A STUDY OF PATTERN CUTS PRODUCED BY CARRYING THE FABRIC BEYOND THE STANDARD SEAM POSITIONS

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A STUDY OF PATTERN CUTS PRODUCED BY CARRYING THE FABRIC BEYOND THE STANDARD SEAM POSITIONS

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TABLE OF CONTENTS

I. INTRODUCTION

At present, dress designs show a wide variation in silhouette. The two extremes are the closely fitted basque bodices with belling skirts and garments cut in one piece in so far as it is possible. The latter cuts are necessarily less closely fitted types of silhouettes. Multiseamed basque bodices and hip length jackets are fitted at the many seam lines and the grain is easily adjusted within each section of the pattern. Layouts are also simplified as the many pieces are small and may be wedged together on the fabric. On the other hand, cuts with very few obvious seams are simple and smooth in appearance but often require more yardage, and fitting by means of concealed seams and darts, complicating the pattern making. The object is to avoid obvious seams while attaining a close smooth fit without wrinkles. With the elimination of many of the standard seamlines, the pattern pieces become larger and thus economical layouts are often difficult to plan. In such cases the problem is to discover how additional fitting seams or darts might be concealed. Planning the grain position in designs cut as far as possible in one piece may create a grain problem, for a grain position suitable in one area of the pattern may be poor in the other areas of the same pattern piece.

Authorities generally believe that designs with multi-

seams often fit better, have better grain placement in all pattern parts, cut better, and are easier to assemble than those limited to very few seams and darts. However, designs cut as far as possible in one piece have the advantage of appearing smoother, less cut-up and are especially desired for fabrics with large patterns or distinct grain.

The purpose of this study was to try to develop designs with some basic seams eliminated which fit as well as those with basic seams retained, and to test and analyze various cuts to determine when and if it is worthwhile to eliminate these seams. Also, an attempt was made to show that simplicity of effect does not always mean simplicity in cut or construction.

This study includes the analysis of design quality, grain, fit, yardage, construction and limitations encountered. Seams referred to as "standard" or "basic" are those which are placed along the silhouette and the natural joints of the body. They include the shoulder, underarm, armscye, neckline, waistline and side seams. The designs were limited to those which extend beyond the shoulder, underarm, armscye and neckline seams. Construction analysis was made only of those cuts in which it was particularly important or difficult.

II. REVIEW OF LITERATURE

The only specific information concerning designs with fabric extended beyond the standard seam lines and their effect on pattern making and layout, fabric economy, grain and fit, and construction, was found in Dress Design by Hillhouse and Mansfield. In chapter seven of their book, the authors suggested many sources of design inspiration, one of which was carrying the fabric beyond the normal seam lines or as far as possible without cutting. This particular suggestion inspired this study.

Hillhouse and Mansfield state that from this source of inspiration, designs with uninterrupted flow of line may be developed and that this is one fundamental of good design. They go on to explain that these designs are more likely to have "uncluttered simplicity...that characterize the most expensive designs".[1] In regard to simplicity, the Goldsteins also state in Art in Everyday Life, that success in dress design depends largely on restraint and that simplicity should be the aim with enough emphasis to give the design individuality and distinction.[2] Morton gives an interesting comment

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[1]Marion S. Hillhouse, Evelyn A. Mansfield, Dress Design, New York: Houghton Mifflin Co., 1943, p. 310.

[2]Harriet and Vetta Goldstein, Art in Everyday Life, New York: Macmillan Co., 1940, 3rd ed., p. 159.

on simplicity in The Arts of Costume and Personal Appearance. She says that it can be most dull and uninspiring when untouched by imagination.[1] Although designs with fewer seam lines have simplicity, they require the most careful kind of planning to avoid obvious seams and yet retain a smooth fit. Hillhouse and Mansfield suggested that small pattern pieces can sometimes be attached to larger sections to eliminate unnecessary seams. But they add that it may simplify cutting, be more economical and enable better grain placement if cut with hidden seams.[2]

The pattern shape, grain placement and character of the fabric influences the silhouette, fit, adaptability to fabric widths and construction ease or difficulty. In regard to pattern shape and silhouette, Goldstein states that when designing a garment, shape harmony is the most important consideration in planning a beautiful and economical structural design. She goes on to say that the silhouette of a dress should bear resemblance to the human figure. In other words, the dress should be made up of shapes and sizes beautiful in themselves as well as becoming to the figure. In her opinion the most beautiful dress designs have some lines which fall closely to the contour of the figure but not so closely as to appear uncomfortable.[3] Hillhouse, Mansfield and Morton con-

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[1]Grace M. Morton, The Arts of Costume and Personal Appearance, New York, John Wiley and Sons Inc., 1943, p. 45.

[2]Hillhouse and Mansfield, Op. cit. p. 310.

[3]Goldstein, Op. cit. p. 267.

stantly stress the importance of silhouette since it is what is seen from a distance before details are visible and it is the most outstanding characteristic of a costume.

A garment must fit correctly to be becoming as well as comfortable. The intricate pattern cuts of present day western cultures require great knowledge, understanding and skill in order to develop comfortable, well-fitting garments. As Rohr points out in his book Pattern Drafting and Grading, present day garments fit more closely and therefore require a greater use of darts and tucks for correct fit over the curves of the body.[1]

Erwin discussed the standard grain placement and stated that except in unusual designs the lengthwise grain should hang straight down on the figure from the neck to the waist, from the armhole to the elbow and from the waistline to the bottom of the skirt and the lengthwise threads should be perpendicular to the main circumferences on the center lines of the body.[2] Although dressmakers agree on these general rules, designers sometimes change the grain to create different effects. Erwin stressed that it is false economy to cut pieces "off grain" whether it be a result of haste, carelessness or desire to economize on fabric, for this results in fitting and stitching difficulties as well as an unbalanced

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[1] M. Rohr, Pattern Drafting and Grading, revised edition, 1944, p. 2.

[2] Mabel D. Erwin, Clothing for Moderns, New York: Macmillan Co., 1949, p. 211.

appearance and overall dissatisfaction.[1] Mansfield defined the term "off grain" as "any line on the fabric not parallel to either lengthwise or crosswise grain". She states "the uneven balance of grain would show in any fabric because of the uneven pull on all fitting lines in the dress. Lack of balance in fabric grain is especially noticeable as the body moves..."[2]

Hillhouse and Mansfield tell us that the stiffness, softness, bulkiness or clinging quality determine whether to shape the fabric to the curves of the body by darts, tucks or pleats to give a flat, close fitting effect ,or by gathers and flaresto give extension. Fabric design characteristics which influence the economy of the cut are: nap, up and down, right and left of pattern, large repeats in florals or plaids, distinct grain or stripe, border prints and twill. Garments cut from these fabrics usually require more careful planning in layout and more yardage. Various cuts are more adaptable to fabrics with no right or wrong or pattern.[3] Erwin states that cutting pieces on the bias often requires one-third more yardage. She adds that some ribbed and striped materials cut to better advantage when some pieces are placed crosswise. She warns however, that such plans must be satisfactory in design

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[1]Erwin, Op. cit., p. 161.

[2]Evelyn A. Mansfield, Clothing Construction, New York: Houghton Mifflin Co., 1953, p. 112.

[3]Hillhouse and Mansfield, Op. cit., p. 281.

and durability before deciding to save yardage in this manner.[1]

The simplicity or complexity of constructing and finishing a garment is determined by the skill of the worker, the shape of the pattern piece, its grain placement, as well as the yarn and weave structure and fiber content of the fabric used to interpret the design.

Although little specific information was available, the general information reviewed helped in determining what limitations and problems might be expected in this study. One problem which might occur when cutting a pattern for any design, is that the design may not appear as sketched when cut in fabric and placed on a figure. This is because the pattern shape, amount of flare introduced, fabric texture, body and weight and grain placement all influence the resulting effect. One may also discover that some sketches that seem to be in one piece are impossible to cut or fit because pattern parts overlap when laid flat. Also the grain may not be suitable in all areas of a large pattern piece.

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[1]Erwin, Op. cit., p. 161.

III. EXPERIMENTAL PROCEDURE

The model

A standard half-size Bauman dress form was used to prove each design sketched. Measurements of the half-size form were: bust 19 inches (38), waist 13 3/4 inches (27 1/2), hips 18 3/4 inches (37 1/2). The full size measurements are indicated in parenthesis.

The fabric

In order to eliminate the variable of texture, medium weight unbleached muslin was chosen to be used throughout the study. Comparisons between designs and cuts could thus be made simply and clearly. Pencil lined or striped fabric was used to study designs which might be questionable if cut from fabrics with a distinctive rib or slub.

The sources of design

The designs used were obtained from: fashion magazines and pattern books, costume design classes at Michigan State University, and original designs. The designs collected were organized according to the four seams eliminated or crossed over: the shoulder, underarm, armscye and neckline seams.

The master pattern

A master pattern was draped in muslin on the half-size form according to directions outlined in the text Dress Design, by Hillhouse and Mansfield, then trued up and cut from tagboard.

The method of pattern making

The half-size patterns were made by blocking from the master pattern, draping in muslin directly on the form, or by a combination of these two methods. The text Dress Design by Hillhouse and Mansfield was used as a basis for cutting all designs used in this study.

The layout

The grain position for each pattern was established according to established rules for grain placement. The paper patterns designed from the master pattern were then cut from muslin. The muslin proof was pinned together and tried on the dress form. Construction was not carried beyond this stage.

The analysis

An analysis of the design quality of the pencil sketch as well as of the muslin proof on the form, was made to determine whether or not there was an improvement over a similar design effect with the standard seam lines retained. The judgment was based on design standards set up by various authorities. Any differences between the sketch and the actual muslin proof were noted.

The quality of fit was examined on the three-dimensional figure. The grain was analyzed for distortion and wrinkling, particularly at the point of crossing over the standard seam positions. Since it is an established fact that grain plays an important part in determining the proper fit of a cut and particularly influences design quality if fabric with distinct grain is used, various grain positions were tried in order to

obtain the best effect and fit.

The yardage requirement was analyzed to detect any limitations of the cut because of fabric width. Four commonly used fabric widths were tried to determine the adaptability and economy of the cut. The fabric widths used were 36, 39, 45 and 54 inch. Fabric characteristics such as distinct grain were also judged by drawing grain lines in pencil on the muslin.

Simplification or complexity of construction of the garment was analyzed but was not included in the discussion except where it was of particular significance.

After each analysis was made, corrections or adjustments were made wherever possible to improve the design and fit. Adaptability to fabric widths and construction was given secondary consideration here.

The sketches

Sketches were made while the muslin proofs were on the figure to show the final results. The half-size patterns were reduced to one-eighth size and diagramed to show the exact pattern shape and grain position. The true bias, in addition to the lengthwise grain, is indicated where it is of particular importance.

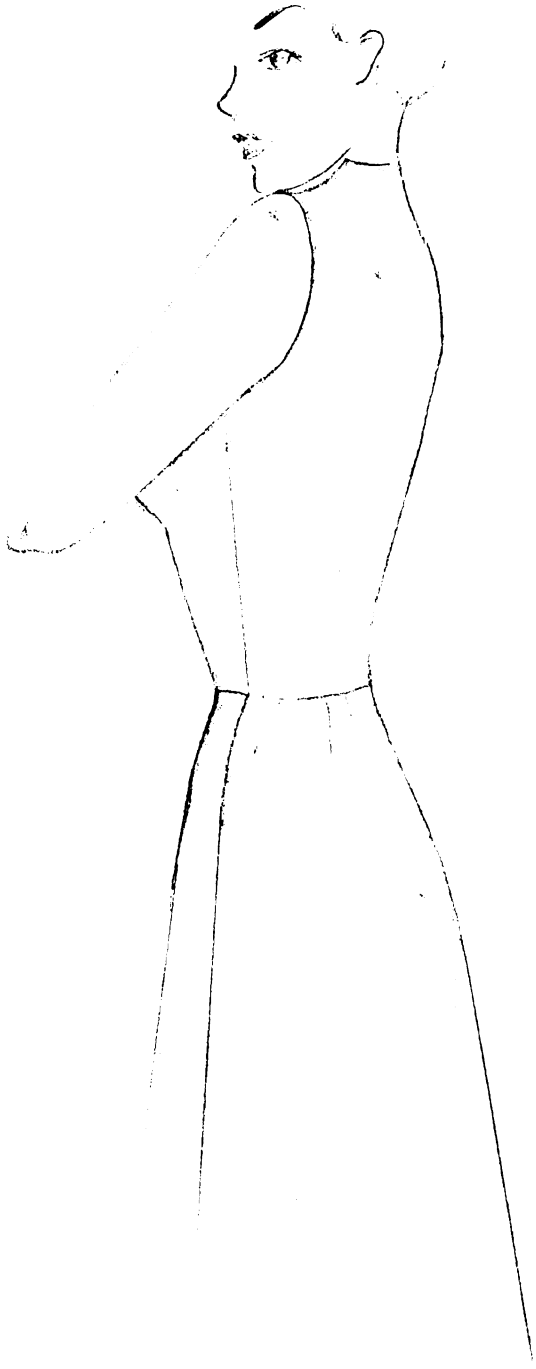


Diagram 1a

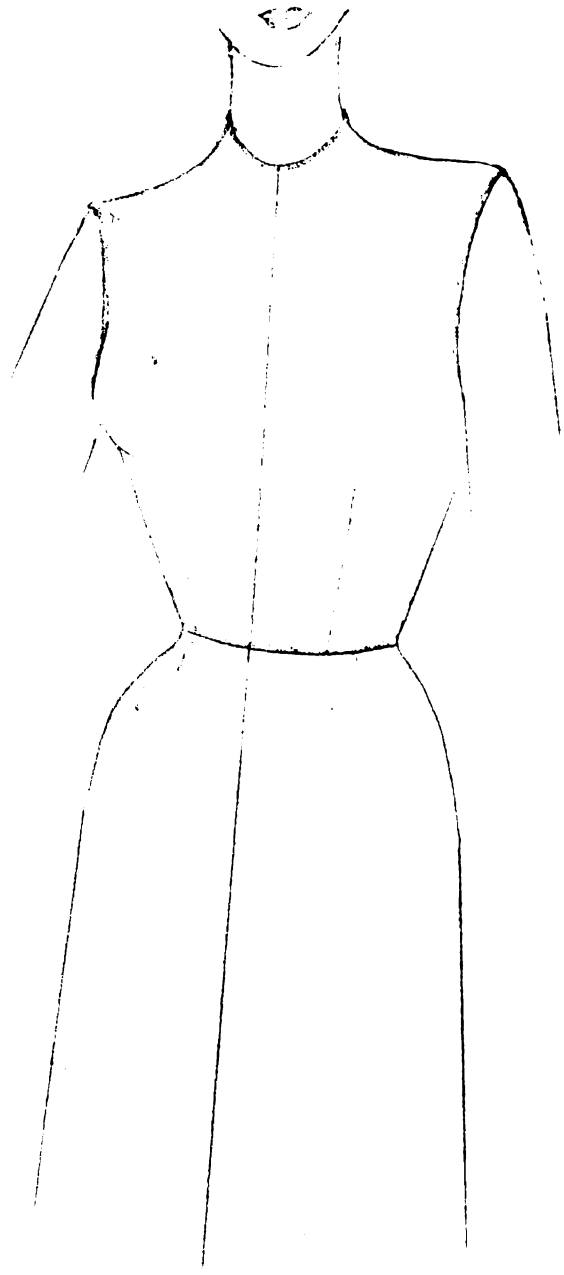


Diagram 1b

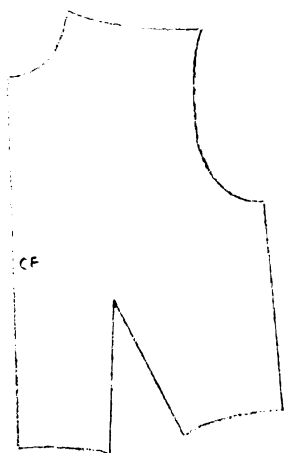
/ Basic body bulges
- Joints of the body

IV. PRELIMINARY STUDY

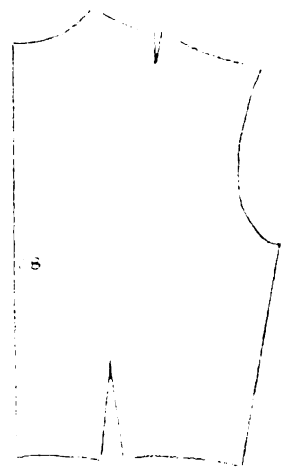
Before experimenting with complex designs it was necessary to understand the makeup of the simplest of all cuts, the master pattern, and before attempting to cross over and substitute for or eliminate basic seamlines it was essential to analyze the master pattern to see why seams and darts are placed as they are.

The master pattern has its straight or curved seams placed at the natural joints of the body and its darts pointing toward the body bulges so as to produce the best fit possible (see Diagrams 1a and 1b). The master pattern has seams at the following positions which will be considered as standard throughout the study: the shoulder, neckline, armscye, waistline, underarm and side seams.

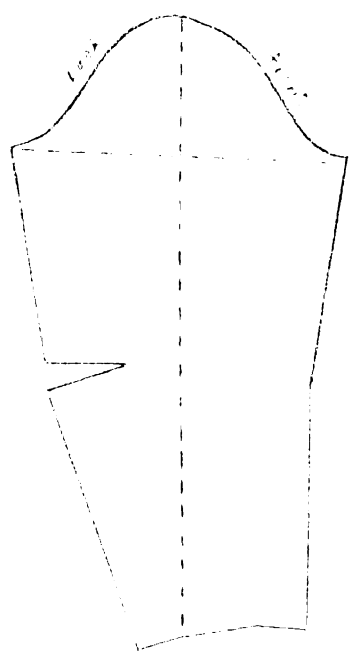
The standard blouse front has the lengthwise grain placed perpendicular to the waistline at center front. A curved seam is placed (1) at the neckline to fit the curve along neck base, (2) along the top of the shoulder to fit the shoulder curve, (3) around the armscye where the arm joins the trunk of the body, and (4) along the waistline to fit the smallest body circumference. Also seams are placed at the underarm to fit the waist indentation and still allow ease around the bustline, and at the side of the skirt to fit the side hip curve of the body. When draping the master pattern a shoulder and waist-



a. Standard Blouse Front



b. Standard Blouse Back



c. Standard Sleeve

Diagram 2

line dart pointing toward the bust was used to fit the bust curve, but the shoulder dart was transferred to form one large waistline dart when the tagboard pattern was cut, in order to simplify its use in designing on the master pattern.

The standard blouse back has a 1/4 to 3/8 inch dart or ease along the shoulder seam to fit the curve of the shoulder blade and allow for action when the arms are pulled forward. The dart is sometimes shifted to the neck edge. The back waistline dart is directed toward the shoulder blade to fit this curve and at the same time helps fit the indentation of the waist.

The silhouette seams are those which outline the body and include the shoulder, underarm and side seams. These are frequently altered when fitting a garment.

The sleeve has the lengthwise grain established in line with the shoulder tip down to the elbow. A horizontal dart is directed toward the elbow point from the sleeve underarm seam. This dart lengthens the back of the sleeve so that the elbow can be bent. The bottom of the sleeve is curved to fit the wristline curve. The sleeve underarm seam slants inwardly toward the wrist to fit the girth, elbow and wrist. The cap of the sleeve is curved to fit the armscye, and ease is allowed in order to shape the cap to fit the shoulder ball.

The master pattern is the foundation for all flat pattern designs. The amount of ease allowed in the half and eighth size patterns used in this study corresponded as accurately as possible to that recommended by Hillhouse and Mansfield.

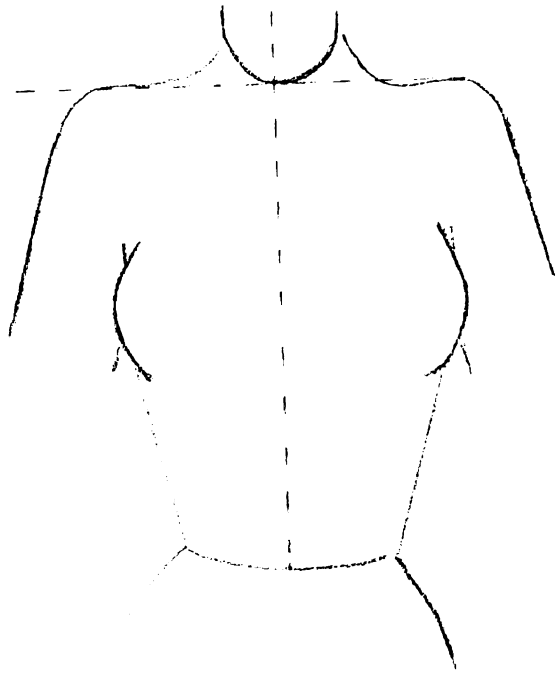


Diagram A

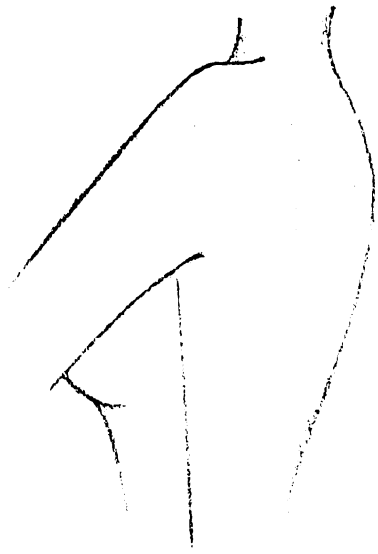


Diagram B

V. EXTENSIONS BEYOND THE STANDARD UNDERARM SEAM OF THE BLOUSE

The standard underarm seam of the blouse is a straight slanting line which falls at the center of the figure from the underarm pit to the waist and it should be inconspicuous from either front or back view. Generally it slants slightly forward, because the center of the body at the armpit is usually slightly farther back than it is at the waistline (Diagram A and B). This position must be changed if, because of poor posture, the shoulders are carried either very far forward or far back.[1] As the arm hangs over this seam of the garment, thereby concealing it, there may be little gained by omitting this seam. However, since the underarm seam is a perfectly straight slanting line it would seem that it might be eliminated and the fabric extended beyond the normal seam position without losing an important fitting line. The fact that the underarm seam is a silhouette seam frequently used in making alterations was not over looked. If it should be omitted in ready-to-wear, cut in standard sizes as it is, the sales of such cuts might be affected.

In order to observe the reaction of the grain and fit when fabric is extended beyond the underarm seam, the master blouse front and back were joined at the underarm and cut in one piece. As the grain position of various areas of the

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[1]Hillhouse and Mansfield, Op. cit., p. 22.

