back and side seams

(1) By using the skirt draft in Chapter V, which may be adapted to various depths or lengths or widths. This method needs no further explanation here.

(2) By combining the separate gores of the six-gore skirt, which may be so arranged as to give any desired depth and length and width. If a circular skirt or tunic is to be made from a six-gore pattern the work proceeds as follows:

(a) For a circular skirt with centre-back seam: (i) The centre of the front panel is on the lengthwise straight fold.

(ii) The front seam-line of the second gore is placed to touch the side seam of the front panel at the waist line and for a few inches below; from this point it gradually spreads until the two gores at the bottom are some distance apart. (iii) The third gore and the back panel are placed in turn in the same way with these, and a circular skirt is made without any seam but that of the centre back.

(b) For a circular skirt with centre-back and side seams:

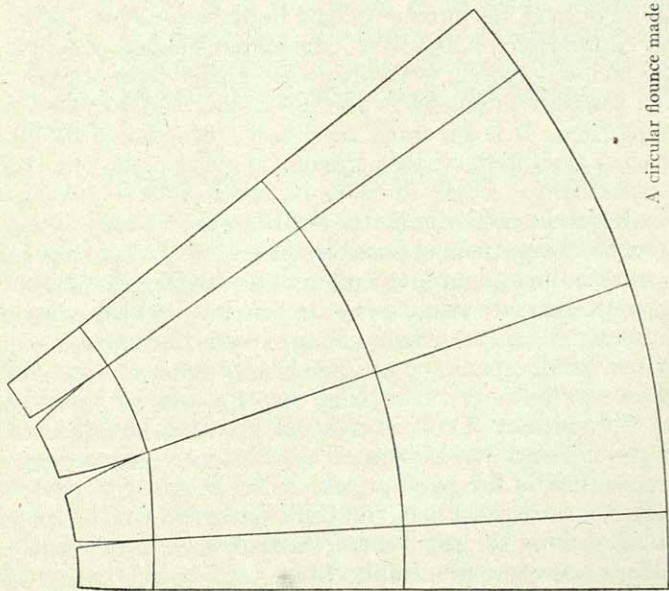
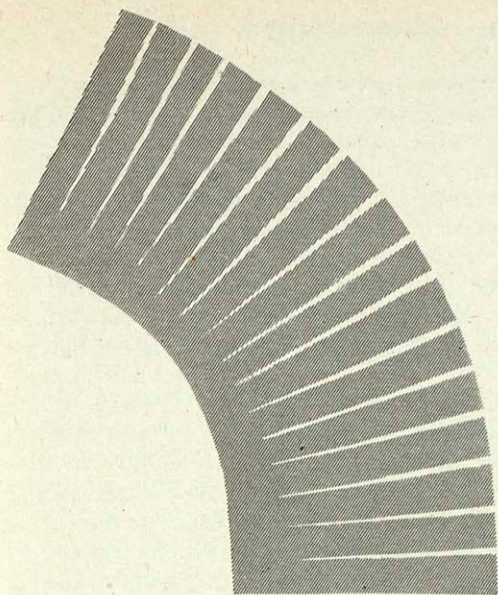
(i) The front panel and the second gore are placed as before and cut. (ii) The third gore and the back panel are arranged together in the same way, and, in cutting, the front seam-line of the third gore is placed on the straight of the material. With a seam over the hip as well as at the centre back there is less likelihood of the skirt's sagging. Frequently the centre-back line is better if it is made somewhat more bias. The amount depends on the width required for the skirt.

By either of these methods the waist line or curve at the top of the skirt or tunic is the same size as it was originally, but deeply curved, as is necessary for circular skirts and tunics. The depth of a tunic may be regulated as desired.

9. **Circular Flounces.**—A circular flounce can easily be made by using the undivided foundation of a rather narrow skirt. An exact pattern should be cut of that part of the skirt for which the flounce is intended. The depth may be as desired. This pattern is then slashed at regular intervals from the bottom to within $\frac{1}{16}$ " of the top and spread to the required width at the bottom. As in the last method of designing a circular skirt or tunic, this makes the curve at the top edge much more circular but does not change its size, while the lower edge is more circular and has more width.

10. **Triple Skirts.**—Triple skirts may be designed from the plain skirt. Triple skirts are of several kinds and are made in many different ways.

(1) By the use of straight or somewhat fitted flounces, the upper slightly gored and cut from the drafted pattern and the two lower straight, or slightly gored, with their



A circular flounce made from the foundation skirt

fulness held in as desired at the side and back. These three flounces may be attached to each other, in which case no foundation is necessary. This is a satisfactory style for soft wash materials. The fitted top flounce may serve as a yoke and the lower rather straight flounces may be joined together and attached to it by cordings or shirrings.

(2) By the use of three straight flounces which are not gored but have their fulness either gathered or plaited. If plaiting is used it may be either side, box, or accordion. Flounces of this style should be attached to a foundation skirt.

(3) By the use of three circular flounces. If these extend around the entire skirt it is generally better to cut them in sections to prevent the material from becoming too bias at the side or back of the skirt. The centre front should be placed on a fold, the front edge of each section on a straight edge. These sections of the flounce correspond to the gores of a skirt and are like them in their general shape. If these flounces are used on a skirt which has a panel front, the fulness of the flounce hangs better and is less likely to fall to the front, if the front edge of the flounce, where it is joined to the panel, is slightly bias rather than straight.

If a series of flounces is used on a skirt and attached to a foundation, as is generally necessary, care should be taken to have each flounce deep enough to overlap the one below satisfactorily. Good division of space should always be considered in determining the width of the various flounces.

As much practice as possible should be given to skirt designing, as many find it a difficult problem. For practice, different-shaped yokes may be added. Yokes may be combined with front, back, or side panels in various ways; shaped pieces, plain or arranged in gathers, or plaits may be inset; the six-gore skirt may be so combined by spreading the gores at the waist as to give a skirt having fulness at the top and little width at the bottom. An example of such a skirt is the peg-top, which has the centre-front and back seams slightly bias and the lengthwise straight of the material over the hip, where there is also extra length of material to form the drapery.

II. DESIGNING AND DRAPING ON THE DRESS-FORM

In designing in materials on the dress-form the kind of design to be chosen, the main divisions of the figure, the finer relations of line and combination of color depend entirely upon the individuality of the wearer, the fabric used, and the general fashion followed. All these factors are, therefore, obviously variable and subject to no rules.

Good technique in this work can be acquired only after much practice in drafting and pattern-designing, as all the general principles embodied in these are needed. Drafted patterns are not used except for linings, but a knowledge of the proportions taught by drafting is necessary.

A dress-form is required for the work, as it is not convenient or even possible in the majority of cases to work directly on the figure. The form should be so arranged as to have, in as far as possible, the general outline and shape of the person for whom the design is to be made. In consequence, the selection of the design to be made cannot be arbitrary. The design may be based on an illustration in the latest fashion book or on an eighteenth-century costume, but whatever its source it must be adapted to suit the wearer.

I. Preparation of the Dress-Form for Draping

While the dress-form is considered here purely as a necessary tool in designing, its use is really one of the most important things to learn in dressmaking. Not only is it necessary in the designing of a costume but in the making as well. When its use is understood and skill is acquired by practice, not only the designing but much of the fitting, adjusting, and sewing may be done on it. Only the most experienced designers attempt to do much work directly on the person, and then usually because of some peculiarity in the individual which makes the finding and adjusting of a suitable style extremely difficult.

I. Purchase of a Form.—Dress-forms of various kinds may be purchased at varying prices. The expensive ones,

such as those which may be adjusted by various mechanical devices to the required sizes, are not necessary and are not considered here. The most satisfactory for general use are the non-adjustable, which may be purchased at small cost and are of good shape in recent makes. In the selection of a form, care should be taken to get one small enough. It is not safe to depend entirely on the bust measure of the form which may be the required size, while the rest of the measures will be much too large. The neck, bust, and hip measures should all be tested. A form which is too small may be made larger but one which is too large is quite useless.

2. **Preparation of the Dress-Form Cover.**—The preparation of the form requires a little time and care; all forms are made in what are considered to be regulation sizes but may be made the desired size by covering and padding. It is very easy to make a form the correct size and shape by covering it with a tight-fitting waist and a plain skirt drafted to the required individual measures. These covers may be made to fit smoothly and closely by using soft tissue-paper or cotton wadding as a padding.

The material used should be strong and not easily stretched. Unbleached muslin, of a quality costing about fifteen cents per yard, is preferable. It is usually kept on the form for some time and has much work done on it, and its firmness prevents any stretching.

(1) *Tight-Fitting Waist and Collar. Making and Padding.*

(a) *Making.*

(i) *Waist.*—The cover for the waist or bust is made first. For this the tight-fitting waist, drafted to the required individual measures, is used. (See *Drafting*.) If the waist pattern is cut to extend 10" below the waist it is more satisfactory for the padding. It should be very carefully and rather closely fitted; otherwise the garments made over it, when it is on the form, will be too large. In this fitting care should be taken that the direction of the seam-lines is good; for, while these seams are not usually indicated in any way in the designs themselves, yet they serve as a basis for them and affect their quality. To pre-

pare this tight lining for the form after the fitting, the seams are stitched and notched, a collar is made and basted on, and the centre-back lines, height of bust, waist line, and armseye line are marked with blue cotton.

(ii) *Collar*.—The collar may be constructed from the draft (see *Drafting*) or by fitting a straight piece of material (see *Waists*). After it is fitted it is turned to the exact size and height and its darts carefully stitched. It is better to baste rather than stitch it to the waist, as collars cannot be used on all forms.

(b) *Padding*.

(i) *Waist*.—After the collar is attached the waist is slipped on the form to see where the padding is needed. After the way in which the pattern fits is carefully observed, it is taken off and the padding arranged as required. It is not satisfactory to put the waist on first and push the padding in, as is sometimes tried.

Soft but strong tissue-paper is a very satisfactory padding; other materials, such as cotton wadding, are frequently used. In arranging the padding on the form every effort should be made to have it smooth and so placed that the waist will not only fit well but indicate very definitely the particular outline and shape of its wearer; otherwise the designs made on it will not be becoming. There are no detailed rules which can be given for the placing of the paper; in general, it gives a better surface if put on in folds without any bunching. If the form is too small below the bust, at the waist, or over the hips, the paper may be wrapped around it in smooth layers. Often, in order to have the neck the correct size, a form must be purchased which is otherwise too small. To remedy this, the paper may be wrapped around as already suggested and still more added by arranging it surplice fashion—that is, strips are brought over each shoulder from waist line to waist line and crossed at centre front and back. If the shoulders are too sloping, extra strips may be used there and also around the armseye. If the lining, which is cut 10" below the waist line, is carefully padded, a skirt need not necessarily be added.

After all the padding which seems necessary has been added, the lining is put on the form once more and carefully smoothed into place. The form must be firm and the correct shape. If not, the lining must be taken off once more and the padding rearranged or more added as is necessary.