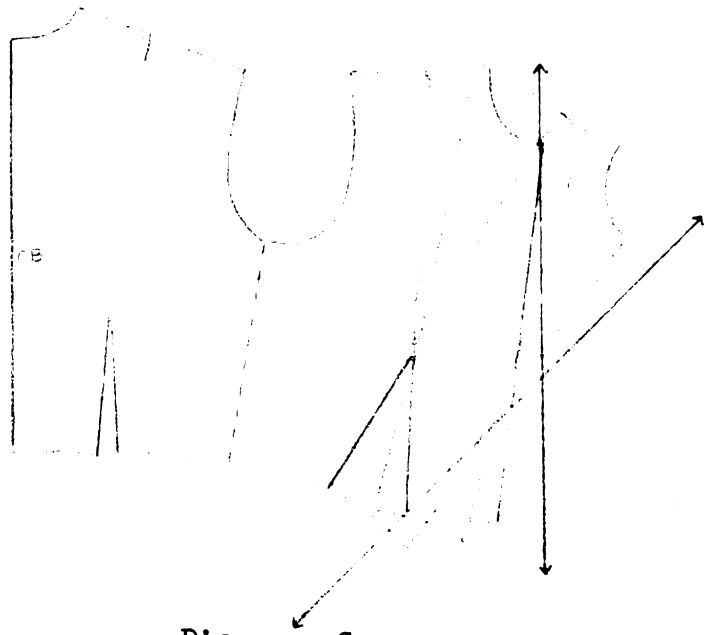


Diagram C

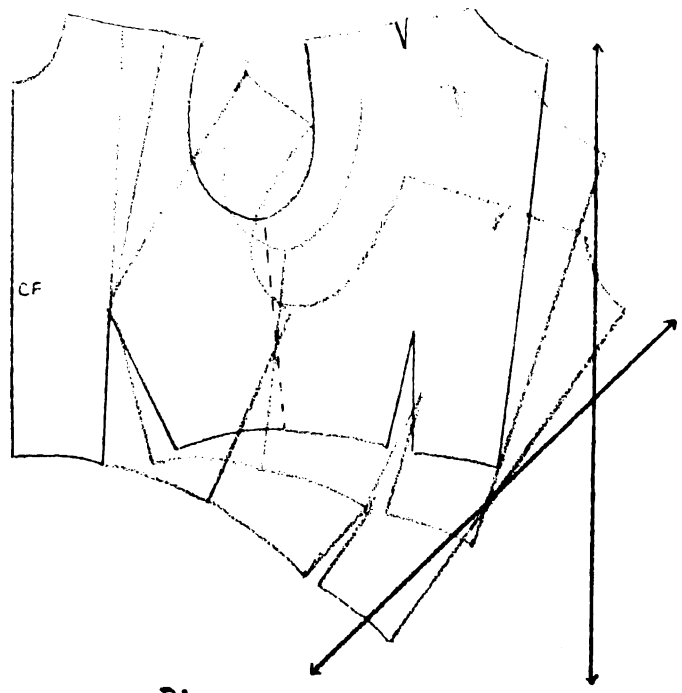


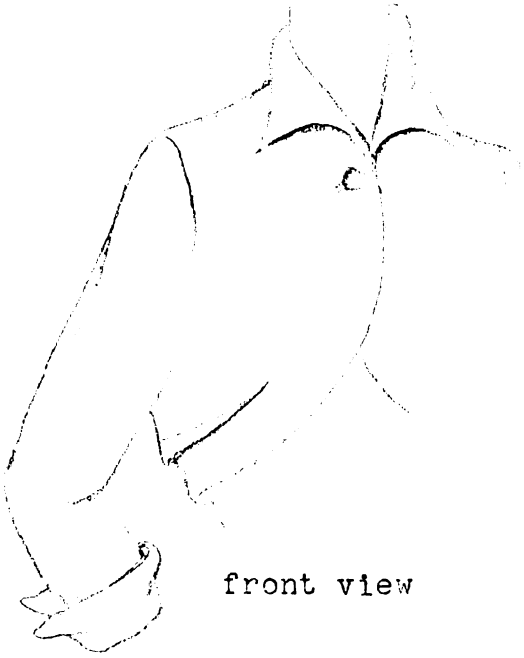
Diagram D

bodice is altered by dart transfers, the center front and center back were placed on the straight grain with the bodice front darts tried at these various positions: the entire dart retained at the waist, the entire dart at the shoulder (this is not recommended but was done to show the effect on grain) and the dart distributed between the shoulder and waistline. These dart positions were tried for they are sometimes used to interpret bodice front designs.

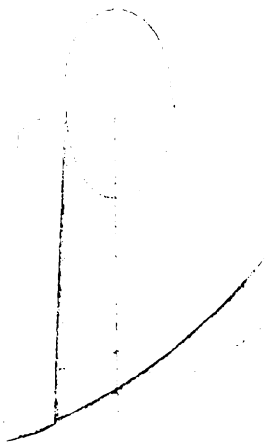
When the center back was placed on straight grain, the underarm fell on a partial bias. The center front also fell on a partial bias when all of the dart was retained at the waistline and became more bias as a greater portion of the dart was shifted to the shoulder. However,it did not become true bias in any case. As more of the dart was shifted to the shoulder, the crosswise grain slanted upward more sharply. The front waistline dart mismatched as more of the dart was transferred to the shoulder. (Diagram C).

When the center front was placed on straight grain, the underarm seam was almost straight grain when all of the dart was retained at the waistline, but the center back became more bias as the dart was shifted to the shoulder. The crosswise grain rose sharply as it neared center back and rose more sharply when the waistline dart was shifted to the shoulder. When part or all of the waistline dart was shifted to the shoulder the back waistline dart became mismatched (Diagram D).

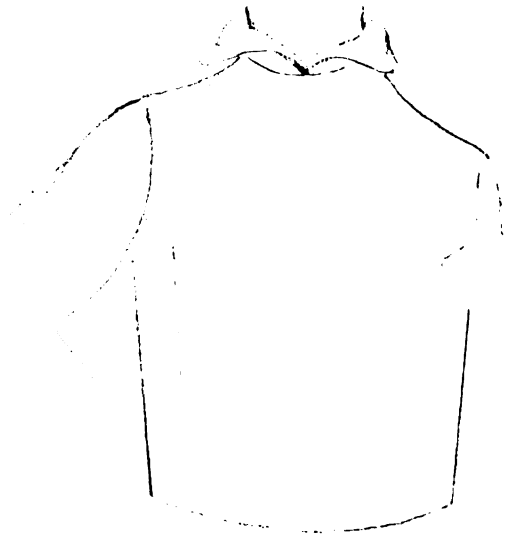
In order to balance the crosswise grain across the chest in both front and back, and to avoid wrinkling at the under-



front view



side view



back view

Design 1

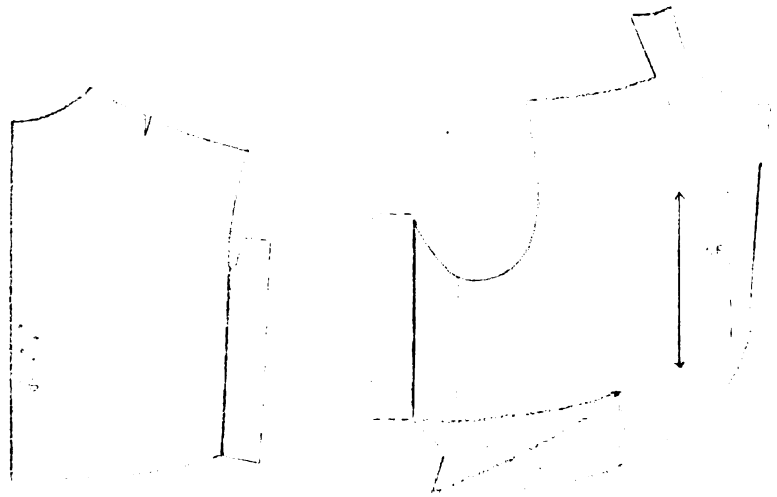


Diagram 1

arm of the bodice front and back caused by an "off-grain" cut, it is recommended that the lengthwise grain be established perpendicular to the waistline at center front and center back. The six cuts just analyzed show very definitely that since the underarm seam slants inwardly from the armpit to the waistline, it is impossible to keep the grain perpendicular to the waistline at both center front and center back without an underarm seam. Any alterations of this cut must be made by adjusting the darts or center front or back seams. Alterations made at these points are likely to change the design effect and are also more difficult to make than adjustments at the underarm seam. Therefore, the complete elimination of the underarm seam in a fitted garment is not worth the effort.

This experiment indicated that perhaps a more loosely fitted bodice might prove successful, particularly if a substituting seam were placed near the standard underarm seam. These thoughts inspired the creation of an original bolero cut.

Design 1 A straight hanging bolero was designed with the underarm seam eliminated and the extension beyond the underarm seam terminated in a seam hidded under a side back pleat. A curved underarm dart shaped the fabric over the bust curve and ended in line with the back bodice hem.

Fit and grain placement The center front was placed on straight grain, and since the bolero was loose fitting, the underarm seam could also be placed on straight grain. The seam under the side back pleat substituted for the underarm

side view

front view

Design 2

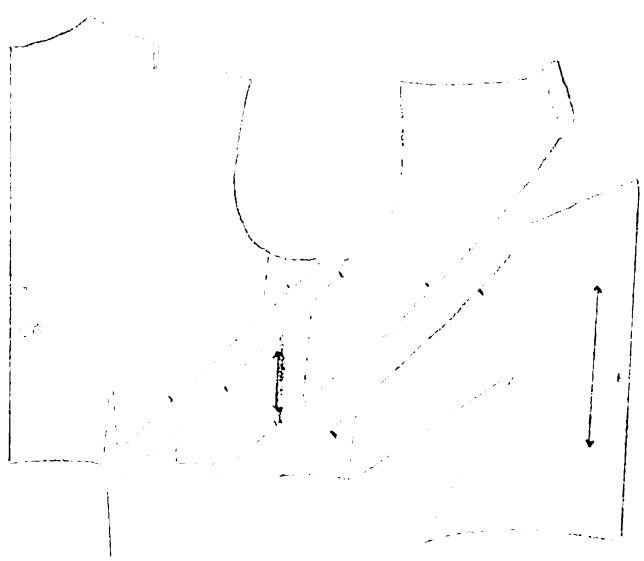


Diagram 2

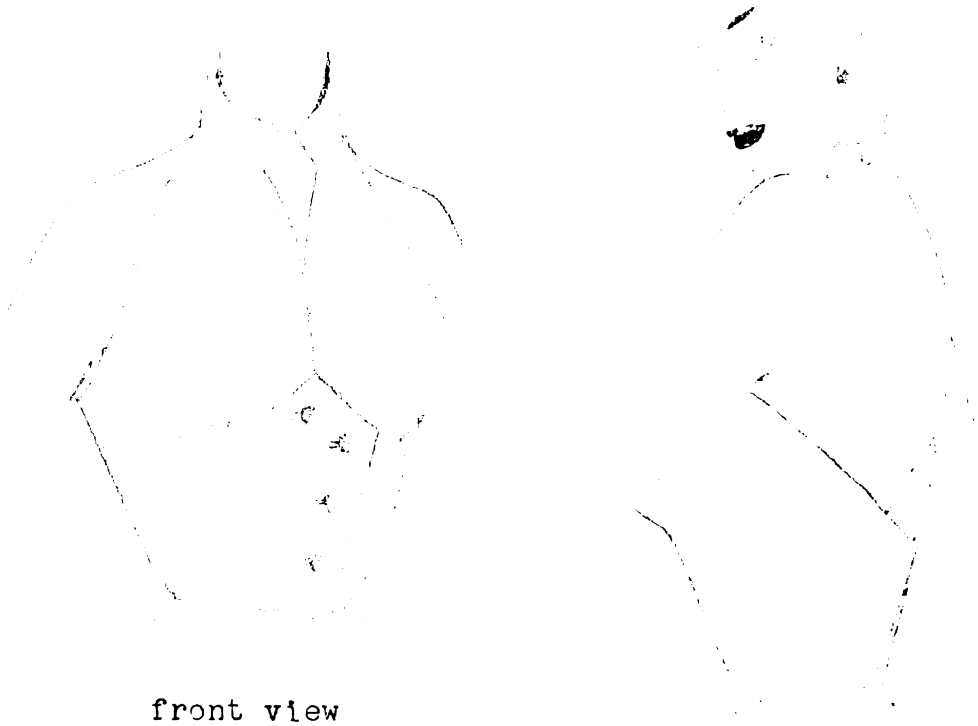
– For commercial use seam here.

and enabled the grain to be balanced in the separate back piece. To avoid a "cut-up" design the center back was placed on a fold. The underarm dart was smooth and unbroken by an underarm seam, and produced an interesting effect from the side view. The underarm extension eliminated the possibility of cutting the sleeve in one piece with the bolero front. The back bodice was not limited in this way but should be consistent with the front. The possibility of collars cut as extensions was not limited.

Adaptability to fabric widths The cut was not limited by the fabric widths.

Design 2 A close fitting bodice resembling a short eton (in front) with a built up neck was produced by carrying the fabric past the underarm to the center back seam. The two diagonal seams which substituted for the normal vertical underarm seam added design interest.

Fit and grain placement The grain was established perpendicular to the waistline at the upper chest. This made the straight grain fall at the underarm position also. The extended strip became bias as it neared the center back and enabled shaping to fit the back waistline. Part of the back and front waistline darts were transferred as ease along the diagonal seamlines to help balance the grain across the bustline. Very small pattern parts were attached to the bodice side back and side front and eliminated the necessity of additional seaming. As the back blouse pattern extended beyond the underarm seam



front view

side view

Design 3

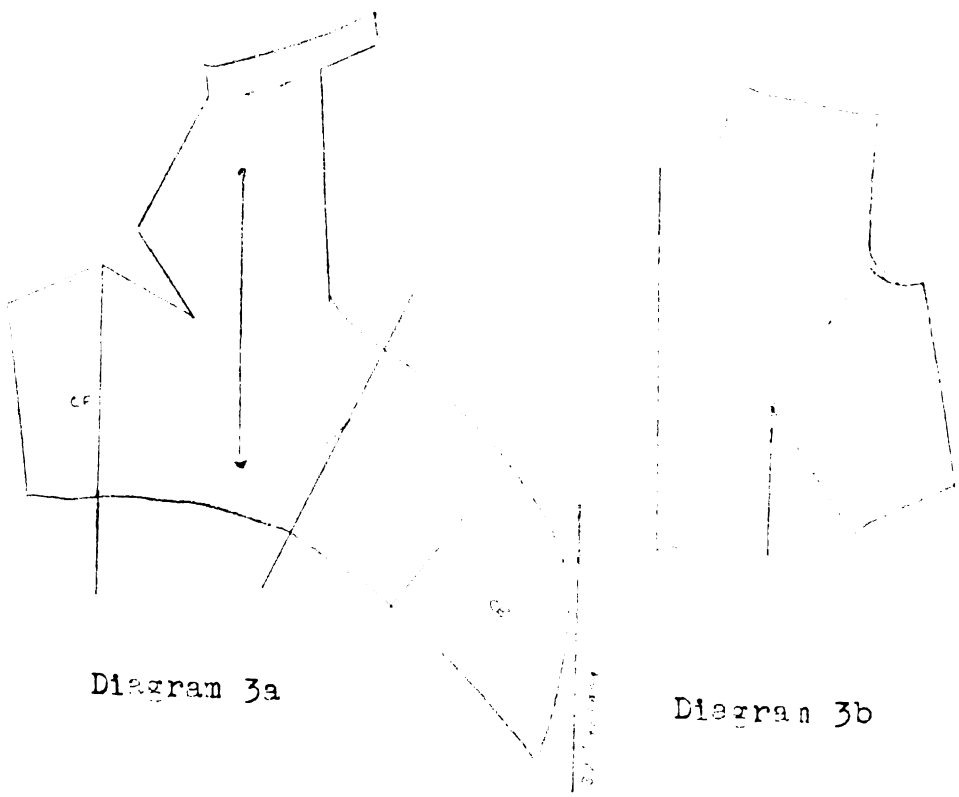


Diagram 3a

Diagram 3b

it eliminated the possibility of cutting the sleeve with the bodice as in design 1. This unusual and interesting design fitted smoothly, but one important disadvantage was noted. Any necessary alteration was made difficult by the substitution of the diagonal seams for the normal vertical underarm seam, as all fitting would have to be done at the center front seam, by darting, or along the partially bias diagonal seams crossing the underarm. Therefore it was decided that this cut is suitable only in garments made to fit a specific person. For commercial use a seam should be placed along the normal underarm position for easier alteration since very little design quality would be lost by the normal seam.

Adaptability to fabric widths This cut was not limited by any of the four fabric widths studied.

Design 3 An unusual halter bodice suitable for striped fabric resulted from experimenting with a center front bias cut. The back and front were cut in one piece with no substituting seams near the underarm as in the previous cuts.

Fit and grain placement The lengthwise grain was established perpendicular to the waistline at the center front. The entire waistline dart was shifted to the center front in line with the bustline. The gap caused by ease allowed for the bust was removed by slashing to the bustline and overlapping the parts. This change is necessary for a close fit in all halter and backless dresses (Diagram 3b). The standard underarm position fell on a partial bias, and would call for firm fab-

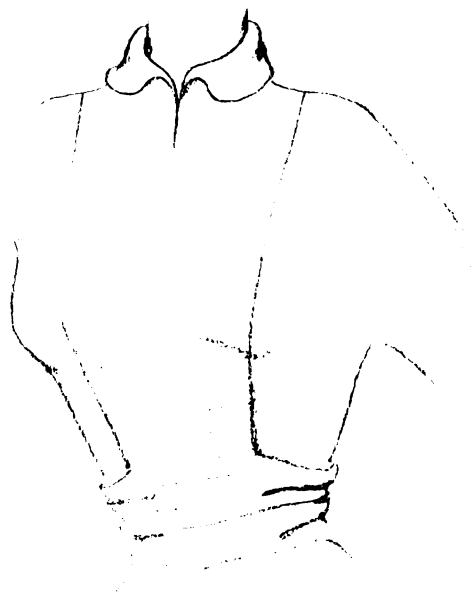
ric to prevent stretching or reinforcement to prevent sagging under the arm. The front halter edge and back closing fell on straight grain and created no problems of stretching. The straight grain across the neckline was a disadvantage, but it was felt that the design interest, simplicity of construction, and good fit in other parts of the design outweighed this disadvantage.

A second cut was tried in an attempt to improve the grain at the underarm and neck base. The straight grain was placed at the standard underarm seamline. The neckline fitted more smoothly and the underarm needed no special reinforcement. However, the center front partial bias made a center front seam necessary and this spoiled the design quality. This center front bias seam would pull and wrinkle unbecomingly when fitted as closely as halter bodices should be. Therefore, this second interpretation was judged less satisfactory.

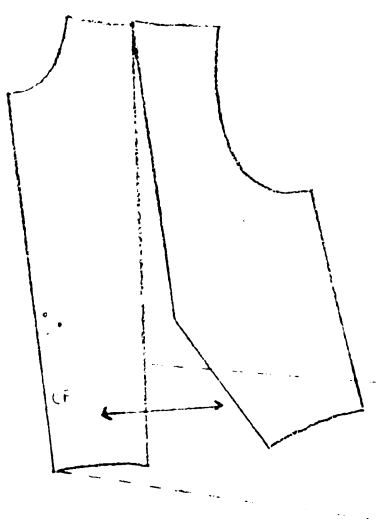
Adaptability to fabric widths The cut illustrated is adaptable to all four fabric widths and can be cut on a center front fold when 39 inch or wider fabric is used. If fitted accurately and reinforced at the underarm, (depending on the fabric used) this cut would prove successful.

Design 4 An extension over part of the underarm seam was carried from side front to the back to produce a continuous girdle.

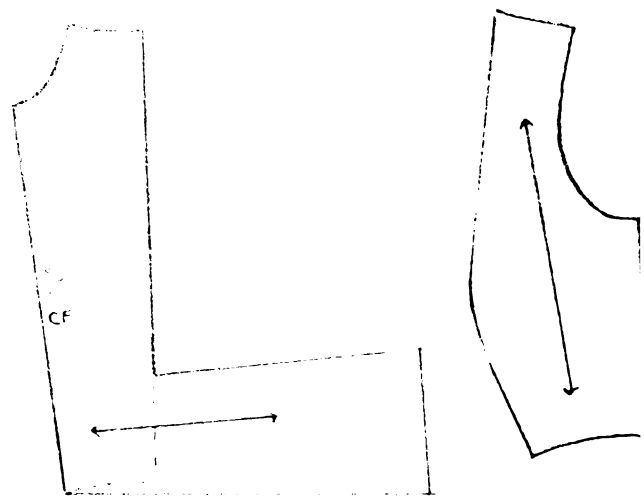
Fit and grain placement The center front was first cut on a straight lengthwise fold with the entire waistline dart



Design 4



cut 1



cut 3

Diagram 4

retained at the original position. A slash from the underarm to the dart allowed the lower bodice to fall free, and the girdle extension was developed by using this excess fabric. The girdle appeared skimpy as the excess below the bodice waist was slight.

A second cut was made with additional length allowed below the center panel. The girdle was widened sufficiently but did not pull evenly as it was on a partial bias. The girdle could have been cut on true bias, but as the girdle would not pull in the direction intended when cut on a true bias, this idea was cast aside.

A third cut with a French dart line and a separate side bodice proved to be the most successful of the three as it had two advantages over the previous cuts. There was no need to piece the under section, and the extension could be cut on straight crosswise or lengthwise grain at the center of the girdle. The girdle cut with this grain position pulled evenly to fit the body without wrinkling and distorting the fabric.

Adaptability to fabric widths The third pattern cut was not as compact as the two previous cuts, as the girdle met the bodice front at right angles. However, it was adaptable to all of the fabric widths used.

CONCLUSIONS

No designs were found in pattern books or fashion magazines that extended beyond the standard underarm seamline, except in the case of suits with two seams, one on either side of the usual underarm seam, substituting for the underarm seam, to harmonize with the two piece sleeve generally used in tailored suits. One design with a girdle appeared to cross the underarm seam, and was included in this section. The other original designs shown were created in order to discover the results when the underarm seam is completely or partially eliminated. The following conclusions were made.

1. The crossing over of the underarm seam eliminates a very important fitting seam. For this reason commercial pattern companies would be most unlikely to eliminate or substitute for this seam, for their patterns must be adaptable to women of all sizes and figures and must be easy to fit.
2. Extensions beyond the underarm seam eliminate the possibility of cutting sleeves together with the bodice. Therefore, if the underarm seam is crossed, the bodice must have either no sleeve, a cap or partial sleeve detail or a set-in sleeve.
3. Because of grain distortion at the underarm and the extended portion, a bodice front and back should not be joined entirely at the underarm and cut in one piece.
4. When a close fit is not essential as in a boxy type

garment, the underarm seam may be eliminated successfully. A substituting vertical seam near the normal underarm position is recommended, for then the grain can be adjusted in the separate section.

5. Diagonal multiseaming may substitute for the vertical underarm seam and produce proper fit, but fitting is made more difficult because of the loss of the standard silhouette seam.

6. The underarm seam may be eliminated successfully in some halter bodices. However, when the grain is established at the center front the bias underarm section may require reinforcement if the fabric is stretchy or weak. It is better not to establish the grain at the underarm position as the center front bodice then falls on a partial bias and wrinkles and pulls unbecomingly when fitted as closely as halter bodices should be fitted.