(ii) *Collar*.—It is frequently difficult to pad the collar successfully or to keep the padding in place once it is arranged. A piece of stiff paper may be used in addition to the padding. If it is cut wider than the collar, and the correct length, and is placed between collar and padding, it will usually keep the collar stretched into shape and free from wrinkles.

Both the waist and the collar, when satisfactorily arranged on the form, should be sewed together along the centre-back line with rather long stitches. Pins are sometimes used, but they catch in the designing fabrics and are not convenient.

(2) *Tight-Fitting Sleeve. Making and Padding.*

(a) *Making*.—One sleeve, the right, is prepared. A pattern of the tight-fitting sleeve is drafted to the required measures. A lining is then cut from this pattern and carefully basted, fitted, and stitched. (See *Drafting*!) This lining should not be permanently attached to the waist. It is often in the way when work is going on, or it may be required for separate sleeve-designing. If the armseye line is plainly marked in the sleeve and the waist, and the positions for the correct placing of the sleeve indicated in the sleeve and the waist, it can be either basted or pinned in when needed.

(b) *Padding*.—The sleeve must be very firmly padded with tissue-paper or with curled hair. To keep the padding in place it is necessary to cover the sleeve at the armseye line or top and also at the wrist with an extra piece of material.

(3) *Skirt*.—As has been said, if the tight-fitting waist is cut to extend 10" below the waist and is well padded, a skirt is not really necessary.

Without a skirt the form is frequently more satisfactory

for draping close-fitting skirts and is also more convenient for general handling and moving. If one is used, however, there is no definite rule in choosing it, as to the number of gores required. The plain foundation pattern may be used. It is drafted to the required measures, carefully fitted, and hung. (See *Drafting*.) After it is stitched and a belt attached it is put on the form, and if more padding about the hips is required than has been used for the waist, it is added, using the same methods as for the waist.

The placket should be fastened, as was the centre back of the waist, with a few rather long stitches.

A few seam-lines should be indicated in pencil on the skirt to serve as a guide in the designing and draping. The seam-line most generally useful, aside from those of the centre front and back, is a line well placed at the side over the hip. A four, five, or six gore skirt may be used satisfactorily.

Whatever division is made, great care should be taken to proportion the gores so that their seams give good lines to the figure for which the skirt is intended. This is a design problem in itself, and as these lines serve as a basis for many other designs it is of special importance that they should be technically and artistically correct. A successful division of gores requires much practice based upon appreciation for good spacing. While in drafting it is necessary to give certain definite directions for these gore divisions, which are in general based upon the hip measure, in designing, these arbitrary divisions should be considered, if at all, as suggestive, as providing merely a starting-point for the work. Two figures may have practically the same hip measure but be quite unlike in contour; one may be wide and flat, the other full and round. They naturally require different designs, and in consequence attention must be given to these differences in the padding of the forms and in the making of the gore divisions of the skirts to be used on the forms. While the width of the gores in a skirt may be largely determined by the prevailing fashion, they can and should be so modified as to be well proportioned and consequently becoming to the wearer.

II. Technique of the Dress-Form

Draping and designing on the form can be done with much less difficulty if the worker first familiarizes herself with its mechanical construction and manner of operation. Any form may be raised or lowered on its standard to a convenient height, which should be such as to enable the worker to use it without unnecessary fatigue. It is impossible to bend over or reach up for any length of time; and, as all good designing requires time and an attention not diverted by inconvenience, it is necessary for the worker to be comfortable before attempting even the simplest problem. The part of the form in use should be as much as possible within easy reach and also on a level with the eyes, so that eyes and hands may work together. If the form is not arranged so that it is practically stationary on its standard, it proves very annoying, as it moves and turns with each movement of the worker. This difficulty can be easily remedied by the use of a wooden collar—there should be such a collar on every standard. It fits into the opening in the wooden base of the form and is held there by a metal band which can be kept firmly in the required position by turning its screw. With the careful tightening of the screw or head at the top this should make the form practically motionless on its standard. There should be sufficient space about the dress-form for the worker to step away and get a good perspective of her work.

These may seem minor details, but they play an important part in the ease with which satisfactory results are secured, especially with beginners.

III. Handling Materials

As materials are to be used in this designing, certain general information is required regarding the various types or classes of standard fabrics which are in most common use. Such information can be satisfactorily acquired only through experience in the actual handling of fabrics, based on the knowledge which may be acquired in a study of textiles. Some fabrics, such as soft satins, are exceedingly

pliable and lend themselves to elaborate design in drapery. Others, like the heavy bengalines in silks and the serges and cheviots in wools, are in general much less flexible and in consequence require simpler treatment. Many materials, like broadcloth, have a decided up and down; because of their napped surface this is easy to determine. On the other hand, there are materials, like henrietta and cashmere, with as decided an up and down, which affects their color in draping but which have no nap to serve as a guide in the work. There are many materials which have a pile surface, such as velvets, corduroys, and plushes. These require special attention in making, as they have a decided up and down. Mirror and chiffon velvets must be used with the pile running down; otherwise the polished or mirrored surface is destroyed. Many velvets and plushes are made, however, with the pile standing, as this gives a much richer surface to the fabric. It also gives a rougher surface which easily catches dust.

In working with materials the fingers should be highly sensitive and as active as the eyes. Flexibility is of as great importance in the hands of the designer as in the hands of the musician, and it is acquired in much the same way—through continuous use. Fingers may be made capable in judging and skilful in arranging materials only through constant and thoughtful use. They should be, through practice, so well trained in recognizing the general quality, the up and down, and right and wrong of fabrics as to render a decision as quickly and as satisfactorily as the eyes. Without well-trained eyes and hands successful dressmaking is impossible. In manipulating material the whole hand should be brought into use rather than, as too often happens, just a few fingers. All the fingers should be dexterous; they should hold the fabric firmly but lightly. Material should never be clutched or grasped, and in arranging it in the desired way there should be no dragging of the fabric, either up or down, into place. If it cannot be made to fall naturally into the required folds, another arrangement to which the material will lend itself should be tried.

IV. Important Factors in Designing

(1) Emphasis has already been laid on the necessity for accuracy in dressmaking; it cannot be overstressed here. Even trifling variation in the details of the designing work affects the result seriously. In testing for accuracy in the size and shape of pieces and to secure true direction of line, there is no more useful tool than the tape-measure. In establishing the long seams of a skirt which is made in flexible material, it is frequently difficult to keep straight lines. If the tape-measure is attached to the waist and drawn tautly to the floor in the desired direction, it acts as a guide in truing the lines.

(2) The greatest care is required in maintaining in all draping the correct grain of the material. The slightest variation may completely ruin a costume.

It may safely be said, in fact, that the successful execution of all designs is dependent on the placing or locating of the straight grain or thread of the material. In copying any designs this is the most important detail to observe and the one most frequently ignored by the beginning designer. Its placing in waist, sleeve, and skirt is not subject to rules but depends entirely upon the design.

If a centre front or centre back of a costume requires the lengthwise straight of the material, as it frequently does, the most careful attention should be paid to the establishment of the straight grain the entire length and width of the piece. The same is true of a bias; if a true bias is required it must be maintained.

A variation in grain, even though it is a slight one, on the two sides of a costume makes it absolutely impossible to arrange the fulness in the same way or to have the folds take the same lines. The two sides will vary decidedly. No general rules can be given for the placing of the straight grain or thread of material, as the character of the design determines its position.

(3) In arranging folds in both waists and skirts the grain of the material must be carefully observed. Folds running on the lengthwise threads give a straight effect and can

be pressed flat. This is frequently very important in skirt work when plaits are used and a sharp edge is desired. Folds on the crosswise threads are much rounder; they give the tubular effect which is sometimes desirable. They can be pressed to give a fairly sharp edge but are not as satisfactory in this way as folds on the lengthwise. They are, in general, less graceful than the lengthwise folds.

Folds on the bias of the material are exceedingly artistic and graceful in the way in which they hang and the general effect they give. They are most desirable in all elaborate designing, especially when silk material is used. If a sharp edge is required they are not good. They will not press flat, as the fold crosses two threads of the material. But, on the other hand, they give very excellent service, as they do not crease or mat in wearing.

(4) When the divisions or lines of a garment are to be determined, the varying outlines of the human figure must be considered as the space to be filled. Because of the great variation in the general outline no exact rules can be given. Each figure presents an individual problem. In beginning designing it is frequently helpful to use tape to indicate on the form the lines desired in the costume. If the tape is of contrasting color the lines show clearly and give a well-defined design, which may then be judged as to correctness of proportion, becomingness, and general suitability.

V. Suggestive Designing Problems

Designs which may be easily executed should be chosen for the first work in draping on the dress-form. However simple the problem may be, it must necessarily involve some new factors. No attempt should be made at first at originality or adaptation of elaborate patterns, and it is much wiser to have the materials of such kind as to be easily handled. Cheese-cloth, net, unbleached muslin, and outing flannel are all good for beginning draping; they drape easily and hang well, and do not require any attention to nap or pattern. Draping which demands consideration of combination of color and texture may follow after

the worker has had some experience in using the dress-form and in the handling of simple materials.

1. **Linings.**—For the preliminary drill various linings and foundation patterns may be made, until facility is acquired in working directly on the form and in cutting the material into the required shapes without the guide-lines of a pattern.

Directions are given here for draping a shirt-waist or semifitting lining and an evening-waist lining. One or both of these may be attempted to gain experience—each offers a slightly different problem.

In any draping too many pins should not be used. Very frequently many attempts must be made before the desired effect is secured, and when the draping is done directly in the material it becomes defaced by pin-holes. In attaching the material to the form a few pins may be placed horizontally to hold it in place. In fastening the seams together the pins, with their points down, should parallel the seam-lines. The regulation seam allowances should be made even though the models are not to be used later.

(1) *Shirt-Waist Lining, Opening at Centre Front.*—This lining is simpler in construction than any other. It has three pieces, the back and the two fronts. The back and one front are all that need be made if trial material is used. The amount of material is approximately twice the length from the highest point of the shoulder down the front to the bottom of the waist, with an additional 2" for seams.