7. When a girdle is extended over the waistline and cut together with the bodice, it pulls best when the crosswise or lengthwise grain is established at the center of the girdle extension. A girdle is not an elimination of the underarm seam as the seam is usually retained under the girdle. The girdle is rather an extension over the seam line.

8. Except for novel effects in custom made garments, extensions over the underarm seam are usually not recommended. The boxy bolero jacket was both practical and good in design and was the best of the group because it hung straight. Construction is affected very little and smooth fit can be

achieved in some cases, but corrections in fit would consume much time and require a good deal of understanding of pattern making and skill in making corrections.

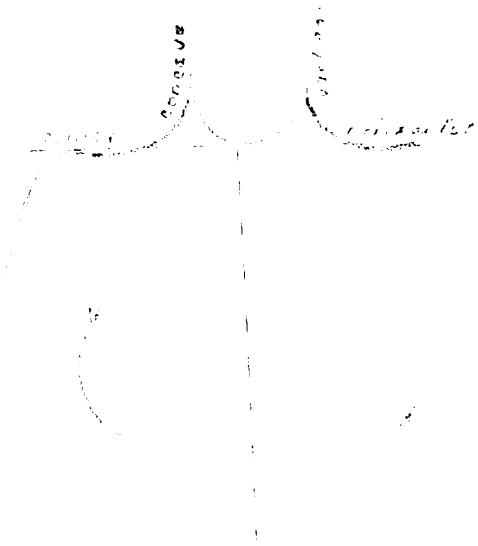


Diagram A

Diagram B

VI. EXTENSIONS BEYOND THE STANDARD SHOULDER SEAM

To obtain the best possible fit over the shoulder curve and shoulder blade, a seam with one-fourth to three-eighths inch of ease along the back shoulder seam is ordinarily placed at the top of the shoulder. Hillhouse and Mansfield state that "The standard position of the shoulder seam is from the cord at the base of the ear along the top of the shoulder and out to a point one-fourth inch back of the bone at the tip of the shoulder. The line slants slightly toward the back. It should appear to be directly on top of the shoulder, and should not be visible from either direct front or back when viewed at the shoulder level." Slight variations from the normal position can be made to help minimize faulty posture or a very large bust.[1]

Because the shoulders have an inward or concave curve at the neck and an outward or convex curve at the shoulder tip, (Diagram A) it is important to carefully analyze each cut if the fabric is to be extended beyond the normal seam toward the front or back successfully. One must also keep in mind the two planes which must be fitted in this area, the vertical plane of the neck and the horizontal plane of the shoulder, when the fabric is extended across the joining of the two planes as in a built-up neckline cut (Diagram A and B).

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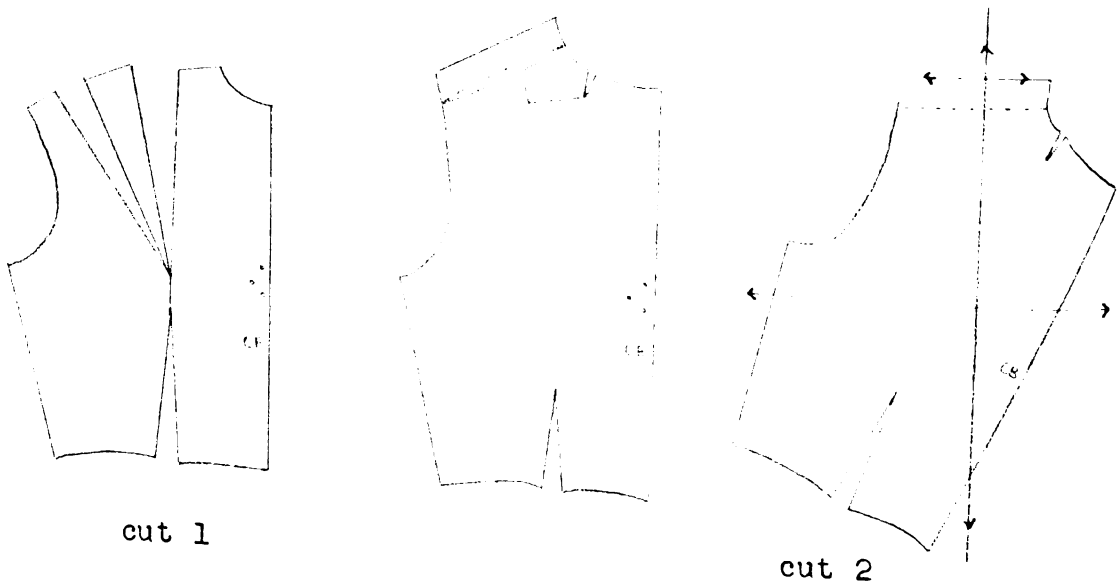
[1]Hillhouse and Mansfield, Op. cit., p. 20.

Design 1



cut 1

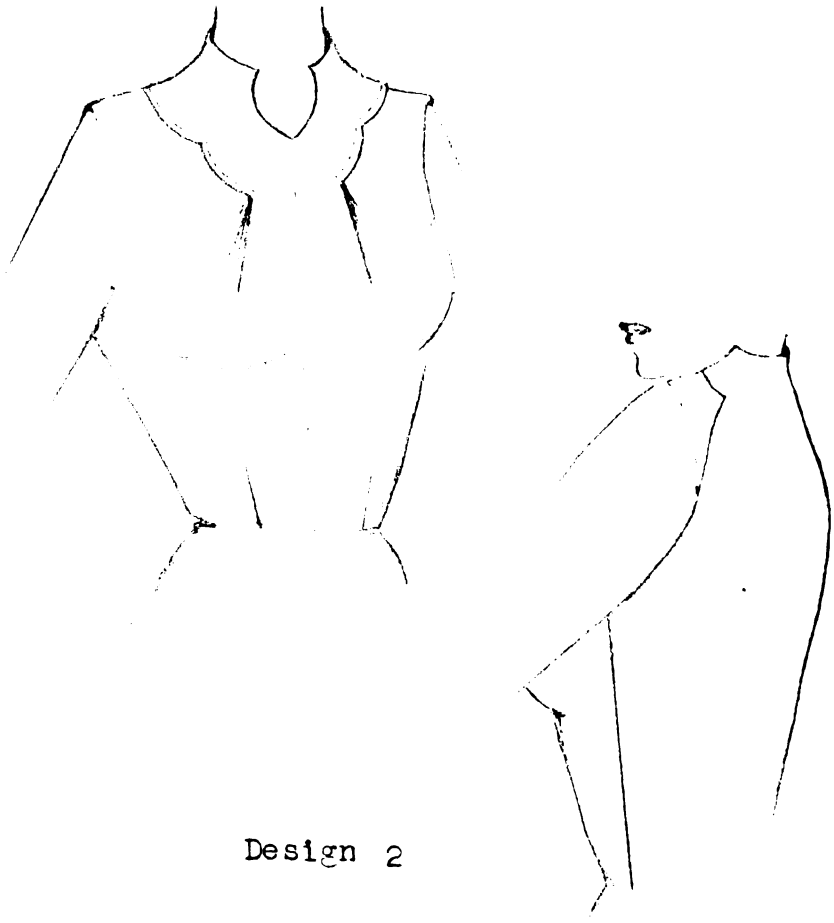
cut 2

Diagram 1

In this section of the study, patterns with the shoulder seam both partially and completely eliminated were tested. A critical analysis was made of each design to decide if substitutes for the shoulder seam were effective. Results shown here would of course vary with figure variations and the amount of shoulder padding used, if any is used at all.

Design 1 The extension of the back bodice to form a narrow shoulder yoke was an improvement in design over one with a normal shoulder seam so close to the focal point of the design. Fit and grain placement The center back was placed on a lengthwise fold. The shoulder dart and ease was shifted to a neck dart so that the front and back shoulder seam could be joined without losing the ease. The shoulder curve was lost when the two seams were joined, but the normal shoulder seamline fell on a partial bias and was flexible enough to fit the shoulder nicely. The mismatched grain at the yoke edge was not considered an important disadvantage, particularly since the shift of part of the waistline dart to the yoke edge made the yoke stand away from the shoulder extension between the buttons.

This extension over the shoulder limited the possibility of cutting a built-up neck with the bodice. However, a center back seam would provide more excess from which to design some neck details. This extension also limited the possibility of cutting long sleeves with the bodice, as the seam would fall in an awkward position. However, a short cap sleeve was possible as there was no binding at the armhole.



Design 2

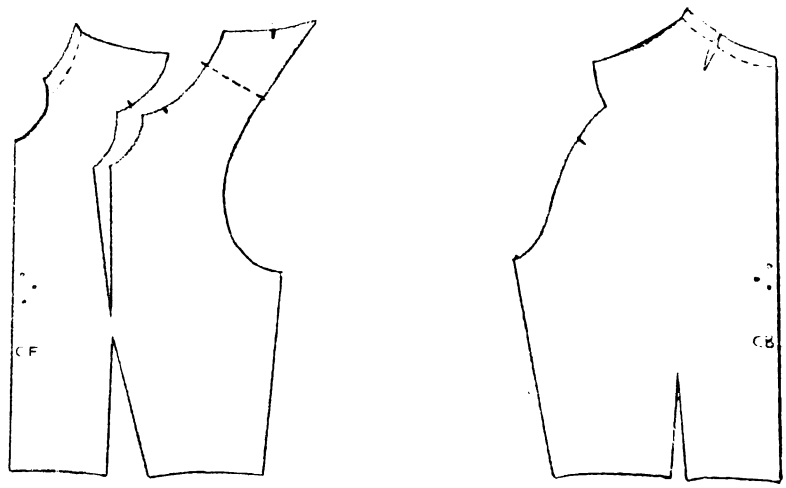


Diagram 2

Although this cut fitted the half-size standard form, it would not fit a person with a pronounced hollow at the shoulder without adding a dart at the top of the shoulder. Also, a person with round shoulders would require more ease across the back of the shoulders.

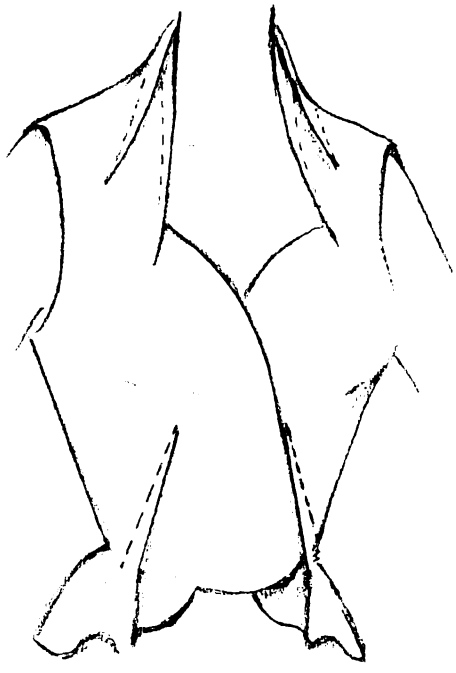
A second experiment was made with the yoke edge cut on straight grain. This cut was poor for three reasons: 1. the straight grain at the normal shoulder seam position would not mold to fit the shoulder curve, 2. the grain slanted upward at the center back, and 3. all edges of the back bodice fell on a partial bias and would not pull evenly.

Adaptability to fabric widths Cut 1 was adaptable to any of the four fabric widths used in the study.

Design 2 The shoulder yoke carried across the shoulder toward the back produced an interesting design and was created in order to determine whether or not a vertical seam could be substituted for a horizontal shoulder seam.

Fit and grain placement As in design 1, the extension across the normal shoulder seamline was a partial bias. The transfer of part of the waistline dart to the yoke edge balanced the grain across the bust. When the entire front and back bodice was cut in one piece, the pattern resulted in partial bias back bodice edges which would not fit properly. Also the inner edge of the shoulder would not fit smoothly.

To correct these faults a second cut was made with the inner half of the shoulder line retained and only the outer edge of the shoulder seam eliminated. As the outer edge of



Design 3

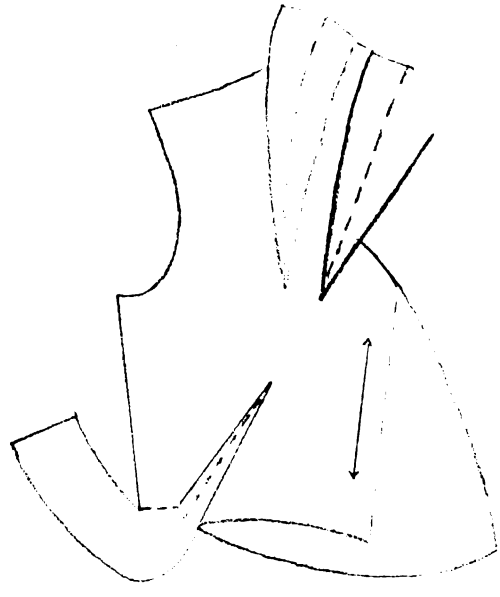


Diagram 3

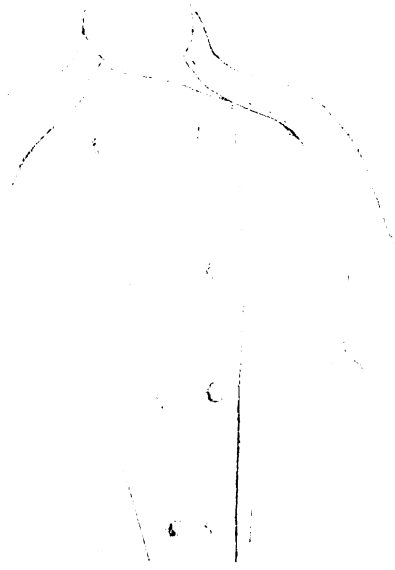
the shoulder is straighter than the inner portion, the extension over this part was satisfactory. It was decided that a vertical seam was not as adequate a substitution as the horizontal seam used in design 1.

Adaptability to fabric widths The partial shoulder seam produced a more economical cut and the pattern was adaptable to all fabric widths. It was felt that the design would be particularly smooth and interesting if the sleeve were cut in one piece with the bodice so that there would be no distracting line produced by a set-in sleeve. This additional extension would of course influence the adaptability of the cut to the four fabric widths.

Design 3 It was thought that any fitting problems or wrinkles likely to occur by the elimination of the shoulder seam would be made negligible by using diagonal darts which cross the shoulder and radiate toward the bust.

Fit and grain placement Almost all of the waistline dart was used at the neckline-shoulder area to create the two darts crossing the shoulder. The partial bias along the dart lines helped fit the darts close to the neck. The fit over the shoulder was not smooth and the fabric stood up and away from the shoulder curve. For this reason this cut was judged unsatisfactory.

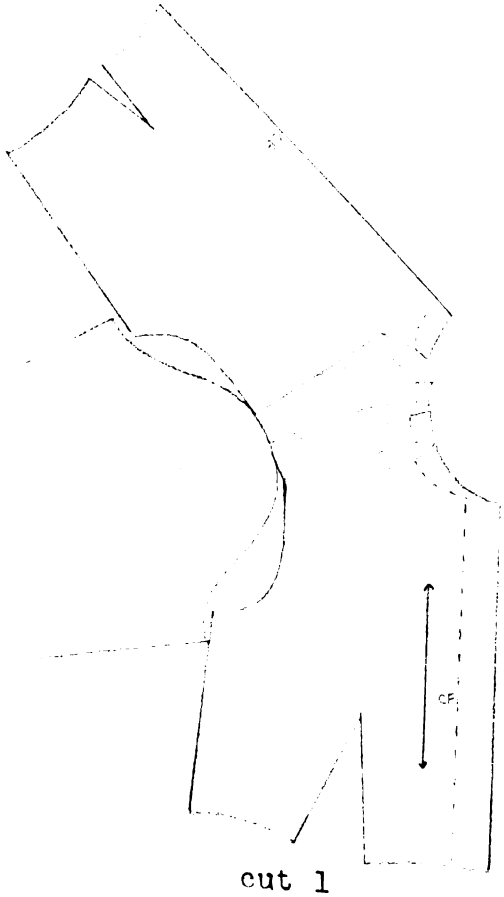
A second cut was made with a partial shoulder seam terminated at the point where the neckline-shoulder dart crossed the shoulder line. This seam made it possible to shape along



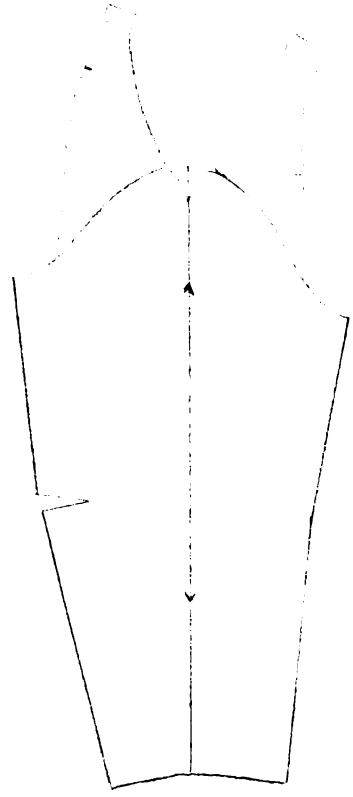
cut 1

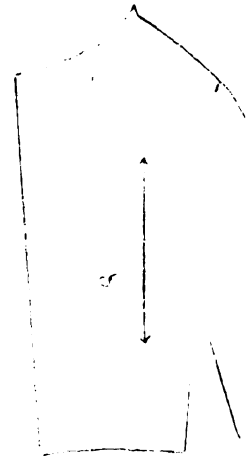
cut 2

Design 4



cut 1





cut 2

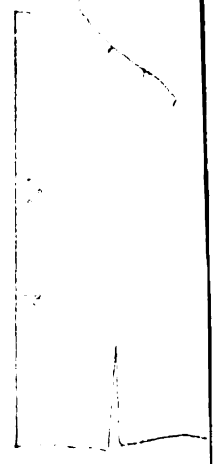


Diagram 4

the shoulder and to balance the grain in the back bodice section. This pattern change produced a successful cut. As the excess below the diagonal waistline dart flared gracefully, it inspired a short peplum which was cut as an extension of the bodice front and was seamed at the center back.

Adaptability to fabric widths The pattern was very large because of the partial extension over the shoulder and other extensions across the neckline, waistline and side seams. In spite of the large size, the shape was compact and was adaptable to any of the four fabric widths used.

Construction As the neckline-shoulder darts fell on a partial curving bias, reinforcement under the darts is recommended. This cut should not be constructed with striped or plaid fabric for the lines would be most distracting.

Design 4 The three parallel darts used to fit the shoulder curve formed the center of interest. An attempt was made to substitute the darts for the shoulder seam. They extended from the neckline to the shoulder tip and were produced by slashing and spreading from the neck to the shoulder tip.

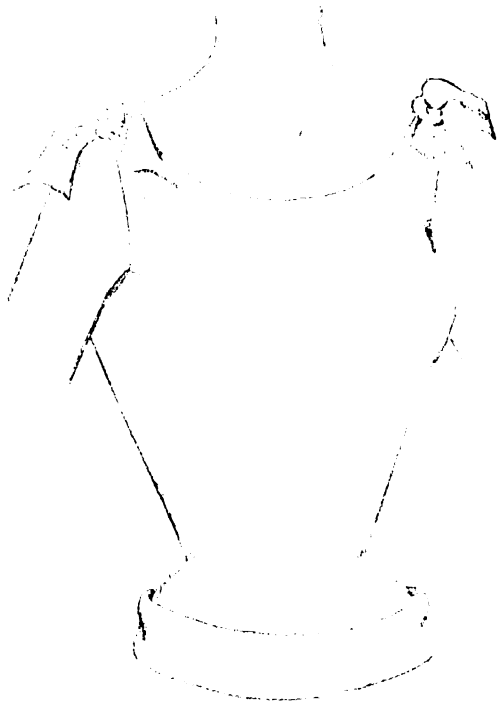
Fit and grain placement The center front was placed on the straight grain and the bodice front and back were joined at the shoulder. The shoulder curve was fitted by the curved center dart placed along the normal shoulder seam position. Other darts were formed on either side of it. The back dart included the shoulder ease which was transferred to a neckline dart, but the front dart was primarily decorative. As

the darts fell on a partial bias, they did not match when closed. In addition to this, other disadvantages were the unbalanced sleeve grain (although there was no center sleeve seam, the unbalanced grain would be evident when worn), and the back bodice seams and darts were partial bias and pulled unevenly. It was decided that this cut would never fit properly.

A second cut was made using a raglan sleeve variation with three lines radiating toward the armscye rather than parallel as in cut 1. The raglan seam separated the bodice into three parts and enabled the balancing of the grain in each section (Diagram 4, cut 2). The shoulder was fitted with a large dart and wedge taken from along the top center of the sleeve, which successfully substituted for the shoulder seam. The back shoulder ease was retained in the dart but some of the cap ease was eliminated. The lines of the raglan sleeve produced design interest very similar to the first cut and at the same time fitted the shoulder curve better.

Adaptability to fabric widths Cut 2 was adaptable to all fabric widths since the sleeve center line was placed on straight lengthwise grain rather than almost on straight crosswise grain.

A sleeve might also be cut with a center lengthwise seam. A seam over the shoulder tip is more easily shaped than a dart, and partial bias along the sleeve center falls more softly than a stiffer, straight grain cut. When this is done the grain should balance at the seam down the top of the arm.