(a) The back of the waist is draped first. The material may be more easily managed if the required length is cut off. The centre-back line is marked with colored cotton and the material folded along the line so that the two sides may be draped together. The draping is done on the right side of the form. In pinning this lengthwise centre fold to the centre-back line of the form it should be placed $\frac{1}{16}$ " to the right to allow for the material included in the fold. Extra material should extend above the neck line to form the shoulder and its seam. The straight threads of the material must be carefully watched throughout the work. They should extend straight across the back from armseye

to armseye. Pins placed near the armseye will hold the material in place while the neck is shaped. The material must be carefully fitted about the curve of the neck to the shoulder seam. A seam allowance of nearly $\frac{1}{2}$ " should be left at the neck line which may require slashing to fit smoothly. The general position of the shoulder seam may be regulated as in the draft, but its exact direction and location should be guided by the requirements of the padded form. It is generally most becoming when it lies just back of the highest part of the shoulder. The material is pinned in place to indicate the seam, but it should not be cut until the underarm seam and the waist line are pinned, as some adjusting may be necessary. The underarm seam falls in a straight line from the centre of the underarm to the waist. The amount of fulness at the waist line is a question of taste. Too much makes the waist clumsy, while none usually makes too great a bias at the seam. In determining the amount of fulness the material should be smoothed down over the back from the armseye along the underarm seam to the waist and pinned at the waist line. The general appearance of the back should then be observed as to fit and direction of grain of material and the shoulder and underarm seam cut with a $\frac{3}{4}$ " allowance. An allowance of $\frac{1}{2}$ " must be made at the armseye, which must be cut sufficiently high under the arm to give a good line. The location of the neck, shoulder, underarm, and armseye lines must be indicated with colored bastings on the two thicknesses of material while it is still pinned in place on the form. It should then be opened and pinned to the form in correct position. If the left side of the padded form is not exactly like the right, any required alterations may be made in the pattern and the bastings changed to indicate the correct lines.

(b) The making of the front is simple, as the seam-lines are already indicated. In pinning the material at the centre front more must be allowed than at the back above the neck line to reach the shoulder seam. The straight threads must extend across the front from armseye to armseye.

The material should be pinned in place near the armseye while the neck is shaped. The front shoulder seam must be shorter than the back seam, and consequently it must be stretched until the two edges can be smoothly pinned together. This seam is not cut until the front is finished. In order to give fulness over the bust the material should be eased in or swung in a little from the point or end of the shoulder. In doing this care should be taken not to make the armseye too full. The fulness at the front is adjusted at the waist line before the underarm seam is pinned. The front should be inspected for fit and grain of material and all its seams marked to form good lines and cut with correct allowances. The seams of the front and back may be pinned together matching bastings, and when an even line is made around the bottom the waist is finished. If the entire waist is to be made the two fronts should be draped together.

Following this, various other linings to be used later may be made—net, China silk, *crêpe de chine*, and muslin are all satisfactory. The linings may be made in various ways, the style and material chosen depending on the figure of the wearer and the kind of dress in which they are to be used. A good armseye and neck line should be established; the shoulder seam should be correctly placed; the fulness at the waist line should be carefully arranged; and the required straight grain or thread of material should be preserved.

(2) *Evening-Waist Lining*.—Evening-waist linings and wide girdles give variety of practice, as they have more seams than the shirt-waist. Their seams are not always placed as are those of the form cover, as many linings are made without an underarm piece.

An evening-waist lining opening at the centre back may be made from a straight piece of 20" material about 18" in length. The draping may be done directly in the lining material.

(a) The lengthwise centre of half the length of the material is marked and pinned to the centre-front line of the form. It is then drawn easily over the bust to the underarm, where there should be a seam. The width of the

material brings the selvage about in position for the seam which falls from the centre underarm straight down to the waist. The fulness in the front below the bust is removed by darts—one at each side of the centre. For a 36" bust measure these darts are about 3" apart at the waist line and 5" at the top. They extend from the waist to within about $1\frac{1}{2}$ " of the upper edge of the lining.

(b) To form the back the second length of material is cut lengthwise along its centre. The back is usually made with two pieces, a centre and a side back, both wider than the corresponding pieces of the form cover because there is to be no underarm piece. The centre and side back pieces should be well proportioned to fill the space to the underarm seam. Attention should be given to the direction of the seam-lines, to the required seam allowances, and to the grain of the material before the lining is considered finished.

A *tight lining* may also be draped, but, as the correct lines are definitely indicated by the form cover, there is no great advantage to be gained unless the worker uses another dress-form of a size and shape requiring some variation. For instance, for a stout figure two underarm pieces are frequently used and the side front may be cut to have a bias grain of material across the chest rather than a straight.

Following the making of linings, the designs suggested for the flat paper work will serve as well for practice in draping. Their becomingness to a special figure can now be tested and necessary alterations made.

2. **Shirt-Waist Designs.**—As the shirt-waist designs are the simplest, they are the first to be made. Various forms of decoration, such as tucks and gathers, which introduce fulness, may be attempted, as well as different styles of yokes and turnover collars. When these are made in material it can be seen how important it is to give careful attention to the proper direction of the threads, as on this depends much of the fit and hang of the garment.

3. **Kimono-Waist Designs.**—The plain kimono-waist gives a very good draping problem. The waist is often

found to fit better when draped on the form than when drafted to measure or designed from the shirt-waist pattern. This is largely because the height of shoulders varies, and, as the plain kimono has no shoulder seam, it is practically impossible to alter by refitting, once the waist is cut.

(1) While draping the kimono the padded sleeve should be attached to the form—practically at right angles to it—otherwise there is no opportunity for testing to get sufficient length of material from armseye to waist to allow freedom of motion. No definite instructions can be given for the direction of the crosswise threads which run from the shoulder down through the sleeve to the wrist, as this depends so largely on the height of the shoulder and the general shape of the figure. They should be so arranged as to remove any unnecessary fulness at the back near the armseye. This requires practice and for this reason is an excellent problem. The lengthwise threads which go around the sleeve should be made to meet at the seam by holding or easing in any extra fulness or length near the armseye and above the elbow. This makes it possible to match the stripes or cords in materials like Bedford cord and piqué. In draping any kimono very careful consideration must be given to the threads of the material.