Design 5

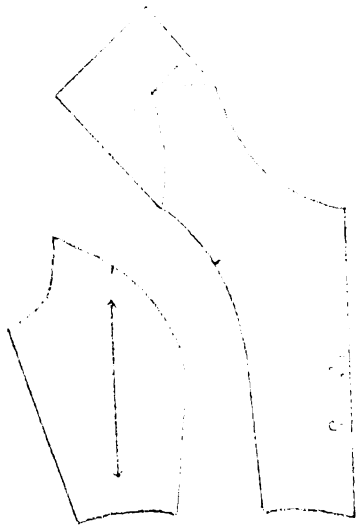
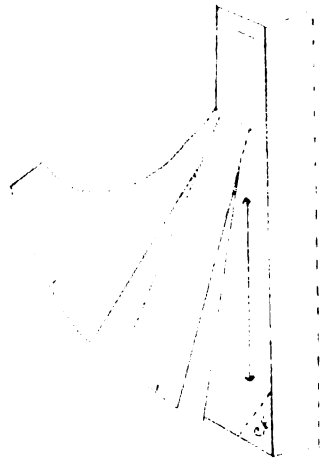
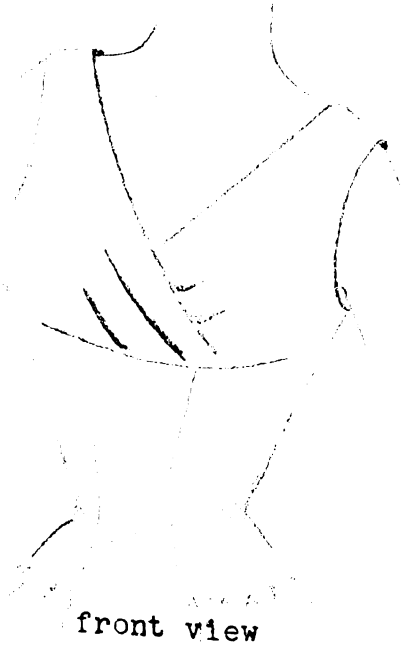


Diagram 5

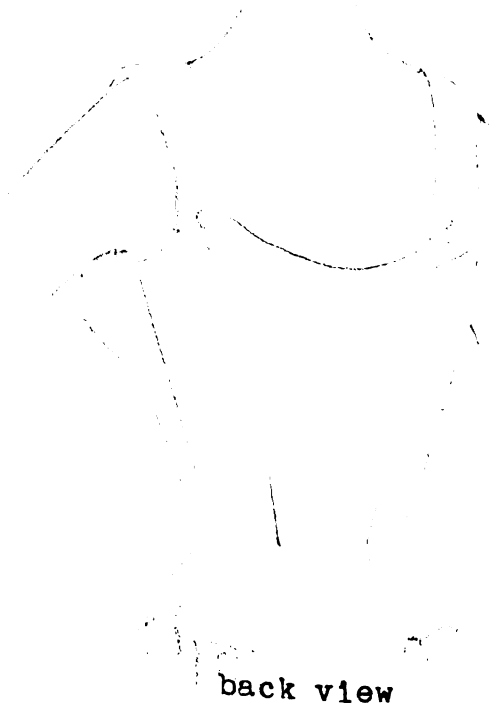


cut 2

Diagram 6 a



front view



back view

Design 6 a

Design 5 The shoulder ties which were cut as partial extensions over the shoulder were the points of emphasis in this design. Garments have more "style" when ties are genuine and are functional in fitting the fabric to the body curves, rather than imitations tacked on.

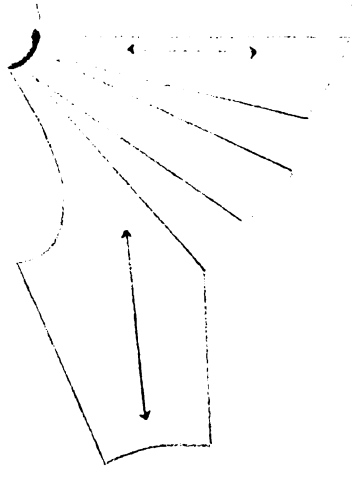
Fit and grain placement When the center front bodice was placed on a center front fold the line at which the extension crossed the shoulder seam was partial bias. The extensions were cut on true bias and pulled evenly and effectively when tied. The ties proved satisfactory for this sleeveless bodice, but might pull inward from the armscye so that sleeves could not be set-in.

Adaptability to fabric widths As this was a short extension it was not limited by fabric width.

Design 6 A partial shoulder extension used for a smooth strap might reveal fitting problems concealed by a tie as in design 5. Therefore, a dress with shoulder straps, suitable for evening or summer wear was designed from an illustration in a fashion magazine.

Fit and grain placement The first pattern was made with the grain perpendicular to the waistline at side front. Slashes to the shoulder provided diagonal folds across the bust, and made the neckline edge fall on true bias. It was decided that a strap cut on straight grain would fit better as it would not stretch. Therefore, a second cut was made with the grain shifted to the neckline and strap edge, and resulted in a

Design 6b



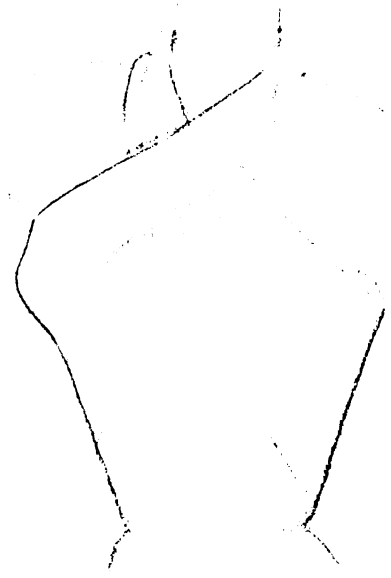
cut 5

Diagram 6b

better fitting strap as well as a smooth neckline. Another advantage was that no reinforcement would be required along these edges as in the first bias cut.

As the principle objective of this study is to show cuts with fewer seamlines, three additional experiments were made in an effort to produce a less "cut-up" design effect. The same general design was cut with the side midriff seamlines eliminated. Cut 3, with the straight grain along the strap and neckline was poor for both the underarm and dart lines stretched and wrinkled because they were on a partial bias. Cut 4, with the straight grain perpendicular to the waistline at side front fitted the underarm and side section nicely but resulted in a partial bias neckline, which was not satisfactory as it would not pull evenly. For cut 5 the size of the folds was increased so that the neckline and strap edge was on straight crosswise grain and the lengthwise grain could be established perpendicular to the waistline at side front. This increased the shoulder line curve, eliminating the possibility of cutting the strap as an extension. This was judged the best cut although there would be no extension over the shoulder.
Adaptability to fabric widths Fabric widths did not limit cut 5.

Design 7 Several unusual halter bodices extending across the shoulder and neckline area were tried. Rhythmic effects resulted from the smooth unseamed line which continued around the neck. Five variations were developed by twisting the strap in different ways.



view 1

view 2

Design 7

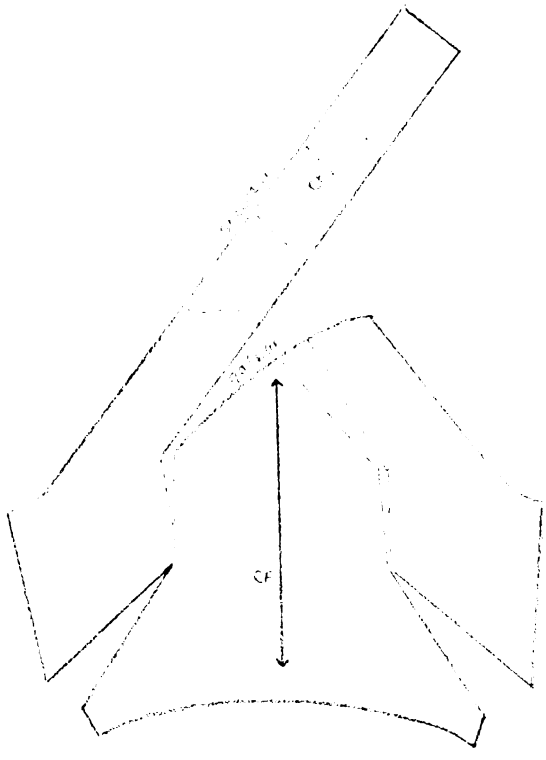
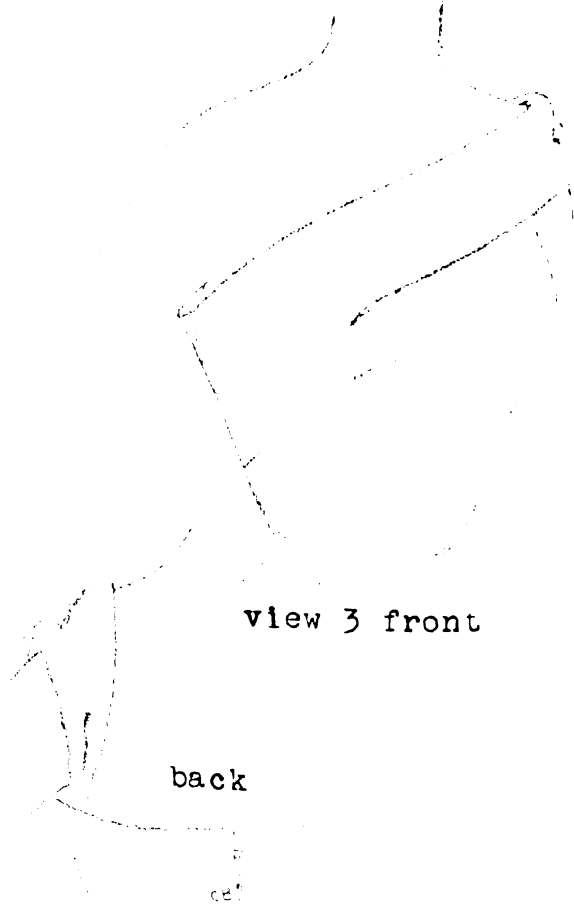


Diagram 7



view 3 front

back

Fit and grain placement The center front was placed on a fold and all of the darting transferred to the upper bodice for fullness under the halter strap. The crosswise grain rose sharply at the underarm and the extension gapped. These faults were corrected by retaining some of the waistline dart as a diagonal underarm dart, which played up the diagonal strap line by repetition. The strap extension was cut on a true bias and resulted in soft, crushed folds that twisted and clung aroung the neck.

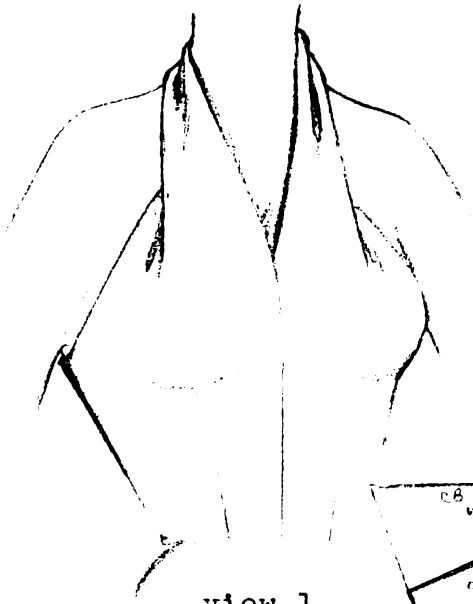
Adaptability to fabric widths The strap extension prevented the pattern piece from being compact, but the pattern was adaptable to all fabric widths tested. The cut would vary slightly depending on whether the neck opening was at center back or concealed under the front strap.

Design 8 Other variations of the basic halter bodice arose from experimenting with excess above the bustline and over the shoulder seam position to the back.

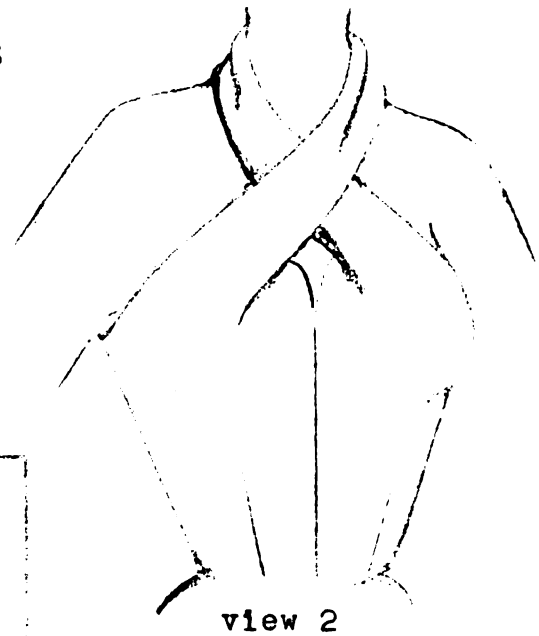
Fit and grain placement The dart transferred to the shoulder, was slashed and the fabric crossed over to fit the bust curve. As it would be difficult to fit the under curve of the bust without a waistline dart, a small dart was retained at the waistline. The straight grain was established at center front. Since true bias lends itself to beautiful, clinging and comfortable draping about the neck, this pattern was recut with the halter straps placed on true bias. This made the centerfront also fall on a bias. Views 2, 3 and 4 proved unsuccessful as

Design 8

cut 1



view 1



view 2

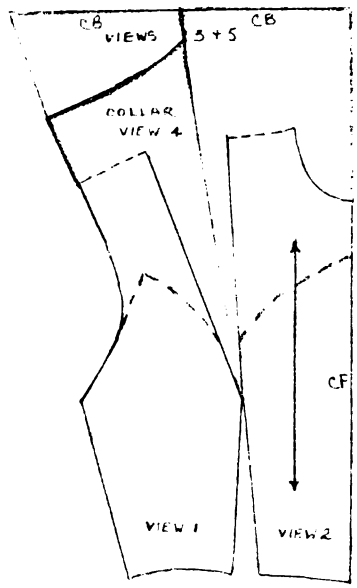
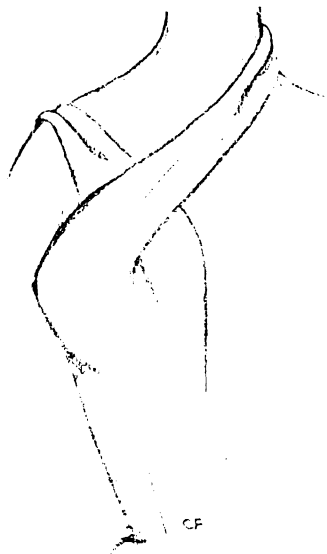
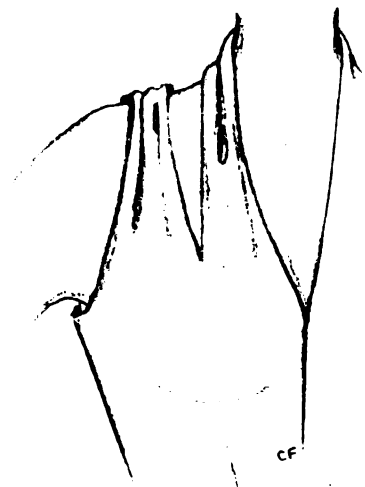


Diagram 8

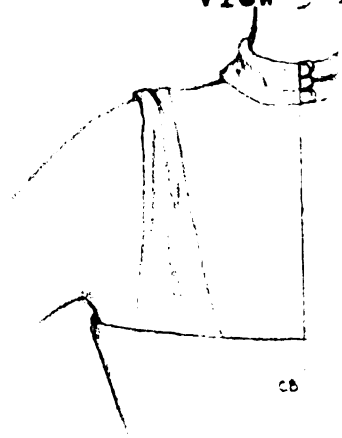


view 3

view 4



view 5 front



back

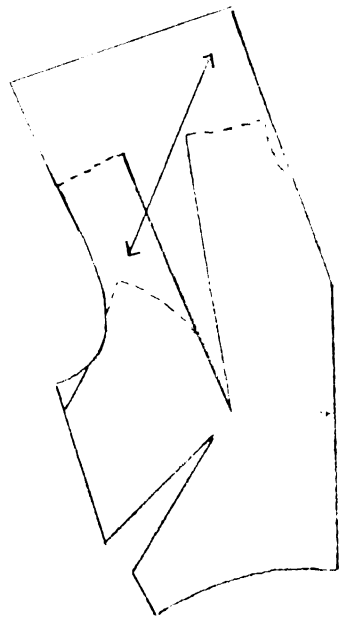
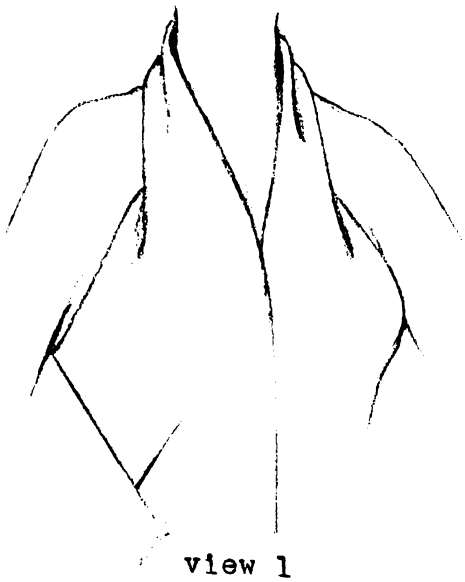


Diagram 8b



view 1

view 5

Design 8

cut 2

Design 9 cut 1

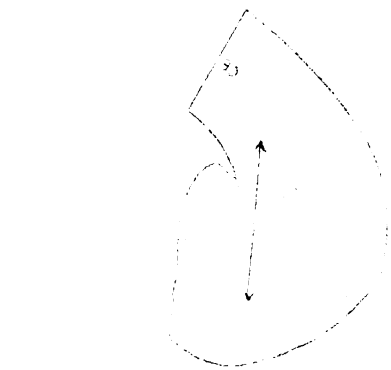
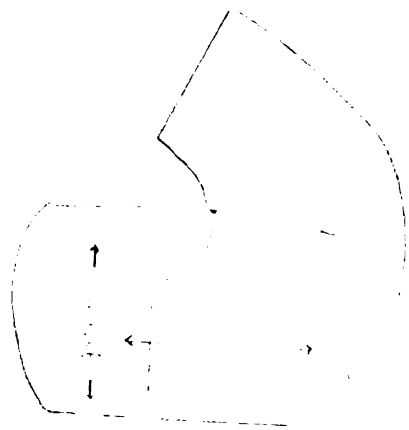


Diagram 9a



Disgram 9b

Design 9 cut 2

the straps were strained when crossed and pulled in the direction intended. However, views 1 and 5 were improved, for the halter draped softly and the underarm line fell on straight grain, which would prevent stretching. The waistline dart was shifted to a diagonal position to harmonize with the design and to keep one edge of the dart on the lengthwise grain. Wrinkling caused by partial bias was avoided by the shift. Darts press better if one edge or the center of the dart is nearly straight grain.

Adaptability to fabric widths. The bias cuts required more yardage but were more advantageous in both design and fit. Both cut 1 and 2 were adaptable to all four fabric widths, even when cut on a center front fold.

Design 9 A short cape cut without a shoulder seam produced a "fly-away" circular effect particularly adapted to crisp sheers.

Fit and grain placement The center front, cut on straight grain, placed a partial bias along the shoulder. Previous experiments showed that bias produces a better fit across the shoulder curve than straight grain. If a built-up neck is used, a shoulder dart is a must in order to fit the sharp upward curve of the neck. But for other cuts a dart is not recommended, for it would appear as a seam and in that case a complete seam might as well be used.

This cape cut was successful because of its shortness and looseness. For a longer, closer fitting cape a shoulder seam should be used.

A cape variation buckled at the throat was cut with the

straight lengthwise grain along the hem edge. This was advantageous as the folds pulled with the grain when buckled. Few neck details were possible as there was little fabric available within the neck area when the front and back were joined at the shoulder.

Adaptability to fabric widths The capes were adaptable to all four fabric widths tested since they were very short.

CONCLUSIONS

1. Generally the most successful cuts without shoulder seams were those which did not call for precise fit and molding to the shoulder curve.
2. The elimination of the shoulder seam limits the number of neck details possible that are cut together with the bodice as well as sleeves cut together with the bodice.
3. The entire shoulder seam can be successfully eliminated if a substituting horizontal yokeline is placed very near the shoulder seam and a partial bias crosses the normal seam position. The grain in the extension is poor if the fabric is extended further, and straight grain will not fit the shoulder curve.
4. Vertical or diagonal seams will not adequately substitute for the horizontal shoulder seam.
5. A raglan sleeve line produces better fit over the shoulder than several darts radiating from the neckline to replace the shoulder seam. The grain can be better established in all pattern pieces when the bodice front and back are separate, and the raglan sleeve with a shoulder dart is used. A single shoulder dart used with a set-in sleeve is of no value when used to fit the shoulder curve, for it appears as a seam, but is bulkier than a seam and does not press as flat.
6. Better fit was possible when part of the shoulder seam was eliminated rather than the entire shoulder seam. And, too, the straighter outer part of the shoulder seam was more

successfully eliminated than the inner portion, because it requires a curved seam to fit the more pronounced curve near the neck, unless a stand-away, unfitted effect is desired, or a detail is used such as that shown in design 3.

7. Halter straps are clinging and therefore successful when cut on a true bias. Straight grain halter straps fit well and are more economical than a bias cut for fabric directly above the shoulder is utilized and the strap does not extend out and away from the remainder of the pattern piece.

8. Partial extensions crossing the outer end of the shoulder create little fitting problem and may be used as a strap or tie. Ties are more graceful when cut on a true bias, whereas straps are best when cut on straight grain to prevent wrinkling and stretching since they support the entire bodice.

9. Short, loose fitting capes are successful without a shoulder seam or dart unless the neckline is also crossed over. In this case a dart is required to fit the neck curve. Long, close fitting capes require a seam across the shoulder and down the side of the arm.

10. Designs with originality and rhythmic effect can sometimes be produced with shoulder seams eliminated or substituted for, but since the seam is very short, unless the design is improved by so doing, the fit will generally be improved by a seam. The shoulder seam should therefore be retained usually for it is inconspicuous and enables exact fit over the shoulder curve.

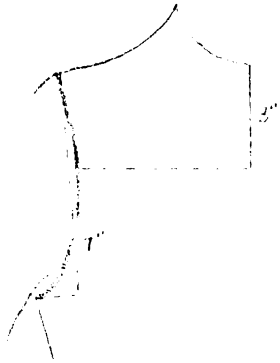


Diagram A

front

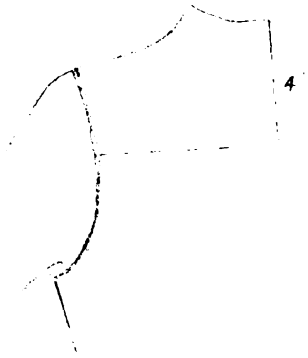


Diagram B

back

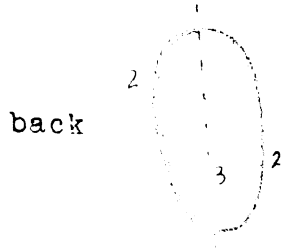


Diagram C

side view

VII. EXTENSIONS BEYOND THE STANDARD ARMSCYE SEAM

The normal armscye or armhole position begins from the juncture of the plane of the shoulder and the plane of the arm, curving slightly inward toward the point where the arm and body join, the narrowest point of the chest, which is perpendicular to a line drawn three inches down from the pit of the neck (Diagram A). The line continues downward and outward to the underarm seam and is about one inch below the armpit.[1] Sufficient width should be allowed across the shoulder blade for moving the arm forward, when marking the back armscye. The narrowest point of the back armscye is a point squared out four inches down from the center back (Diagram B). "To allow the arm to swing forward the curve between 2 and 3 is somewhat higher than the curve on the front armscye between the same two points."[2] (Diagram C)

Darts or ease must provide shaping for the sleeve at the two main points of articulation, the elbow and shoulder ball. The arm performs a great number of various kinds of movements, which makes the sleeve the most complicated of all pattern shapes. Hillhouse and Mansfield tell us that the most suitable and reliable sleeve pattern is a one-piece sleeve with a horizontal elbow dart obtained by drafting. From this drafted

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[1] Hillhouse and Mansfield, Op. cit., p. 21.

[2] Ibid, p. 26.

pattern, unusual sleeve cuts may be blocked.[1]

Hillhouse and Mansfield have thoroughly discussed sleeves cut-in-one with the bodice with the armscye seam completely or partially eliminated. Therefore, this portion of the study will only be concerned with the 1. types of sleeves which extend partially or completely over the armscye, 2. grain placement, and 3. an analysis of their adaptability to fabric widths. Fit will not be studied as the patterns will be drafted according to reliable directions given by Hillhouse and Mansfield, and armscye and sleeve fit is difficult to judge unless cut in full size and worn.