(2) A kimono-waist may be close-fitting or full. (a) In making a rather full kimono the centre back and centre front may both be on the straight of the material. Some of the fulness may be removed in the underarm and sleeve seam. (b) If a kimono pattern is required which has little fulness the extra material may be removed in three different ways; that is: (i) The material may be drawn to the front and the centre front finished with a slight bias, or with the extra material turned back to form decorative revers. (ii) The centre back may have a seam the edges of which are slightly bias. This removes the extra fulness and allows the front to be straight. (iii) A seam may be made, extending from the neck line down the shoulder and arm to the wrist.

All these methods should be tried for the experience they

give. The patterns acquired may be used for a foundation for various designs which are made by the introduction of lines forming different divisions. As illustration, the raglan sleeve may be suggested by using a line which forms a 2" yoke at the centre back and gradually drops in a curve under the arm and is then brought up again in a straighter line at the front to form a shallow yoke. There are many possible variations of these lines to suit different figures.

4. **Sleeve Designs.**—Designs may be made from the foundation or plain shirt-waist sleeve and the plain fitted sleeve. Both lend themselves to a great variety of treatment. The designing may be done in several ways: on a sleeve form which may be purchased and prepared; on a sleeve which has been drafted to individual measures made in material and padded; on a stiff-paper sleeve which is made from the drafted pattern.

Of these the first method is the least satisfactory. The form is expensive; it is heavy and stiff, difficult to manage in consequence, and it requires as much preparation as the other methods. Like the dress-forms, it must be padded to fit a covering which has been drafted to individual measures and fitted.

As sleeves are an exceedingly important part of any costume and are often difficult to make satisfactorily, all possible practice should be given in their designing. For this practice it is a good plan to have a stiff-paper sleeve and a padded sleeve; for, as the stiff-paper sleeve is flat and the padded sleeve is round, each is specially suited to certain kinds of sleeve work. For instance, in the making of a rather elaborate fitted sleeve of chiffon with a net or mousseline-de-soie lining the material can, in general, be more easily manipulated and sewed on the flat-paper sleeve; on the other hand, in the making of semifitted sleeves and shirt-waist sleeves the padded sleeve is much more satisfactory.

In preparing both the stiff-paper sleeve and the padded sleeve it is necessary to draft a fitted pattern to individual measures, cut it in material, and baste and fit it. The stiff-paper sleeve should be made first, as the muslin pattern

from which it is cut may afterward be made by padding into a padded sleeve.

(1) *Making the Sleeves.*

(a) *The Stiff-Paper Sleeve.*—(i) A muslin sleeve is first made to measure, using the tight-fitting-sleeve draft. If this sleeve is correctly drafted and basted and its seams notched, it will lie flat on the table without twisting or drawing and the straight of the material will lie along its back fold from armseye to elbow. It is easier to cut the paper pattern from the sleeve if its seams are turned to the wrong side, as no seam allowances are made in the paper—the pattern is cut the exact size of the sleeve. (ii) The paper should be heavy but not so stiff as to break or crack in the handling. As the pattern must be double, like the sleeve, a large sheet about 30" by 20" should be used and folded in the centre on the lengthwise straight. (iii) The work proceeds as follows: The straight fold of the basted sleeve from armseye to elbow is placed to the lengthwise fold of the paper and the sleeve held in place by pins, perfectly smooth and flat, while its entire outline is traced with a wheel.

A tracing should also be made to indicate the line of the top of the under part of the sleeve. After the muslin sleeve is removed from the paper all the traced lines of the pattern should be trued, as it is usually difficult to get good lines in tracing around soft materials. The pattern is then cut out along the seam tracings and the top shaped by the traced line. The sleeve will be in one piece, as it must not be cut open along the fold. If the pattern is well made the muslin sleeve should slip over it and fit perfectly.

(b) *The Padded Sleeve.*—(i) The muslin sleeve which served as a pattern in cutting the stiff paper is used for the padded sleeve. (ii) In preparing it for cutting in the paper it was necessary only to baste the seams carefully and notch them. Before it can be padded, however, the seams must be stitched in order to stand the pressure of the padding. (iii) After stitching, the seams are turned to the inside and the sleeve firmly and evenly padded with tissue-paper or with curled hair, which is much better but more expensive.

(2) *Materials*.—Flexible materials, such as cheese-cloth, unbleached muslin, cambric, tissue-paper, and inexpensive net are most satisfactory for practice in sleeve designing.

(3) *Shirt-Waist-Sleeve Designs*.—The padded sleeve is usually found to be more satisfactory for shirt-waist-sleeve designing than the stiff paper.

To aid in the designing, a plain shirt-waist sleeve which has been drafted to measure, fitted, and made should first be placed on the padded sleeve and pinned in proper position for general inspection as to the direction of its seam and the location of the straight of the material. The seam should be in line with the inside seam of the padded sleeve, just inside the arm, but not too much under it. The thread of the material should fall from the highest or central point of the sleeve in a straight line to the elbow. The grain or straight thread of the material is as important in sleeve designing as in all other designing.

(a) There is a regulation model for the sleeve of the strictly tailored shirt. Its only variation is in size; that is, in the amount of fulness used and in the width of its cuff—details which are regulated by fashion. Such changes are easily made and do not provide a designing problem.

(b) Sleeves which are used in semi-tailored waists and in lingerie or silk waists, however, may be changed in many ways; while their general style as to the size, location of fulness, or decoration is usually determined by the demands of fashion, the details of execution—that is, the methods used for adding or removing fulness and for making decoration—are determined by the design. In general, there is much less opportunity for decoration above the elbow of a full or semifitted sleeve than below.