Sleeves cut together with the bodice may be classified in two groups, the raglan and the kimono sleeve. The raglan sleeve has the overarm section cut-in-one with the bodice but retains the underarm curve of the set-in sleeve. The raglan may fall in the same manner as the set-in sleeve, depending on the depth of the armscye. The fit of the two sleeve types differs for the kimono sleeve has both the original overarm and underarm curve eliminated, producing a soft, loose, draped effect around the armscye area. It fits when the arm is extended, whereas the raglan fits much like a standard set-in sleeve. That is, it has few drapery lines when the arm is down at the side.[2]

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[1] Ibid, p.112.

[2] Ibid, p. 148.

A. Raglan Sleeve

The raglan sleeve uses a shoulder line dart to hold in a part of the original sleeve cap ease. When the raglan line enters the bodice above the halfway point, one-fourth inch ease should be worked in when joining the sleeve and bodice. For the same sleeve cap height as the master pattern, the blouse shoulder corner should be one-fourth inch above the sleeve cap. The shoulder dart is usually transferred to the neck edge with some of the back shoulder ease retained along the raglan shoulder line dart wall.[1]

The raglan type sleeves included in this study are:

1. The typical raglan sleeve with a dart along the normal shoulder seamline (shoulder design 4) or the dart continued into a bias seam down the center of the sleeve.
2. The epaulet which is cut with a narrow strap extending on top of the shoulder. The seams on either side of the strap substitute for the normal shoulder seam. Therefore, this is an extension over both the shoulder and part of the armscye.
3. The raglan sleeve cut with a yoke, which has the lower half of the armscye controlling the freedom with which the arm can move; therefore the yokeline should not enter the armhole below the center of the armscye.[2]
4. The drop shoulder which is often used in continuing a yoke or other design line beyond the armscye.

As all raglan sleeves retain the lower part of the armscye line, they are partial extensions across the armscye seamline.

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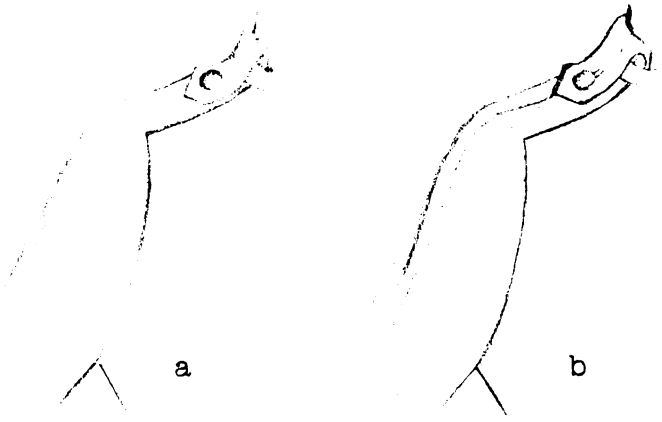
[1] Ibid, p. 149.
[2] Ibid, p. 156.



Design 1

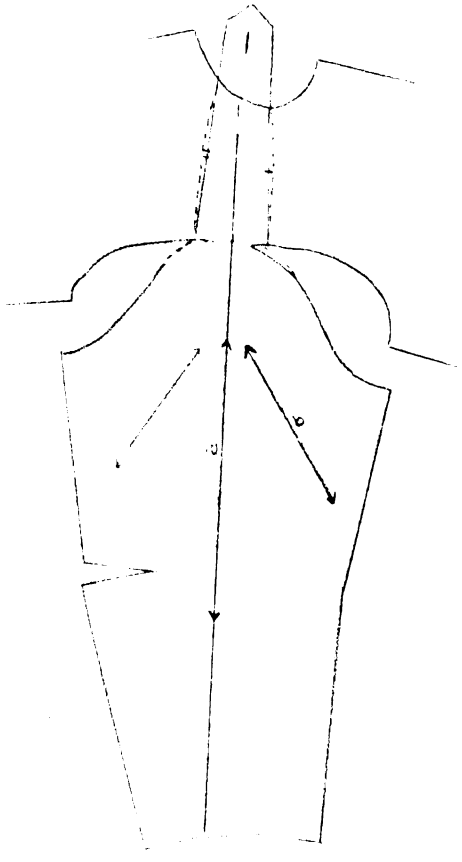


Diagram 1

Design 1 The small portion extended over the armscye was made the center of interest by using the strap or epaulet to form part of the neckline. It was folded back and buttoned, and through this loop fabric was drawn to give the illusion of a mandarin collar. A broadened shoulder effect resulted from the horizontal design line. The epaulet detail held the point of interest near the face.

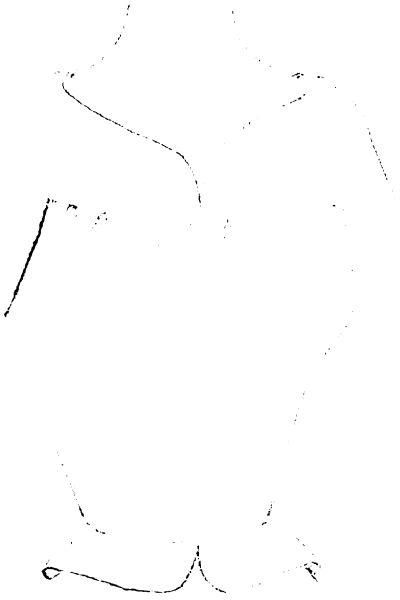
Fit and grain placement The lengthwise grain was placed in the center of the sleeve and the epaulet or strap. As only a small portion of the armscye was eliminated, with the remainder of the normal armscye retained, no problems of fit were encountered.

The raglan sleeve was also tried with a matched bias seam down the center of the sleeve. The advantages of the second cut were the smooth, rounder shoulder and softer drape of the bias sleeve.

Adaptability to fabric widths The bias cut required more yardage than the straight cut but both cut a and b were adaptable to all fabric widths tried.

Design 2 When a shoulder yoke is the center of interest, an armscye seamline over the top of the shoulder often detracts from it by conflicting with it. The following two raglan sleeves cut with the yoke avoid this distraction. Cut 1 has a raglan sleeve joined to a gathered bodice, and cut 2 has fullness along the raglan line and is joined to a plain bodice.

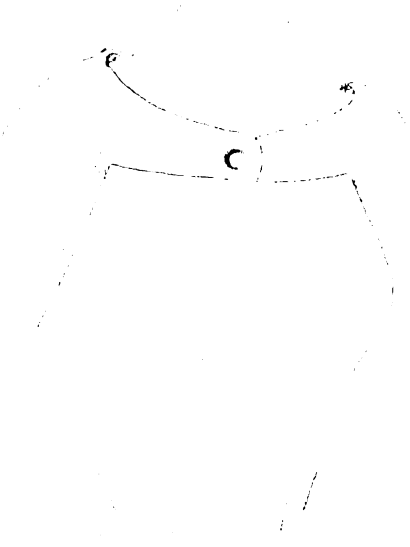
Fit and grain placement In cut 1 the sleeve center was first



cut 1

Design 2

Diagram 2a



cut 2

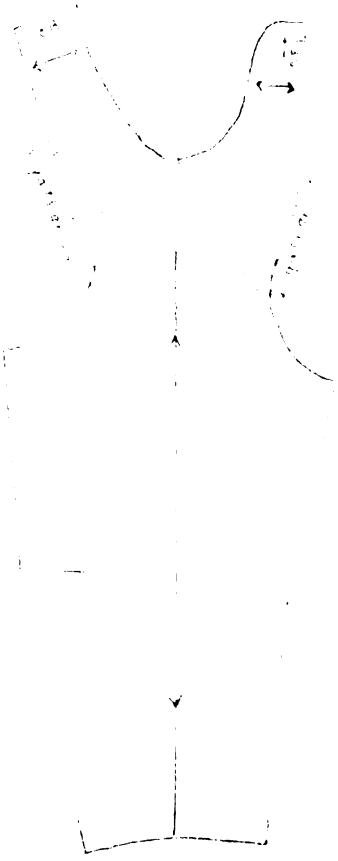
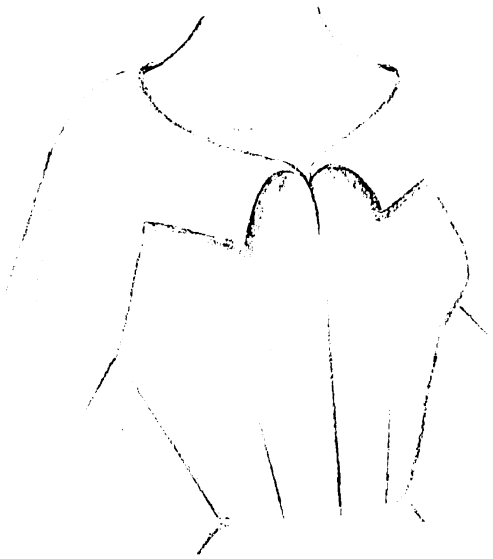


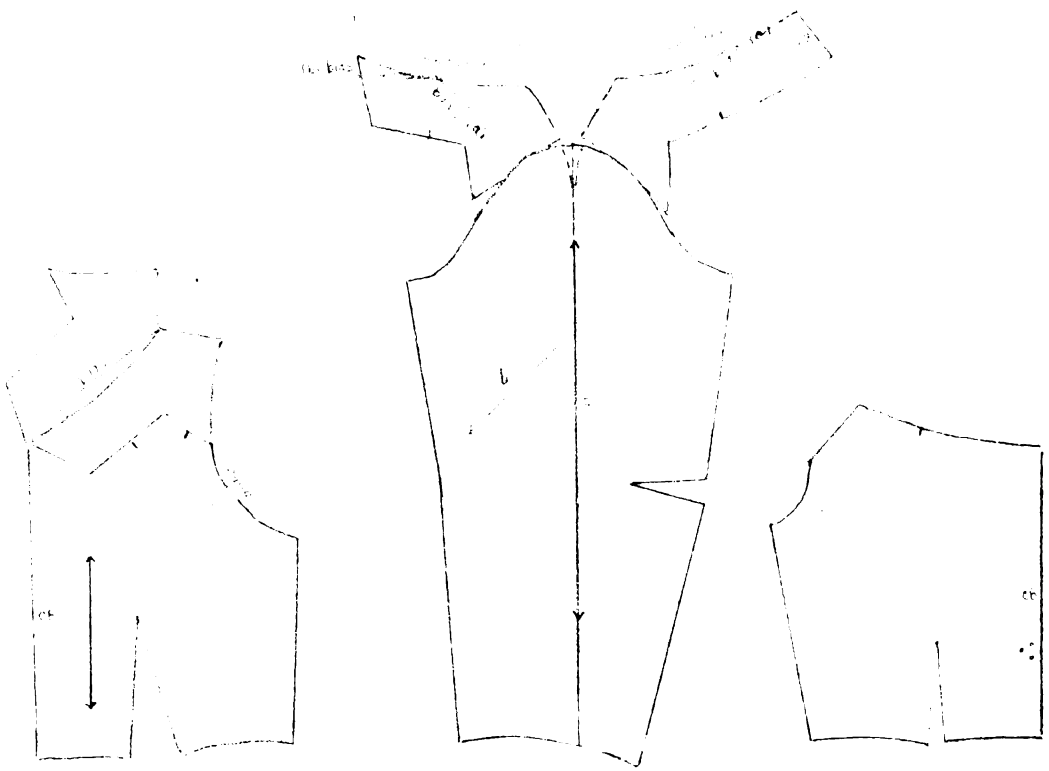
Diagram 2b

placed on straight lengthwise grain, with the separate lower bodice front and back placed on a straight lengthwise fold. A slash was made to the yokeline to transfer part of the large shoulder dart to the yoke edge. This reduced the dart size and reduced the pouching at the shoulder tip. A very large dart produces a very square shoulder, so for a rounder shoulder a seam should be continued down the sleeve center. With the grain established at the sleeve center, the yoke center front and center back fell on a bias. For this reason the grain was shifted to the center front and this placed a partial bias at the sleeve center. The size of the shoulder dart determined whether the center back fell on the crosswise grain or a partial bias. After comparing these results, a bias center sleeve seam appeared to produce the best result for the grain matched at the center of the sleeve, it produced a smooth, round shoulder and draped more softly than when the sleeve center was established on straight grain, as shown previously in design 1. These advantages outweighed the fact that the bias cut required more yardage.

Cut 2 was slashed and spread along the raglan line, and the pattern resulted in a center front yoke more nearly on straight grain than in cut 1 when the center sleeve was placed on straight lengthwise grain. It was thought that the center front or center back yoke might be placed on a fold, but this was not possible for two reasons, 1. the center back extended beyond the center front, and 2. the pattern was too wide to cut on a straight lengthwise fold. A center bias sleeve seam



Design 3



front

back

Diagram 3

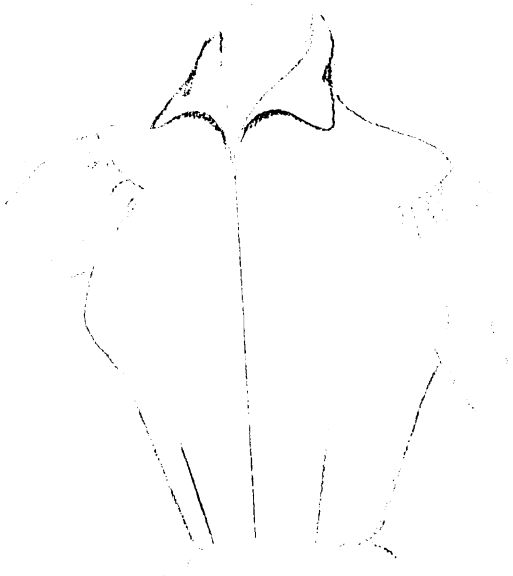
was not tried as it was evident that the pattern edges and center front would become partial bias. The straight grain at the sleeve center was advantageous in this cut for it placed the straight grain perpendicular to the waistline at center front and the straight crosswise grain along the yoke edge.

Design 3 The raglan line joined a loose flap similar to an upper bodice yoke, to produce a very soft, smooth and different effect. The elimination of the upper portion of the armscye gave this design continuity without sacrificing a close fitting underarm.

Fit and grain placement The bodice was first cut in five pieces, with the bodice front cut with a center front seam on straight grain and the center back on a fold. The center front seam was necessary for the facing of the neck detail extended beyond the center front and could not be cut on a fold. A dart along the shoulder and across the armscye fitted the shoulder and arm curve. When the center of the sleeve was cut on straight grain, however, the low neckline edge fell on almost straight grain and neither rolled softly nor matched the grain of the bodice flap facing.

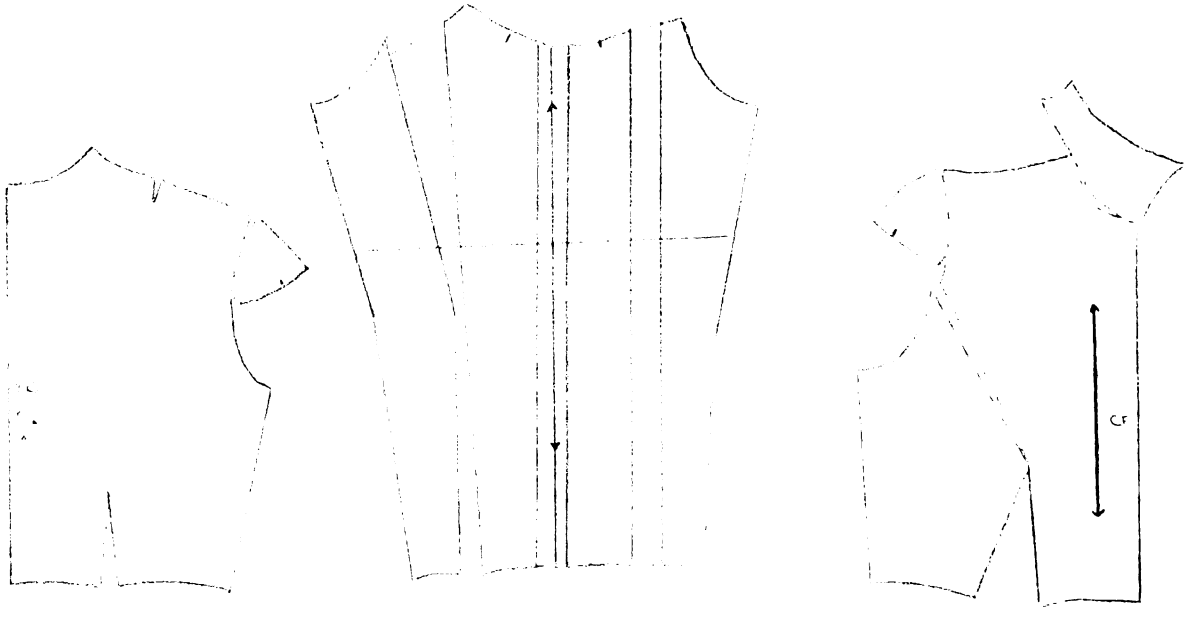
A second cut, with the sleeve and flap grain matched, and true bias along the rolled edge and a semi-bias along the sleeve center, corrected the faults of the previous cut. The seam along the sleeve center also produced a rounder, better fitting shoulder.

Design 4



cut 4

cut 2



back

Diagram 4

front

Adaptability to fabric widths The bias cut required more yardage but was still adaptable to all four fabric widths.

Design 4 The transitional drop shoulder line, accented by soft gathers placed over the arm, was the center of interest. A drop shoulder may have a shortening effect and may droop. When padded out, it becomes too broadening. Therefore, the drop should be slight.

Fit and grain placement In cut one the center front was placed on straight grain with part of the waistline dart transferred to ease along the drop shoulder line. This cut fitted well but the center seam was thought to be distracting. This led to a second cut without a center seam. The fabric was carried as far as possible to form the back bodice to note the reaction. Because of the grain distortion in the back bodice, this cut was eliminated.

A third cut was made with a kimono sleeve. A slash from the design line to the underarm prevented overlapping of pattern parts. This decreased the angle at which the sleeve underarm met the bodice underarm, and also decreased the size of the elbow dart. This cut was successful but as some of the folds naturally radiated to the underarm, a fourth cut was made with a raglan sleeve which retained the original underarm seam. The effect obtained by using a raglan sleeve was similar to the three previous cuts, but was more successful for 1. there was no distracting center seam, 2. the grain could be adjusted in both the front and back bodice as well as in the sleeve, and

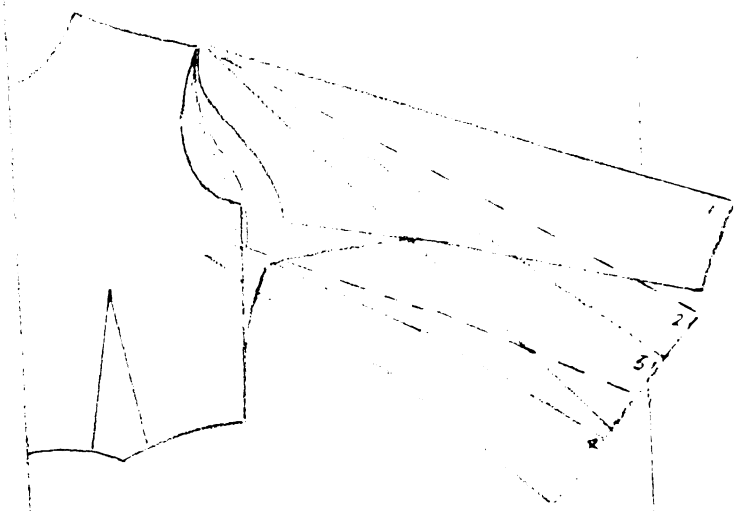


Diagram D

Hillhouse and Mansfield, Op. cit., p. 155.

3. the fullness radiating to the underarm made the raglan seamline inconspicuous.

Adaptability to fabric widths The raglan cut was the most adaptable to the fabric widths tested as the pattern parts could be wedged together.

B. Kimono Sleeves

Kimono sleeves usually have a seam down the top of the sleeve in order to balance the grain in the front and back halves of the sleeve and also to place the center front and back bodice on grain. Therefore, the center line is moved to a point 5/8 inch back from the wrist center. Diagonal wrinkles falling from the top of the arm toward the underarm seam are typical of this kind of sleeve, and are caused by the elimination of the normal lower armscye seam. Kimono sleeves may be cut with or without a gusset. For smoother fitting sleeves without excessive wrinkling under the arm, the angle between the armscye of the blouse and the armscye of the sleeve may be reduced. This necessitates the use of a gusset, a bias diamond shaped piece, set into the underarm seam to give extra ease and length. "Whenever the angle is sharper than a right angle, it will be necessary to set in some form of gusset so that the arm can be raised comfortably without pulling up the waistline." Also the greater the slope is on the top of the sleeve, the less the sleeve tends to pull down from the shoulder line and away from the side of the neck.[1]

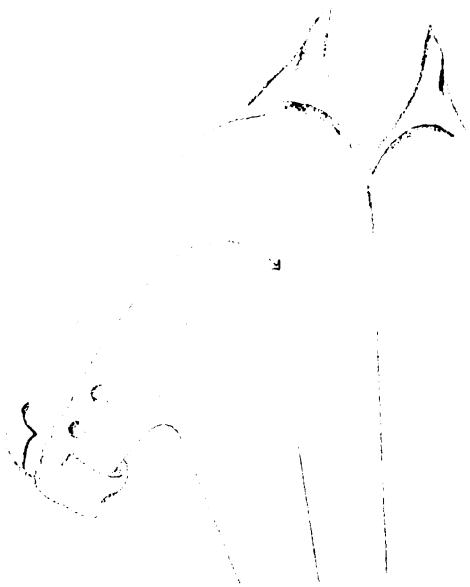
[1] Ibid, pp. 162-164.

The kimono sleeve types which will be analyzed in this study include:

1. the kimono sleeve without a gusset
2. the kimono sleeve with a gusset (a. diamond shaped, b. straight bodice inset, c. shaped bodice inset)
3. the kimono sleeve with a yoke

Short kimono sleeves can also be cut as extensions across the armscye. They are made by extending the shoulder line out four inches and adding slightly to the bodice width or a more accurate method is by using the kimono drafts and shortening the length. For the most part the fabric remaining within the armscye curve is utilized. Therefore, the extensions are very practical. As Hillhouse and Mansfield have shown that these extensions can be done successfully, short kimono sleeves will not be included in the study since sleeve fit is not being analyzed and it is very unlikely that fabric widths would limit short kimono sleeves cut as extensions across the armscye.

From a sketch illustrated in the book Dress Design by Hillhouse and Mansfield, a comparison was made of the adaptability of various kimono sleeve drafts to fabric widths. As the angle between the sleeve underarm and bodice underarm becomes more acute, the pattern becomes narrower. Therefore kimono sleeve draft 1 required the most width and cuts 2, 3 and 4 required less in the order given. The sharper the angle of the sleeve and bodice underarm, the larger the gusset must be (Diagram D).



Design 5

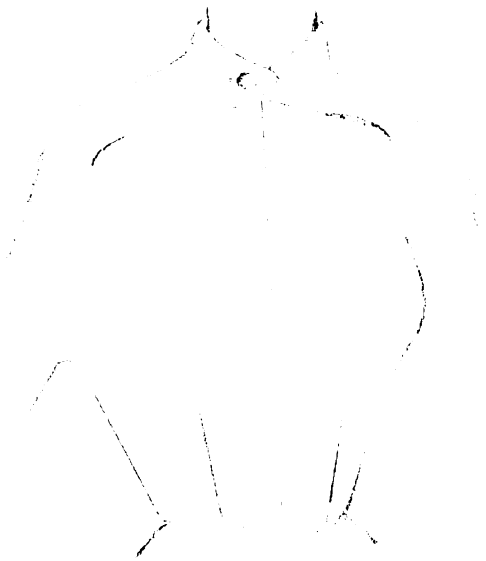
Diagram 5

Design 5 The sleeve was made the center of interest by carrying a gracefully curving line from the bodice front down through the sleeve. This effect was accented by a row of buttons. The design line also helped balance the cross-wise grain across the chest.

Fit and grain placement The bodice was first tried with a kimono sleeve without a gusset and a portion of the waistline dart shifted to the design line. The excess between the dart walls was used for the underlap of the sleeve. The design line appeared similar to a French dart line, therefore a second cut was made with the bodice cut into two parts by a French dart. The side section of the second cut was marked with the lengthwise grain perpendicular to the waist in the center of the pattern piece. Since there was little difference in grain position from the first cut, it was felt that cut 1 was more desirable than cut 2 for it produced a smoother effect when unbroken by a seam across the bust, and the excess between the dart edges was used advantageously.

Adaptability to fabric widths The pattern was very compact as it made use of the excess within the dart. The cut was adaptable to all four fabric widths when cut with a center front seam. When cut without a center front seam, 45 inch width fabric was required.

Design 6 A simple yet unusual design was achieved by transferring part of the waistline dart to a deep horizontal dart radiating from the center of the neckline and across the up-



Design 6

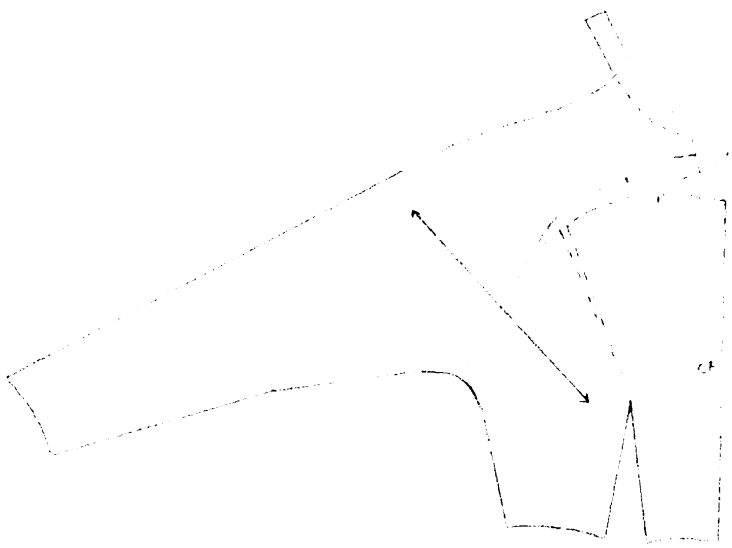
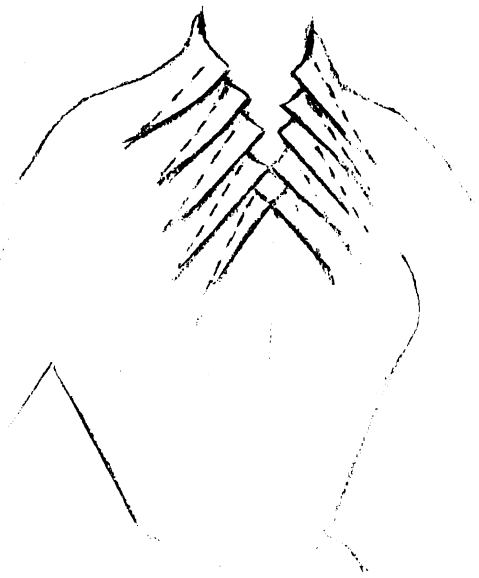


Diagram 6



Design 7

Design 8

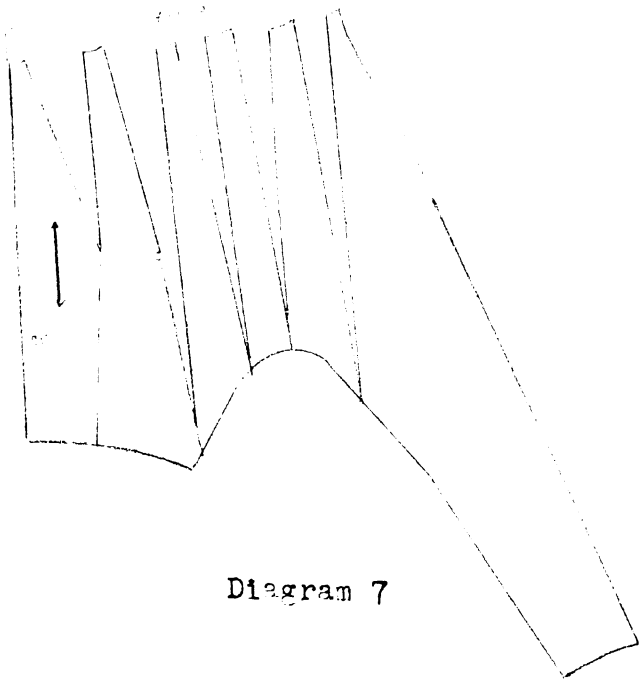


Diagram 7

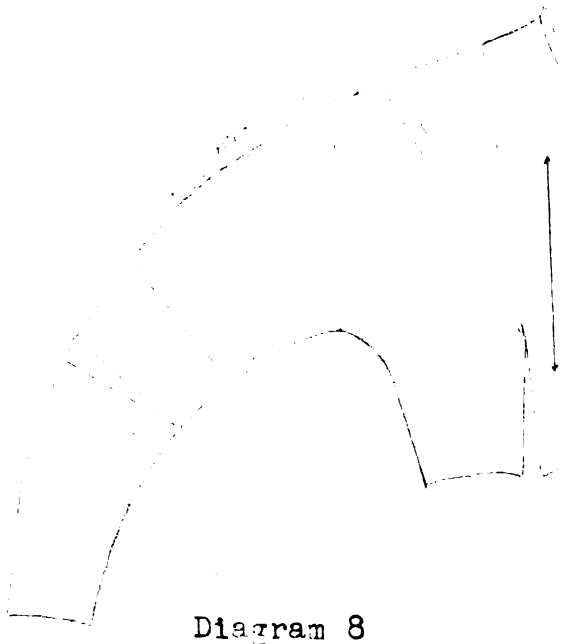


Diagram 8

per chest.

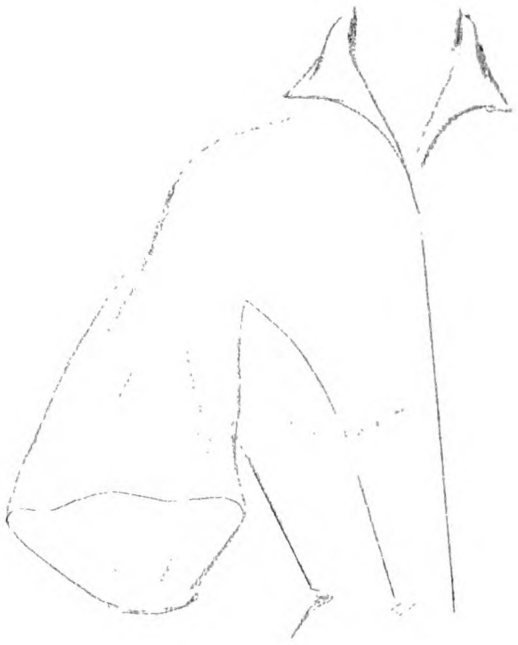
Adaptability to fabric widths Two cuts were made to determine the difference in fabric width required by a pattern with the center front bodice cut on straight grain and by one with the center front bodice cut on a true bias. The cuts were measured from center front to the wrist line. Both patterns measured 13½ inches wide (half-size) and the difference noted was negligible in the particular cut used. Both cuts were adaptable to all four fabric widths tested.

Cuts 7 and 8 were studied to help decide what kind of front bodice design with kimono sleeves was most adaptable to fabric widths without sacrificing fit.

Design 7 This design was cut with several darts radiating from the front neckline which focused interest near the face.

Adaptability to fabric widths Slashes were made radiating from the pit of the neck out to the sleeve underarm and waistline. The deeper the slashes were spread, the narrower the pattern piece became. However, as the darts would become very bulky if spread too much, the pattern should not be reduced to more than 12 inches half-size bodice width. This cut was adaptable to any of the four fabric widths used when cut with a center front seam and is adaptable to fabric 48 inches wide or wider when cut on a center front fold.

Design 8 A kimono sleeve without a gusset was first drafted. Slashes were made and spread along the shoulder, down through the sleeve center to the bodice and sleeve underarm, to pro-



Design 9

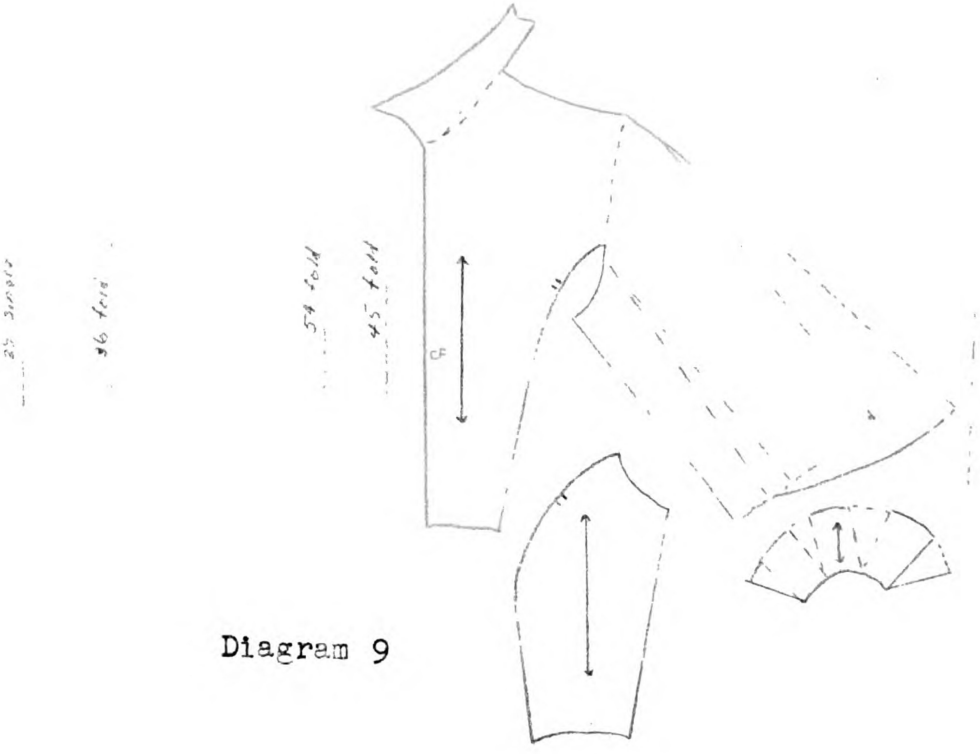


Diagram 9

vide fullness down the sleeve seam.

Adaptability to fabric widths As this curved the sleeve around toward the side bodice, the fabric width required was decreased. The bodice was adaptable to 45 inch fabric when cut on a center front fold and adaptable to 36 and 39 inch fabric when cut with a center front seam. The center front was placed on straight grain in calculating the fabric widths required.

These two cuts showed that darting or fullness originating from the upper bodice reduces the width of the pattern piece, thus making the pattern more adaptable to various fabric widths.

Design 9 Straight underarm insets from 1½ to 2 inches from the original underarm seamline may substitute for a gusset and is not very conspicuous. A larger side bodice inset, such as the one shown, may also be used for this purpose and is usually a part of the design line. A seam very much like the normal armscye was retained at the lower half of the armscye with the upper portion of the armscye eliminated and the sleeve cut together with the bodice front.

Adaptability to fabric widths As kimono sleeve draft two or three may be used, the comparative fabric widths needed can be judged by referring to these cuts (Diagram D). Design 9 with lantern sleeves was adaptable to any of the four fabric widths, and can be cut with the fabric folded if 54 inch fabric is used.

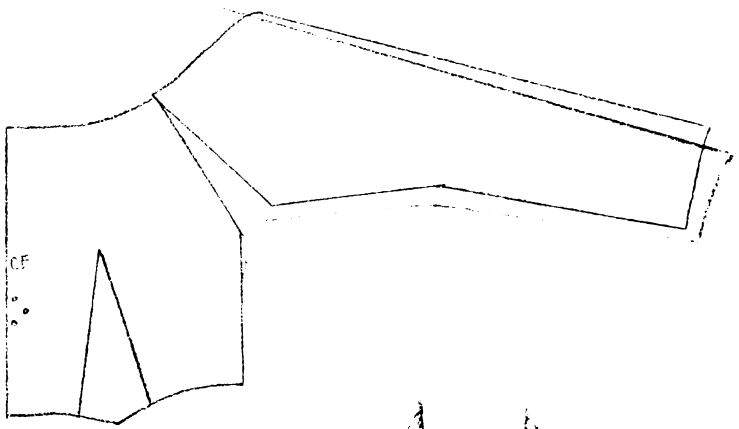
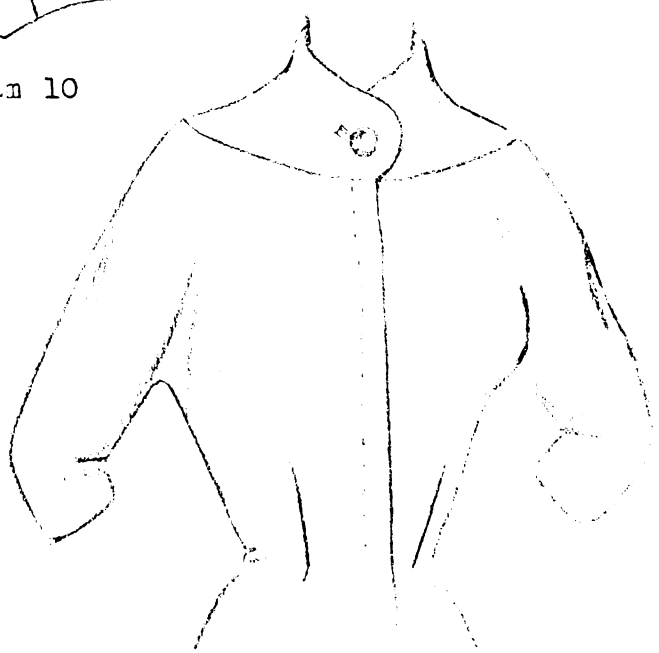


Diagram 10



Design 10

Design 10 "Combining a yoke with a kimono cut offers the advantage of a smooth hanging sleeve with one definite fold at the front and one at the back of the armscye and a clean-cut close fitting shoulder line, because the needed length atthe underarm seam can radiate from a point at the lower yoke edge rather than from the line of the shoulder seam. It also offers the opportunity to increase the overarm sleeve length by lowering the grain slightly at the top center line of the arm. This, however, increases the difficulty of raising the arm unless the sleeve is quite wide at the top." [1]

Adaptability to fabric widths A comparison was made between a kimono sleeve draft not requiring a gusset and a kimono sleeve with a yoke with the underarm length increased by slashing from the underarm to the shoulder. When the sleeve was swung up for the additional underarm length, the pattern piece became wider from center front to the sleeve wrist. Therefore, more fabric width was required for the kimono sleeve cut with a yoke.

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[1] Hillhouse and Mansfield, Op. cit., p. 172.

CONCLUSIONS

1. Raglan sleeves eliminate the seam across the top of the armscye which is often discordant with the design used.
2. Raglan sleeves cut with a center bias seam produce a smoother, rounder shoulder and softer drape. Although it required more yardage than a sleeve with a shoulder dart and the sleeve center placed on straight grain, it was judged the better of the two. The grain of a bias sleeve cut must match at the seam for proper fit and effect.
3. Raglan sleeves cut with a yoke cannot be cut with the center of the yoke on a fold because of fabric width limitation.
4. When a drop shoulder line is used and fullness radiates to the underarm, the raglan seam is inconspicuous and is more suitable than a kimono sleeve considering design effect, grain placement and fabric economy.
5. Kimono sleeves entirely eliminate the armscye seam and are useful when an armscye seam interferes with the design lines of the garment.
6. Fullness added along the upper bodice reduces the width of the pattern and makes the pattern more adaptable to narrower fabric widths and at times enables it to be cut on a center front fold. On the other hand, fullness radiating from the lower bodice or underarm (kimono sleeve with a yoke, Design 10) increases the width of the pattern and

requires wider fabric, a grain shift or additional seaming.

7. Although sleeves cut with the bodice create larger pattern pieces than sleeves without the armscye eliminated, they are not ordinarily limited by fabric width.

8. Kimono sleeves cut with gussets are more adaptable to fabric widths than if cut without gussets, as the angle between the sleeve underarm and the bodice underarm decreases and the distance across the pattern is also reduced.

9. The elimination of the armscye can result in successful fit (as shown throughout chapter 4 of Dress Design by Hillhouse and Mansfield), but the fit is usually looser than a set-in sleeve, although a raglan sleeve may be made to fit very much like a set-in sleeve.

VIII. EXTENSIONS BEYOND THE STANDARD NECKLINE SEAM

The neckline should generally be considered the most important area of design for it frames the face. It should be fashionable, becoming and an integrated part of the costume. Hillhouse and Mansfield find that "a neckline that curves up against the side of the neck is usually more becoming than one that stops abruptly at the base of the neck, since it forms a softer, transitional line. Moreover, it creates an impression of height...and slenderizes a short heavy neck."[1] When collars are cut together with the bodice, unity is achieved in both cut and style, for the bodice and neckline are in one continuous piece. A cut up effect is avoided and the excess fabric above the shoulder and within the neck area is utilized in creating any number of unusual effects.

Mansfield explains the position of the standard neckline seam as "along the base of the throat from across the center back vertebra most prominent when the head is tilted forward, and the side slightly above the point where the horizontal plane of the shoulder meets the vertical plane of the neck to the center front at the pit of the neck." She adds that it should be at least as high at the center back as at the shoulder seam. Because of the two planes involved, the

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[1] Ibid, p. 256.

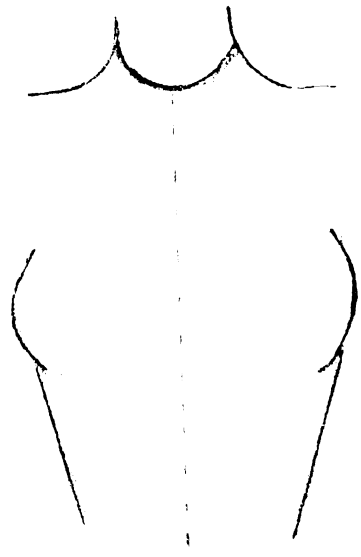

Diagram A

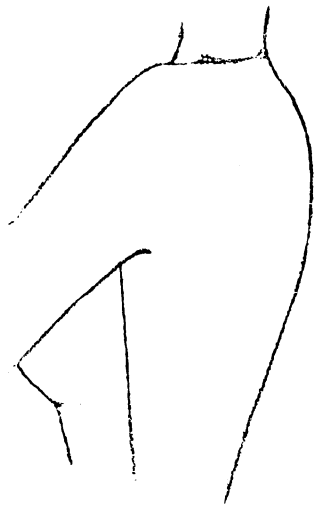

Diagram B

horizontal shoulder plane and vertical neck plane, no area requires greater precision of fit (Diagrams A and B). Therefore, draping, rather than flat pattern design offers the best opportunity for creating original designs which will fit the neck contour.[1]

The measurements given by Hillhouse and Mansfield for marking the standard neckline position for a size 16 dress is three inches deep at center front and two and one-half inches wide at shoulder level and one-half inch deep at center back and two and one-half inches wide at the shoulder level.[2]

When designing and finishing either a built-up neckline or a collar cut-in-one with the bodice front, a diagonal slash is necessary at the juncture of the neck and shoulder to achieve smooth fit. The shoulder seam of the built-up neckline must curve sharply upward at the base of the neck as it changes direction. The same is true of the collar cut together with the bodice, for although the seam does not usually continue up the side of the neck, the fabric continues upward and the seam changes direction at the shoulder and neckline juncture and may continue further to form the back neckline.

The text, Dress Design by Hillhouse and Mansfield will be used throughout this portion of the study as a basis for blocking and draping collars and necklines. In this section

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[1] Mansfield, Op. cit., p. 56.

[2] Hillhouse and Mansfield, Op. cit., p. 13.

a progression of designs will be studied from A. the simplest built-up neckline to B. the shawl collar and other collars ending in a deep "v", and C. the high roll collars cut-in-one with the bodice.

Principal terms used in reference to various parts of the neckline and collars will be the same as those used by Hillhouse and Mansfield.[1]

Stand--height of the collar roll, usually the amount the collar rises above the basic neckline to which it is attached. It is that part of the collar which extends from the neckline to the roll-line.

Roll or fold--turning line of the collar along the top of the stand.

Break--point where the lapel begins to fold back from the edge of the garment, and breakline refers to the fold-line of the lapel and the tailored collar.

Style line--free outside edge of the collar.