Occasionally fashion demands a sleeve which is full below the elbow and close above. One method of making such a sleeve is by removing the fulness at the top by a series of tucks or plaits of the desired length. These must always be laid absolutely along the straight threads of the material. Tucks are also used around a sleeve its full length; these are purely decorative. They must be made on the straight crosswise threads, and may be in groups or

at regular intervals and with or without the added decoration of insertion. The use of tucks always provides a problem in good spacing.

There are many variations in methods of finishing below the elbow or at the wrist. The straight cuff and placket are usually omitted. The sleeve may be made to fit closely below the elbow by removing its fulness in a seam, as suggested in the flat-paper work. This seam runs from the point of the elbow to the hand in a straight line, which if extended would touch the little finger. It may be finished as a plain seam or to form a decoration. If the fulness is allowed to remain it may be tucked or gathered in at the wrist and the sleeve finished with a plain band cut the lengthwise straight of the material and finished in different ways: a plain band with a plaiting or ruffling falling over the hand; a circular or flaring cuff falling over the hand; or various-shaped turn-back cuffs.

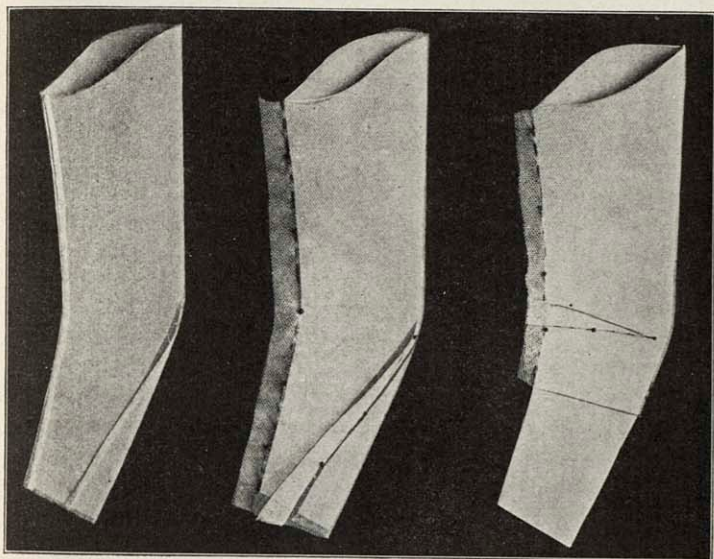
(4) *Tight-Fitting-Sleeve Designs.*

(a) *Fitted Linings.*—As beginning-work with the tight-fitting sleeve, pattern linings should be made. They give excellent preliminary drill in the use of the stiff-paper sleeve and may be used later as foundations for the more elaborate designs in fitted or semifitted sleeves. If possible, net should be used in making the linings, although tissue-paper is satisfactory. The net is strong enough to be used as a foundation for the making of several designs, and because of this strength and its flexibility it is easier for the inexperienced to handle.

Three different linings may be made. They serve as linings or foundations for practically all types of sleeves. These three differ chiefly in length. They are: the full length, or long sleeve, covering the wrist; the three-quarter, or short sleeve, extending a few inches below the elbow; and the very short sleeve, or cap, only a few inches in length and generally used in fitted and semifitted waist linings and for evening dresses.

(i) *Long Sleeve Lining.*—The long sleeve lining does not require much material—once its length and a little more than twice its width, about three-quarters of a yard of 18"

material. The work proceeds as follows: The material is folded in the centre on the lengthwise straight thread and the paper sleeve slipped into it, with the fold of the pattern along the fold of the material. Before beginning the work the material should be pinned in place, as its straight thread must be kept along this fold from armseye to elbow. The



Net linings made on the stiff-paper sleeve

material is next pinned along the inside of the sleeve its full length, close to the pattern; this forms a seam which takes the place of the inside seam of the original muslin sleeve. When this is done the upper part of the sleeve—that is, above the elbow—is fitted and finished except for cutting the proper seam allowance. Below the elbow at the back, however, there is surplus material which must be taken out to give shape to the lower part of the sleeve. This surplus is removed by making a seam, not on the outside of the sleeve along the edge of the paper, but on the under side, from the point of the elbow to the centre of the

wrist. If this seam were to extend along the outer edge of the pattern, as seems its natural position, it would bring both the seam and the sleeve opening (which, if one is needed, should be in this seam) too far back on the arm, to look well. It may seem difficult at first to draw the surplus material smoothly around to the proper place and make a good seam-line, but it can be accomplished with a little practice. The direction of the seam should be straight for about 2" up from the bottom of the sleeve because of the opening, which must be straight. This makes the seam for 2" at right angles to the lower edge of the sleeve. From the 2" point it should slant directly toward the elbow. This direction may be indicated first in pencil on the paper pattern. After the material is drawn into place and the seam pinned, the surplus material may be cut away, leaving only a seam allowance which will be narrow as it nears the elbow.

(ii) *Short Sleeve Lining*.—A short sleeve lining extending a few inches below the elbow may be made in much the same way. The material is placed with its straight threads along the fold of the pattern as before and its inside seam securely pinned. There is a different method, however, for removing surplus fulness below the elbow. In place of the downward-slanting seam from the elbow the material is drawn up to fit the pattern by making a crosswise seam. This seam is laid just in the bend of the elbow so that in wearing it seldom shows. It extends straight across and is quite deep at the inside of the elbow but tapers to nothing at the point.