A. The Built-up Neckline and its Variations

The built-up neckline is the simplest design where fabric is carried beyond the standard neckline. Hillhouse and Mansfield explain the change necessary in the master pattern when cutting a built-up neckline..."the size of the basic neckline must be slightly increased and the grain must be shifted so that the lengthwise threads are perpendicular

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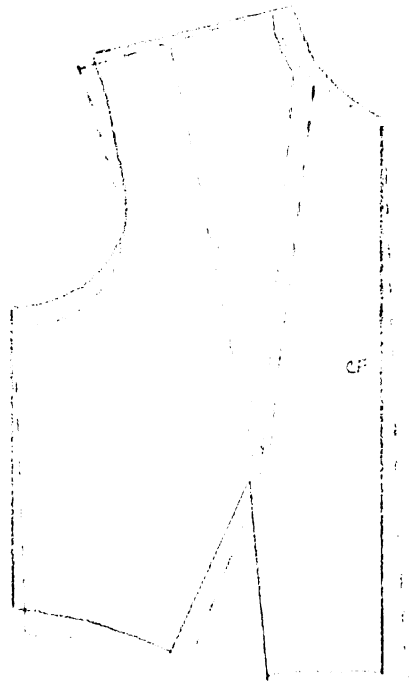
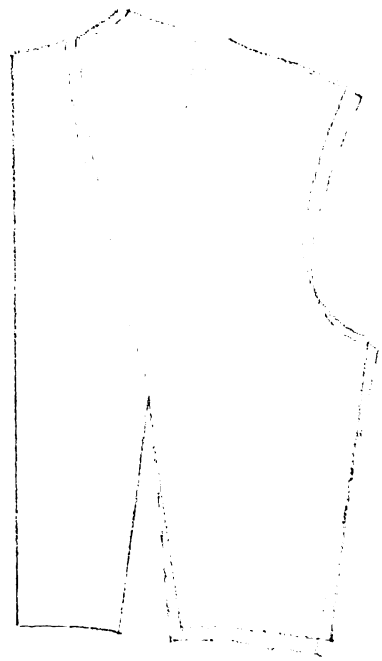
[1] Ibid, p. 247.



front

Diagram C



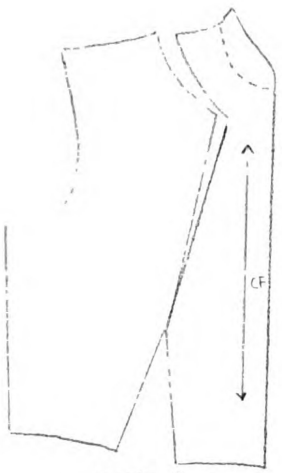
back

Diagram D

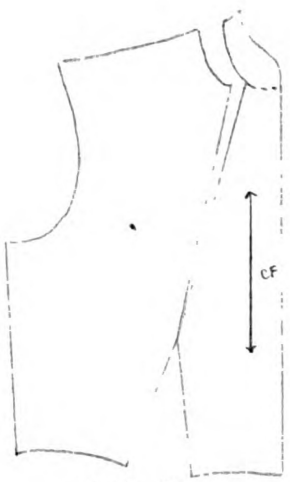
cut 1

cut 2

Design 1



cut 1



cut 2

Diagram 2

to the neckline rather than slightly stretched away from it." And to revise the blouse back, some of the waistline dart must be transferred to a neckline dart which shifts the lengthwise grain slightly to provide a fitting line at the back of neck. (Diagrams C and D)[1]

Design 1 The curved dart placed below the standard neckline position was the focal point of the design and repeated the curve of the built-up neckline. For greater accentuation a corded seam or a slot with a contrasting tie could be introduced. Part of the waistline dart was used to form the loose fold at the end of the curved dart which was directed toward the bust point. The built-up neckline gave an effect of slenderness and additional height. This would be particularly evident if dark colored fabric were used to sharply define the silhouette.

Fit and grain placement The curved dart was decorative and also helped balance the grain across the bust, but did not help fit the neck curve since it was placed below the neck base. All the fitting was done through clipping and curving the shoulder seam. Successful fit was also dependent upon the amount the fabric could be stretched at the standard neckline position. Flexibility, of course, is influenced by grain position. When the center front was placed on straight grain, the neckline automatically became a flexible bias

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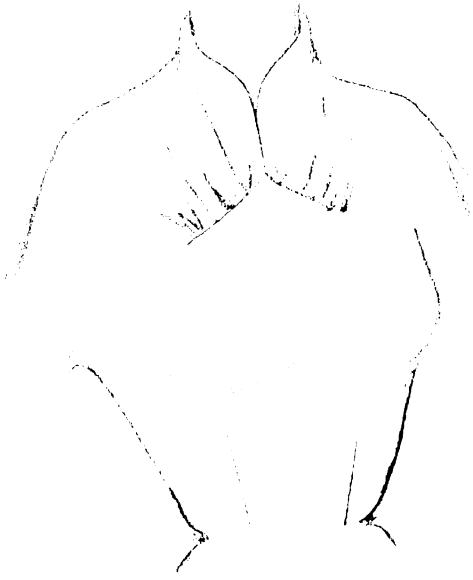
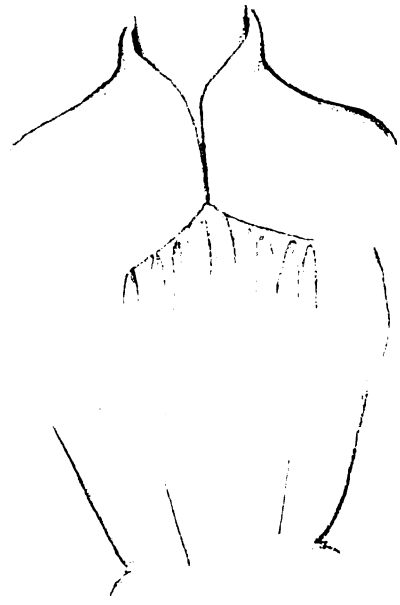
[1] Ibid, pp. 243-249.



Design 2



Design 3

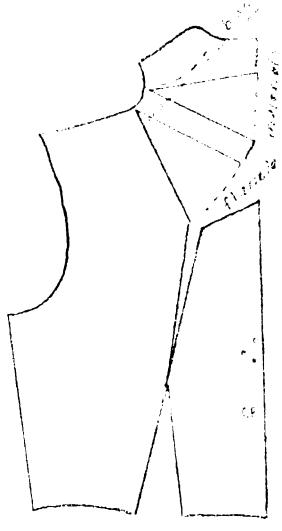


Diagram 2

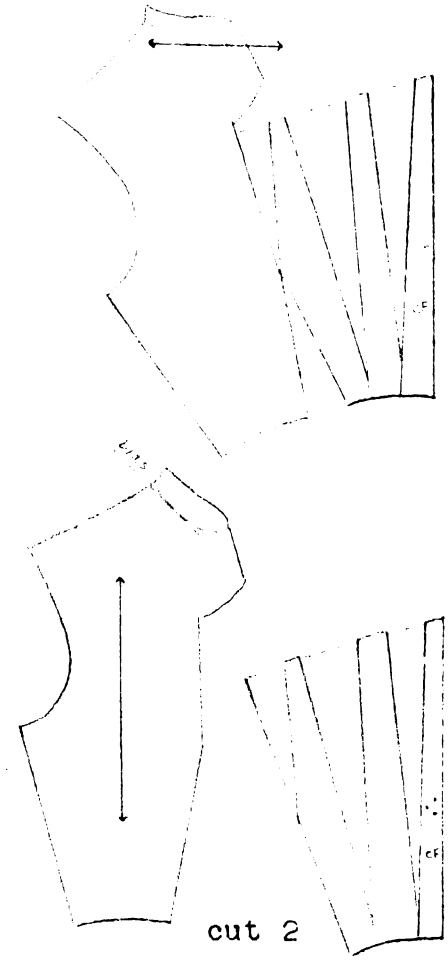


Diagram 3

curve. The height of the built-up neckline increases the difficulty of fitting the neckline area, for the neckline curve becomes smaller as it is extended up beyond the neck base. Therefore,the neckline was built up only slightly.

A second cut was attempted with the design line raised to the standard neckline level. The advantages of this over the first cut were;1. the partial seam beginning at the shoulder and ending before reaching the center front served as a functional fitting line for the neck curve, 2. a closer, smoother fit resulted as the fitting of the neck curve was distributed between two seams, the partial neckline seam and the curved shoulder seam, and 3. with the addition of the partial seam the neckline could be built up higher than in the first cut and could even be extended to form a wing collar.

Design 2 Another built-up neckline was cut with a partial yoke line out of which gathers radiated toward the shoulders. The gathers gave this design a soft, transitional appearance and centered interest at the neck. This partial yoke carried out the main purpose of this experimental work by cutting the whole blouse front in one piece.

Fit and Grain placement The design was first tried with the center front on straight grain. Slashes were made to the shoulder seam to produce fullness along the yoke edge. When the slashed pieces were swung around to avoid crossing the center front, the standard neckline position automatically fell on a true bias. Since the center front could be cut on

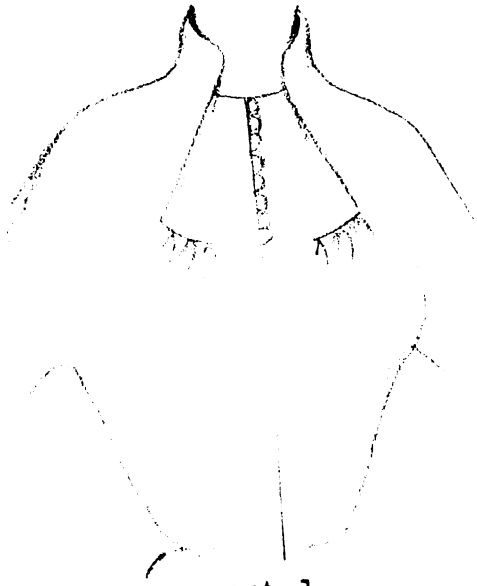
a fold, there was unity in design. The true bias across the neckline helped to fit the neck curve. The gathers near the center front were not flexible, however, as they fell on the straight lengthwise grain, compared with the remaining flexible bias gathered edge. These gathers along the upper edge of the yoke were above the bust so they did not help to mold the bodice over the bust, although they did disguise any tendency to wrinkle around the neck base.

Adaptability to fabric widths This cut was not extravagant as excess directly above the neckline was used for the gathered yoke. It was not limited in any way by fabric width. The center front could be cut on a fold regardless of which of the four fabric widths was used.

Design 3 A similar cut was attempted with the gathers placed at the lower edge of the yoke to note the difference in fit between the two cuts when the gathers were placed at the opposite edge of the yoke.

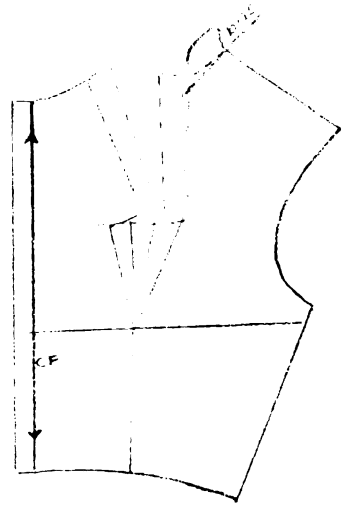
Fit and grain placement The transfer of part of the waistline dart to the yoke edge made the gathers fall on a partial bias, producing soft folds. Several disadvantages in the cut were noted with this design modification: 1. the neckline fell on straight grain and caused wrinkles at the neck base, 2. the shoulder seam, underarm and waistline seams fell on a semi-bias, and 3. the crosswise grain slanted downward from the shoulder to the center front.

To correct these problems, the side section was cut



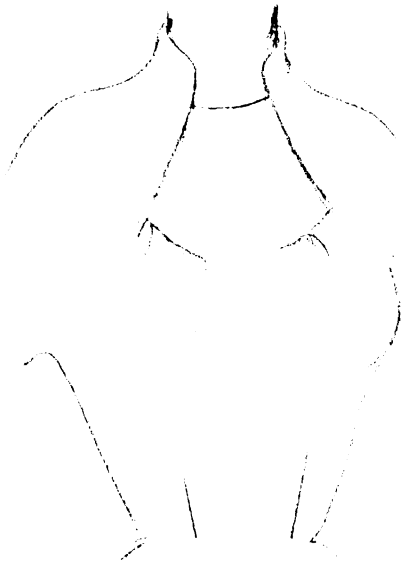
cut 1

Design 4

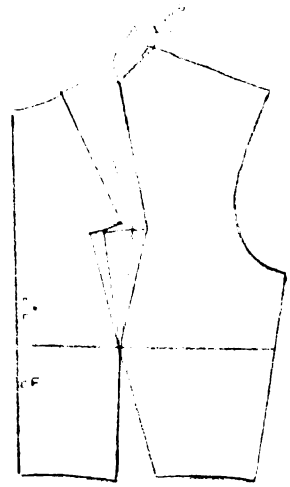


cut 1

Diagram 4



cut 2

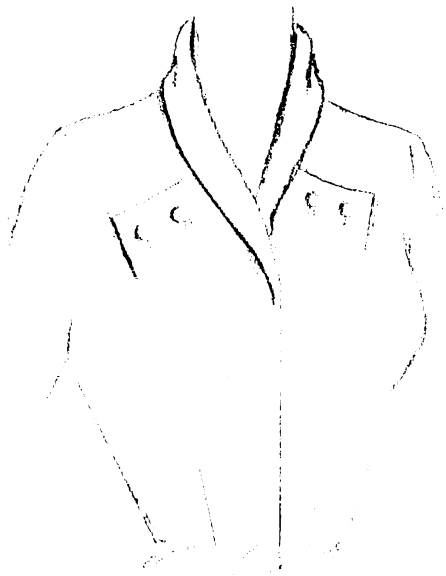


cut 2

separately with the grain perpendicular to the waistline at the center of the side section. This made the true bias fall at the neckline curve and produced smooth fit around the neck base. The addition of the seam was neither conspicuous nor altered the design effect. This design could also be cut with the grain perpendicular to the waistline at side front and with a bias center front seam. However, a seam at the normal side dart position is less conspicuous and at the same time helps fit the bust curve.

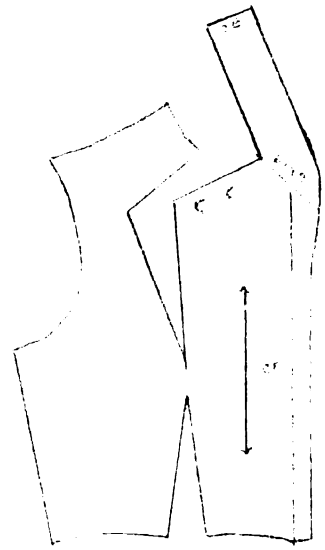
Design 4 From the simple built-up neckline the experiment progressed to a partially built-up neckline combined with a partial neckline seam. This particular design had a center front portion which followed the standard neckline for a short distance and yet had the side and back neckline built-up above the neck base. Irregular lines like this are more becoming than a single plain line at the neck base. The dart to the neck molded the fabric around the bust and directed the attention toward the face.

Fit and grain placement The cut was first tried with the center front on the straight grain and all of the waistline dart transferred to the neckline dart and yoke fullness. The excess between the two edges of the neckline dart provided fabric for the dart facing. Shifting the entire dart unbalanced the grain across the bust and made the bodice fit tightly around the under curve of the bust as no fitting dart or seam was provided below the bust except at the underarm



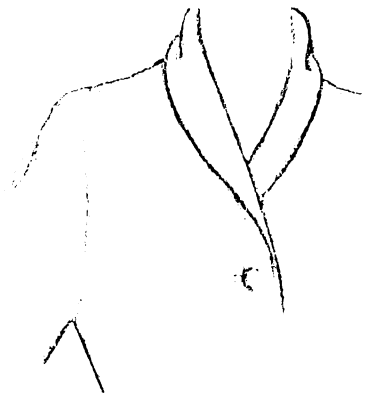
cut 2

Design 5

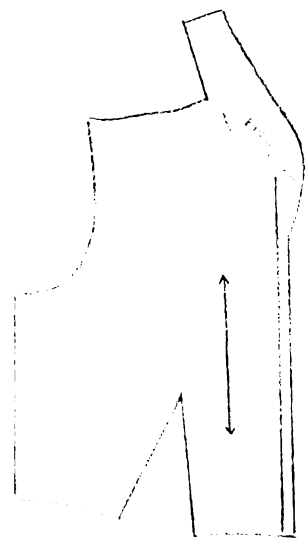


cut 2

Diagram 5



cut 1



cut 1

and center front. The underarm and shoulder seams were bias and the cross grain slanted upward from the center front at the armscye. As only a part of the neckline curve had to be fitted, it was possible to obtain a smooth fit without true bias at the neck base. The fit of the neckline did not rest solely on the shaping at the shoulder as in design 1.

A second cut was attempted and the general appearance was improved by retaining part of the waistline dart. The cross grain was balanced at the bust level, the normal neckline position fell on a true bias and there was still enough excess within the dart area for the dart facing.

B. The Shawl Collar and its Variations

The next group of designs showsvariations of collars cut onto the front bodice, beginning with the shawl type collar which extends across the neckline and ends in a low "v" below the neck base at center front. This is one of the simplest and most standard varieties. To produce a good fit it requires less darting or stretching at the neck base than the high, close fitting collars. However, a crescent dart at the side of the neck base improves the fit of the shawl collar and this appears as a standard fitting procedure on patterns and ready-to-wear cut on collars. The dart is hidden by the collar roll and a smooth facing covers it. (Diagram 5, cut 1)

Design 5 A more unusual shawl collar variation with a partial seam was cut with part of the waistline dart transferred to the

simulated pocket near the shoulder. The dart made a partial seam along the upper neckline necessary. It replaced the crescent dart and served as a fitting seam. The shoulder dart swung the shoulder section back just enough to provide seam allowance for the partial neckline seam. To cut the collar the fabric above the neckline was used plus the fabric beyond the center front. All collars cut onto the blouse require a blouse center front seam in order to have extra width beyond the center front to use in designing the collar. With the center front placed on straight lengthwise grain, the neckline automatically fell on a partial bias and produced a soft roll. A similar effect could have been obtained by using a separate true bias fold. However, a shawl collar cut with the front bodice avoids a thick seam at the juncture of the collar and blouse, and appeared smoother and softer at neck base.

Design 6 In this design a modified shawl collar and lower bodice were cut together. The curving yoke which stood away from the under edge, formed a pocket and entered the armscye at the underarm. A smooth effect was obtained by cutting the sleeve together with the upper bodice. As the yoke extension formed the smooth underpocket, a kimono draft was required although the sketch appeared as if a raglan sleeve might be used.

Fit and grain placement The yoke was cut with the lengthwise grain perpendicular to the bustline. The shawl collar was

Design 6

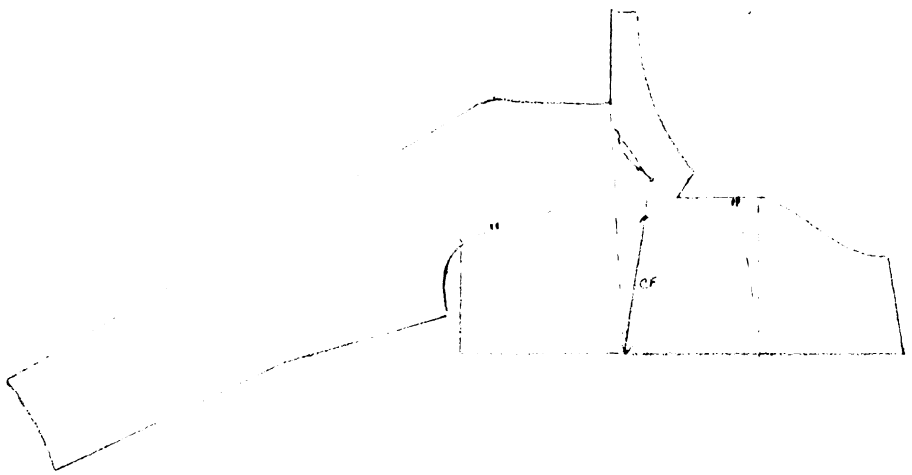


Diagram 6

draped with a crescent dart along the base of neck. The collar and lower bodice section were cut with the grain identical to the draped collar, and part of the waistline dart was shifted to the yoke edge to encourage it to stand away. The neckline fitted smoothly but the lower bodice seam lines were partially bias. Firm interfacing would be required to keep the stitching from breaking and to prevent stretching.

A second cut was made with the lower bodice center front on straight grain. This improved the fit of the lower bodice but the collar was not as flexible as the previous cut, for the front and back neckline fell almost on straight grain. However, since the neckline ended in a deep "v", no undesirable wrinkles resulted, and the effect was smooth and flowing. Therefore, the second cut was judged the more successful of the two.

It was then thought that firm reversible fabric might be used to cut the entire bodice in one piece. This plan was unsuccessful since a grain position could not be established which produced good fit in all areas of the bodice.

Adaptability to fabric widths This cut is not adaptable to 36 inch fabric when cut with the grain placement chosen as best.

C. The Stand-up Collar and its Variations

The stand-up collar differs from the shawl collar in that it rolls to a higher point on center front rather than rolling down into a deep "v" below the pit of the neck. The stand of

the collar is higher and it fits more closely all around the neck curve. Therefore, more seaming or deeper darting is required to shape the collar to fit the neckline without wrinkling. All collars of this type must be designed directly on the form as there is no master pattern for cut-on collars. From Hillhouse and Mansfield we learn several rules concerning collars cut-in-one with the bodice front. They tell us that to obtain a collar with a petal like under curl along the style line, the outside edge of the collar should be smoothed, and the height of the fold line reduced if necessary. The center back line from the outside edge of the collar to the fold line slants more when the outside edge is lengthened. To produce a higher roll, more of the fabric is dropped below the basic neckline of the form at the back. Other important rules discussed in their text are that the center back seam should not be made a straight line unless marked as such when it is draped on the form. Rather it should slope in from the neckline seam to the fold line and out again to the outside edge (Diagram 7a). This improves the fit and allows extra length on the outside edge of the collar with a rolling effect. The neckline seam may have a slight convex curve near the center back which produces close fit along the fold line and prevents the center back from standing away from the neck. For a collar with a roll of three-fourths to one-inch, the angle formed by the shoulder seam and neckline seam should be a right angle. If the angle is less the stand is lower.[1]

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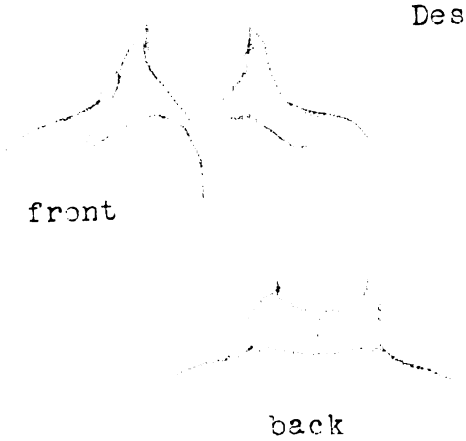
[1]Hillhouse and Mansfield, Op. cit., p. 265.