(iii) *The Cap, or Very Short Lining*.—This very short sleeve differs from the longer ones in that it has but one seam which is placed exactly in the centre of the under side of the pattern. This requires less work in making and also prevents the seam showing if, as is frequent, transparent fabrics are used in the making of the sleeve itself. The lining is very simple to design; there is no surplus fulness to remove and the material may be drawn smoothly around the pattern with its straight threads extending along the fold. The seam when finished should

form a straight line along the lengthwise centre of the under sleeve.

(b) *Fitted Sleeves.*

(i) *Unlined.*—When practice in the modelling of linings has given sufficient skill a sleeve without a lining should be made, with the usual inside seam but with the surplus fulness below the elbow taken out in such a way as to give the sleeve its distinctive style. The fulness need not necessarily be removed on the under side of the sleeve, as in the linings, but may be drawn to the upper side and so arranged and cut out as to form the decoration. Cambric and unbleached muslin are very satisfactory mediums for this designing.

(ii) *Lined.*—In making many of the elaborate sleeves over linings frequently one seam is all that is required in the sleeve itself. This one should fall from the centre of the underarm; that is, the centre of the under side of the pattern straight down the sleeve and join the lining seam at the point 2" above the wrist, where that seam straightens for the opening. As an example of a sleeve which may be made in this way, directions are given for the mousquetaire.

The mousquetaire sleeve may be worked out successfully with tissue. Unless it is to be very full—and it should not be—one and a half times the length of the sleeve is material enough for the fulness. This fulness may be arranged in various ways: by the use of lengthwise shirred tucks, cording, gathers, or by crosswise shallow tucks or plaits. The amount of material required in width depends somewhat upon the method chosen. In making the mousquetaire sleeve, no matter what the style of decoration may be, the straight of the material must be kept in the centre of the upper side of the sleeve from shoulder to wrist; that is, half-way between the two edges of the paper pattern. Any lengthwise decoration for the centre of the upper side of the sleeve, such as shirred tucks, gathers, or cording, is made on the straight of the material and drawn up to the required length before being pinned in place on the sleeve. After the material is prepared the work proceeds

as follows: the straight of the material is first pinned along the centre line of the upper side of the sleeve, which may be indicated in pencil on the paper. It is wise to pin the material in place as well along both edges of the pattern. If this is done the fulness can be better arranged. By keeping the straight of the material in the centre of the upper side when the material is drawn around to the under part of the sleeve for adjustment, there is necessarily additional fulness at the inside or bend of the elbow, to give sufficient fulness at the point of the elbow. This fulness can without difficulty be gathered or laid in small plaits and, if lightly attached to the lining, will lie flat and stay in place. When all the fulness is satisfactorily arranged the edges of the material are brought together along the centre line of the under side of the sleeve and cut off evenly, allowing $\frac{1}{4}$ " on one edge and enough on the other for a small $\frac{1}{4}$ " turning to finish the seam neatly. Both edges are gathered, one along the raw edge, the other after the $\frac{1}{4}$ " turning is made. The gathered raw edge is pinned to the net lining and then covered by the folded edge.

By this same general method of procedure, using the padded or stiff-paper sleeve, fulness may be arranged in various attractive ways, caps and cuffs may be added, slashings may be introduced, all according to the prevailing fashion and suitably adapted by the taste of the designer. All fashion sheets and historic costume prints and books give an endless variety of designs for simple and elaborate, full, semifitted, and fitted sleeves.

5. **Skirt Designs.**—Skirt work in draping, as in pattern-designing, should begin with the making of gore divisions which form the basis for all other designs. In making these the principles of construction used in drafting should be kept carefully in mind. Special figures must now be considered; there should be much testing of various divisions, such as have already been tried in the flat-paper work, with regard to the becomingness of the lines and the proportions of the gores. It will soon be seen that any definite rules already given for gore directions can be only generally sug-

gestive for this work. In many cases they do not give well-proportioned divisions or the most becoming lines to the figure for which they are intended. While the general style of a skirt and its divisions are somewhat determined by fashion, they may always be modified to be in good proportion and give grace of line to the figure. All gore lines should be at right angles to the waist line. If the tape-measure is pinned at the waist and drawn down to the floor it shows the effect of the gore divisions distinctly and also gives good direction of line. Many of the gored skirts made may serve as foundations for more elaborate draping for which very few directions can be given.

In the draping of all skirts there are certain factors to be observed.

(1) In general, (a) if a straight-hanging skirt is desired—that is, straight as a plumb-line falls—the straight lengthwise thread should be used. This gives a waist line with little curve. (b) If a skirt which flares or stands away from the figure is required the bias should fall from the waist to the floor; this gives a waist line which is rather deeply curved. It will be remembered that, in drafting, the narrow, straight skirt had a fairly straight waist line when compared to the deeply curving one of the circular skirt. The same principle holds true in draping.

(2) In manipulating material in the skirt work it will be seen: (a) that in the straight skirt with the straight lengthwise threads there is always the straight crosswise thread of the material around the hip; (b) that as the material is drawn up off the straight crosswise grain from the front toward the back, the skirt becomes narrower at the bottom line and fuller at the hip; (c) that, on the contrary, as the grain is allowed to sag or drop, making the circular waist line, the skirt begins to flare. The amount of flare is always determined by the depth of the waist circle, the greatest flare coming where the circle is deepest.

As facility is secured in executing waist and skirt designs in rather simple materials, those requiring more skill in manipulation and a more subtle combination of textures and colors should be attempted, their choice depending

always on the individuality of the wearer. Because of the great number and variety of the factors involved and the amount of practice necessary before any skill can be acquired, too rapid progress in designing should not be attempted or expected.