Design 7



cut 1

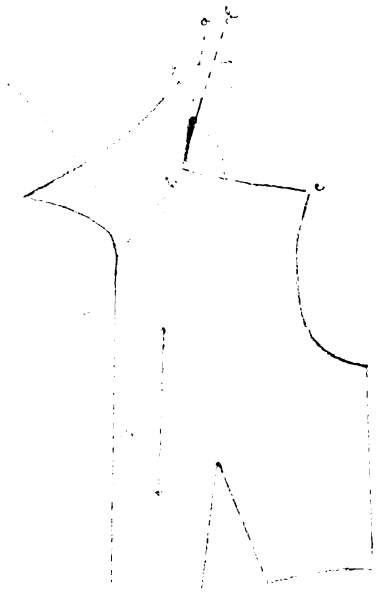
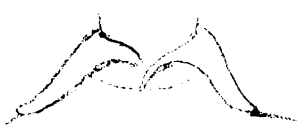
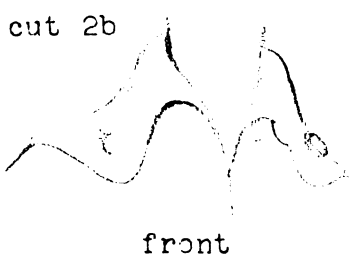


Diagram 7

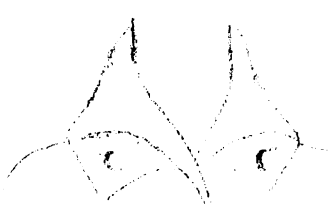


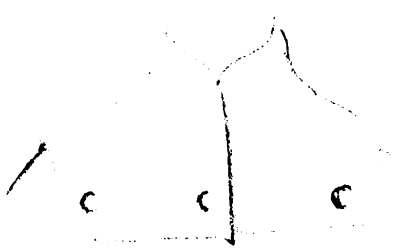
back

cut 2b

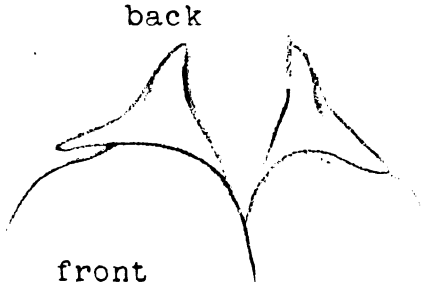


front



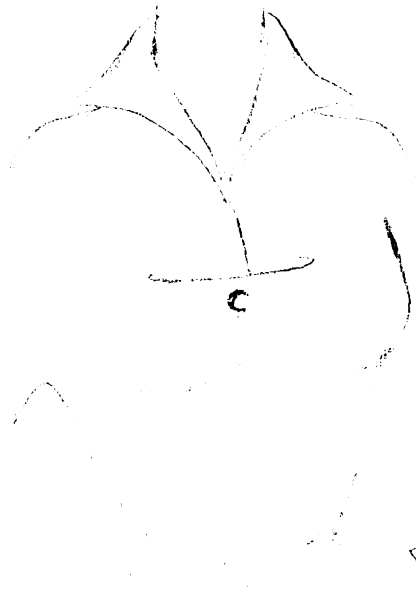


back

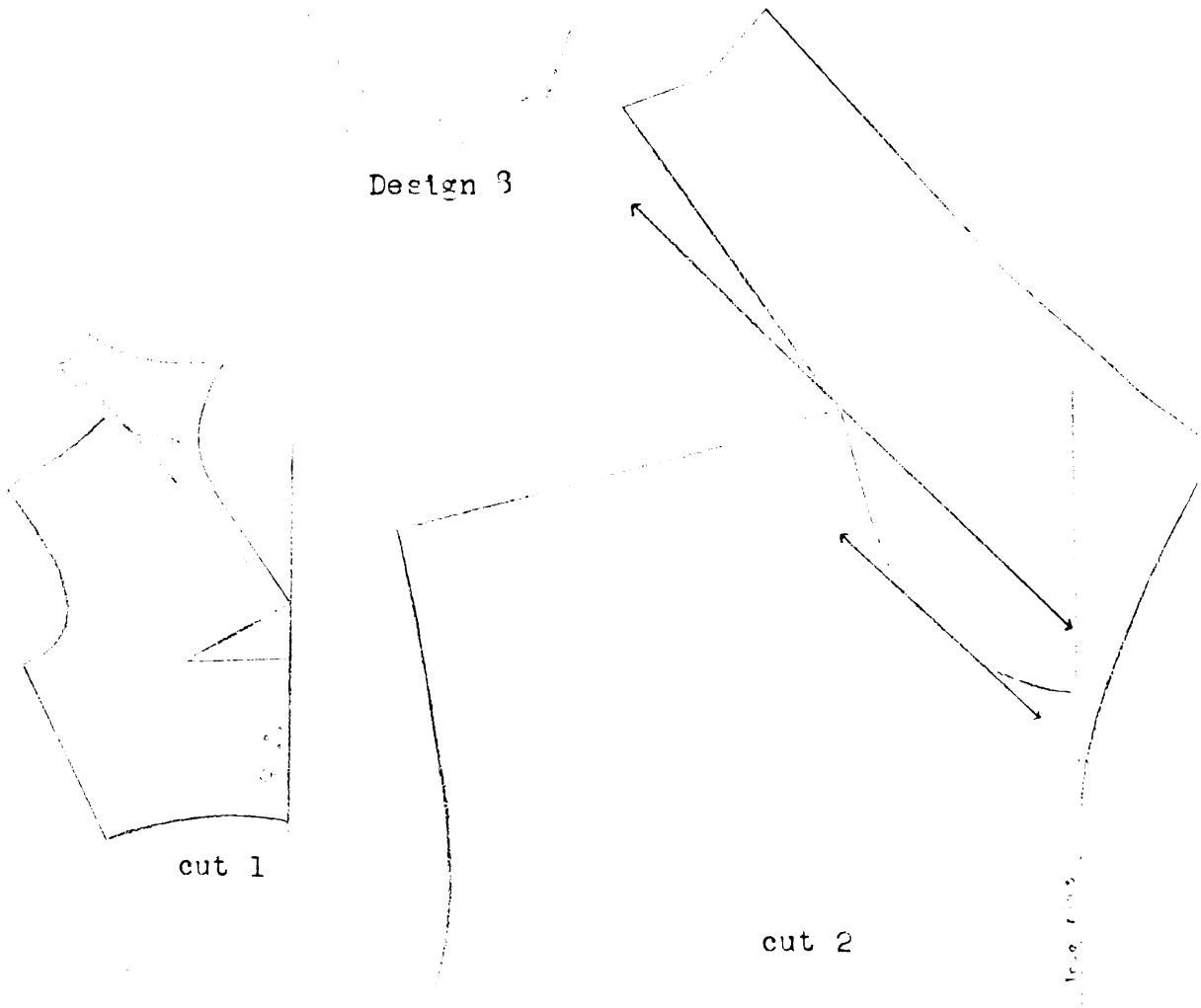


front

cut 2a



Design 3



cut 1

cut 2

Diagram 8

Design 7 The first collar cut together with the bodice had a slight stand and the style line was drawn with a curve. The second collar was cut with the fabric extended further and the style line was placed on straight crosswise grain. The sailor collar formed, was buttoned down onto the back bodice. This collar formed a very high roll and the height increased when the corners were brought to the front bodice and buttoned at the shoulder.

Fit An eliptical dart was fitted along the basic neckline from the shoulder and tapered to nothing before reaching center front. The roll height is determined by the angle at which the neckline and shoulder meet. The greater the angle between the back neck seam and the shoulder seam, the higher the stand of the collar (Diagram 7, angle abc is greater than dbc).[1]

Design 8 Another collar cut with the bodice was tried with a portion of the center front placed on a partial bias to discover the resulting grain effect across the neckline. The center front was placed on straight grain and the waistline dart was transferred to the center front seam. This dart transfer made the upper half of the bodice center front fall on a partial bias. It swung the upper bodice back, and automatically provided extra fabric from which a center front overlap and collar was cut.

Fit and grain placement The true bias at the neck base plus the eliptical dart made the fabric cling to the neckline. The cut was also economical because the fabric within the neckline

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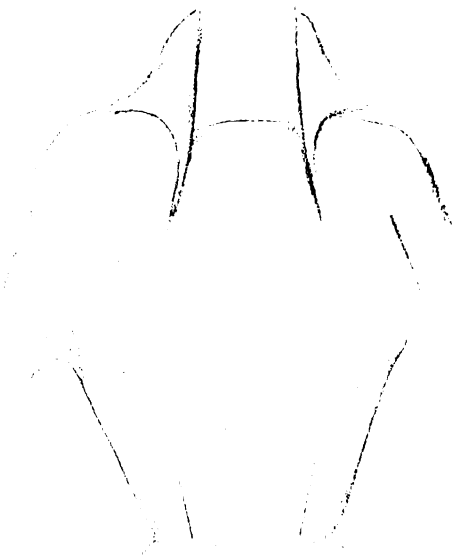
[1]Hillhouse and Mansfield, Op. cit., p. 265.



Design 9

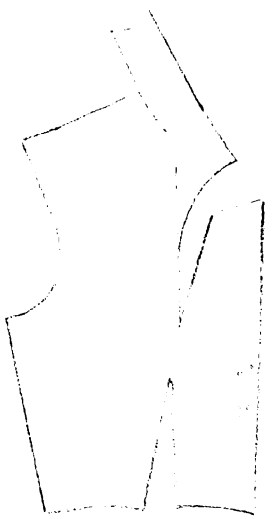


Diagram 9

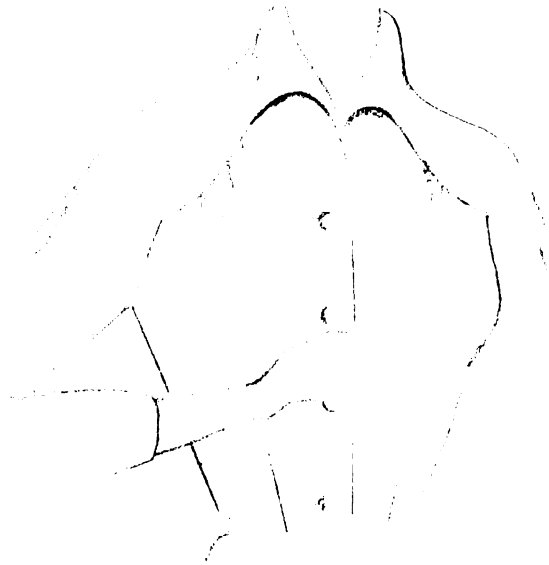
area was utilized.

To compare the result when the center front is cut on true bias with that when cut on straight grain or partial bias, the muslin proof was cut with the center front on a true bias. Definite changes in fit were noted. The back neckline as well as the front neckline, was placed on straight grain. The fabric appeared stiff and harsh about the neck and would not cling as in the previous two cuts.

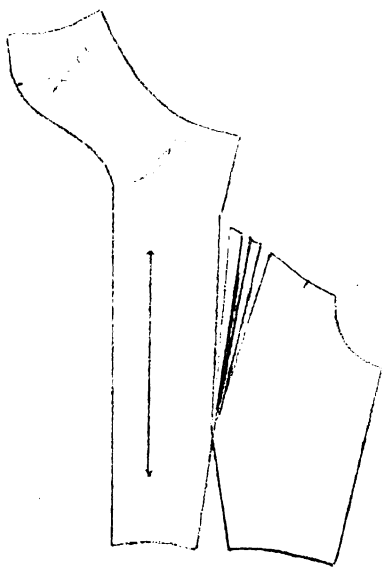
Design 9 Another variation of the collar cut-in-one with the bodice was tried with a partial extension over the neckline. The rolled collar originated from a dart radiating toward the bust.

Fit and grain placement Since the collar did not continue around to the center front, a crescent dart at neck base was not necessary to fit it. Part of the waistline dart was transferred to the neckline edge to balance the grain across the bustline and at the same time provide excess from which the collar detail could be designed. This excess was used to drape a turn-over collar and when the neckline dart was closed, it fitted closely to the neck at the back and side neckline.

Design 10 This neckline was created by rolling the fabric beyond the neckline in a way similar to a collar cut-in-one near the center front. The fabric was extended as far as possible and was caught into the yoke seam and continued further to form a raglan sleeve.



Design 10



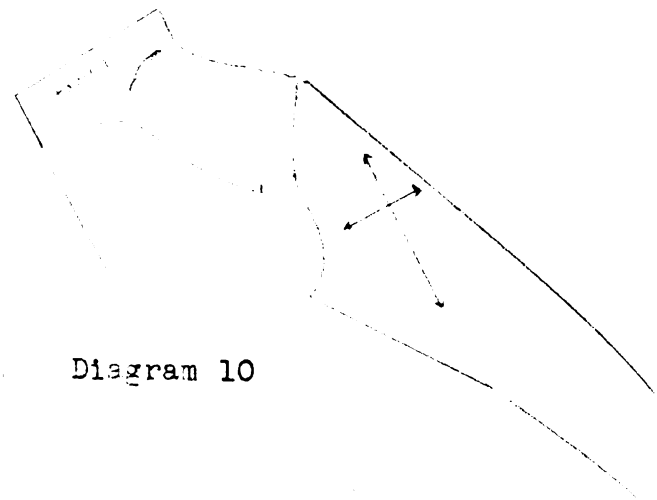


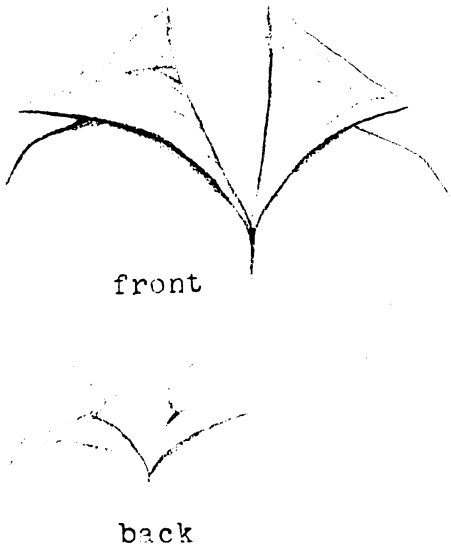
Diagram 10

Fit and grain placement The center front was cut on straight grain as this proved to be the best grain position for a collar extension which is to fit closely around the neck base. Part of the waistline dart was shifted to fullness along the shoulder yoke to balance the grain across the bustline. An eliptical dart was draped at the neck base to avoid wrinkling. The neckline and yoke underfacing were draped from the excess fabric beyond the neck base of the bodice front. A raglan sleeve was drafted onto the yoke pattern, and the grain was established perpendicular to the waistline at the yoke center. Since the grain of the yoke and facing did not match, a second cut was made with the yoke and facing grain matching. This cut was judged the better of the two because the matching grain let the two layers pull evenly.

Adaptability to fabric widths The cut shown was adaptable to all four fabric widths.

The following original collar and neckline designs were grouped together to show variations of the built-up neckline, shawl collar and stand-up collar which can be created by simply using the imagination, by accidental slashing or by merely experimenting with excess fabric above the neckline or fabric scraps and shapes left over from other cuts.

Design 11 This design, similar to the stand-up collar but ending in a deep "v", eliminated the necessity of an eliptical neck base dart. Instead of carrying the extension to the center back, it was terminated at the shoulder line. In order



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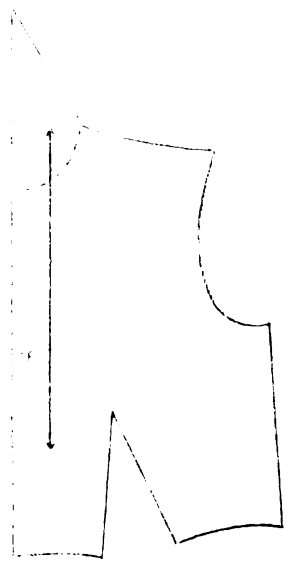
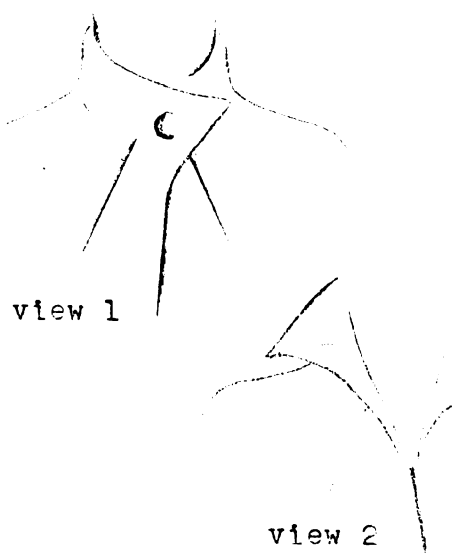


Diagram 11



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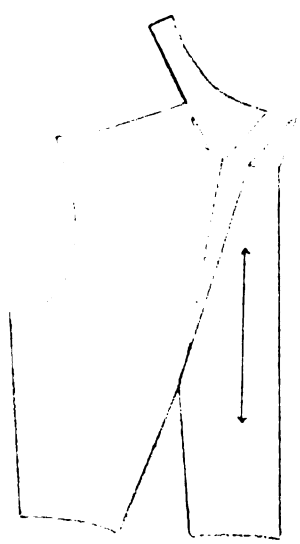
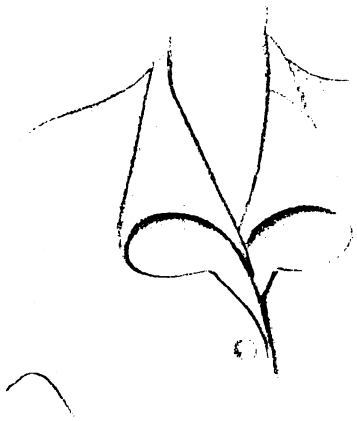


Diagram 12



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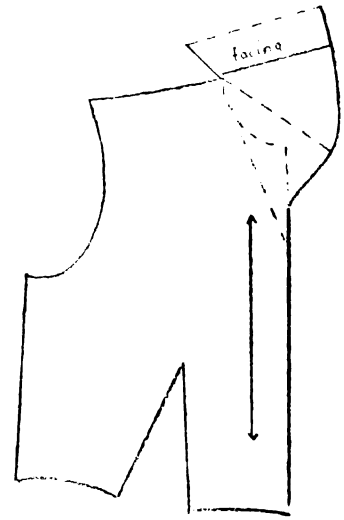
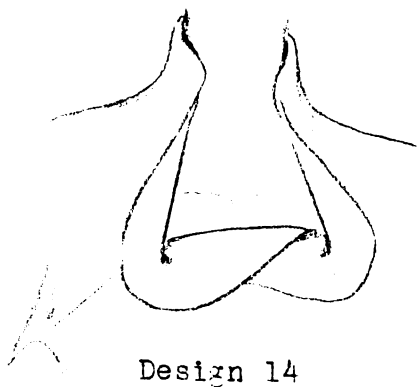


Diagram 13



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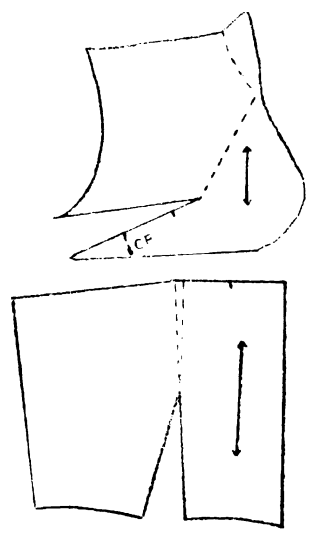


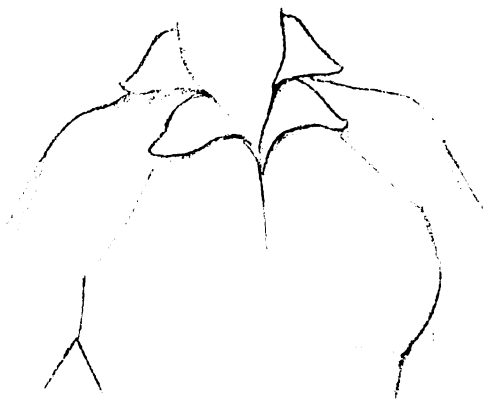
Diagram 14

to produce a pleasing effect with striped fabric, the back and front were cut with matching grain along the collar seam, so that the stripes chevroned. To keep the grain matched on both sides of the seam, and to keep the seam in line with the shoulder seam, it was necessary to allow the back neckline to fall into a deep "v" similar to the front neckline.

Design 12 It was thought that a vertical dart might help to fit the neckline curve; therefore, part of the waistline dart was shifted to the neck base. The back of the neckline was formed by carrying the bias excess around to the center back. The neckline dart was carried to the tip of the collar but required slashing through the center of the dart in order to avoid bulkiness and wrinkling. The slash could also be used as a button slot.

Design 13 A collar resembling a shawl collar was turned under to form a petal-like roll which ended in a deep "v". No darting or seaming was required to fit it to the neckline. When cut in striped fabric the effect was interesting and showed how a softly rolled collar counteracts the bareness of a plain, collarless low neckline.

Design 14 A neckline with the side and back neckline built-up was combined with a square low front neckline which formed a soft roll. The diagonal slash to the corner of the neckline provided the fabric used in draping the lower portion of the rolled detail. This slash, and the utilization of the fabric



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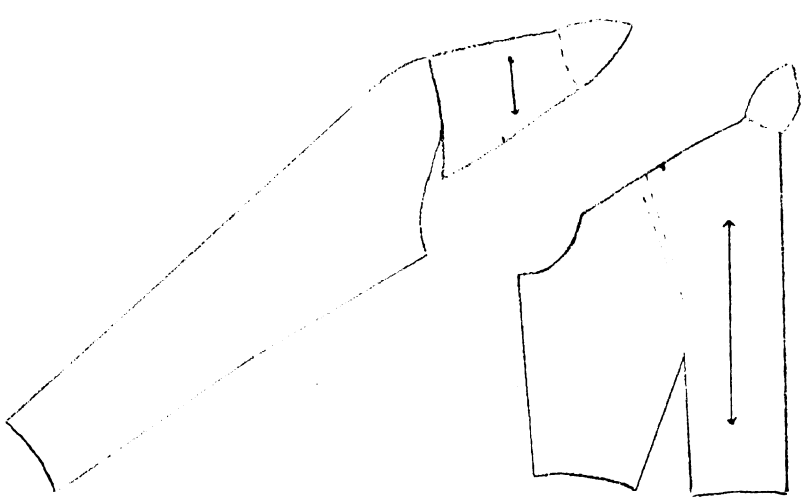


Diagram 15

below the neckline area made it necessary to cut the lower bodice front separately. The illustration shows the interesting effect created when striped fabric is used.

Design 15 The facing of the petal like points of this neck detail were formed by continuing both the bodice front and raglan sections. No additional darting or seaming was required to fit the neckline as it was intended to fit loosely. The roll should be encouraged by puffing or easing the top facing of the collar when joining it to the undercollar.

CONCLUSIONS

1. Extensions beyond the neckline seam inspired the most original and most numerous designs of all the extensions beyond the normal seam positions. This was because collars cut with the bodice must be draped, and by using this method of designing, unusually interesting details can result from experimenting freely and using ones imagination.
2. Necklines and collars are important design locations since they frame the face and neck, and focus interest there.
3. Cut-on collars and built-up necklines invariably help to avoid the "cut-up look" by avoiding unnecessary joints. They quite generally add to the grace and flow of line of the costume.
4. If the center front is placed on straight grain, as is usually done, the neckline curve is bias enough to permit stretching and smoothing to fit the neck.
5. In order to serve to fit the collar closely at neck base, either an eliptical neckline dart or a partial seam should fall along the normal neckline position.
6. Because the shawl collar rolls into a deep "v", it requires less darting and stretching to fit the neck base than a collar which fits at the normal center front neck base. However, a crescent dart is invisible and improves fit by taking out excess fabric along the neck base that would

otherwise wrinkle.

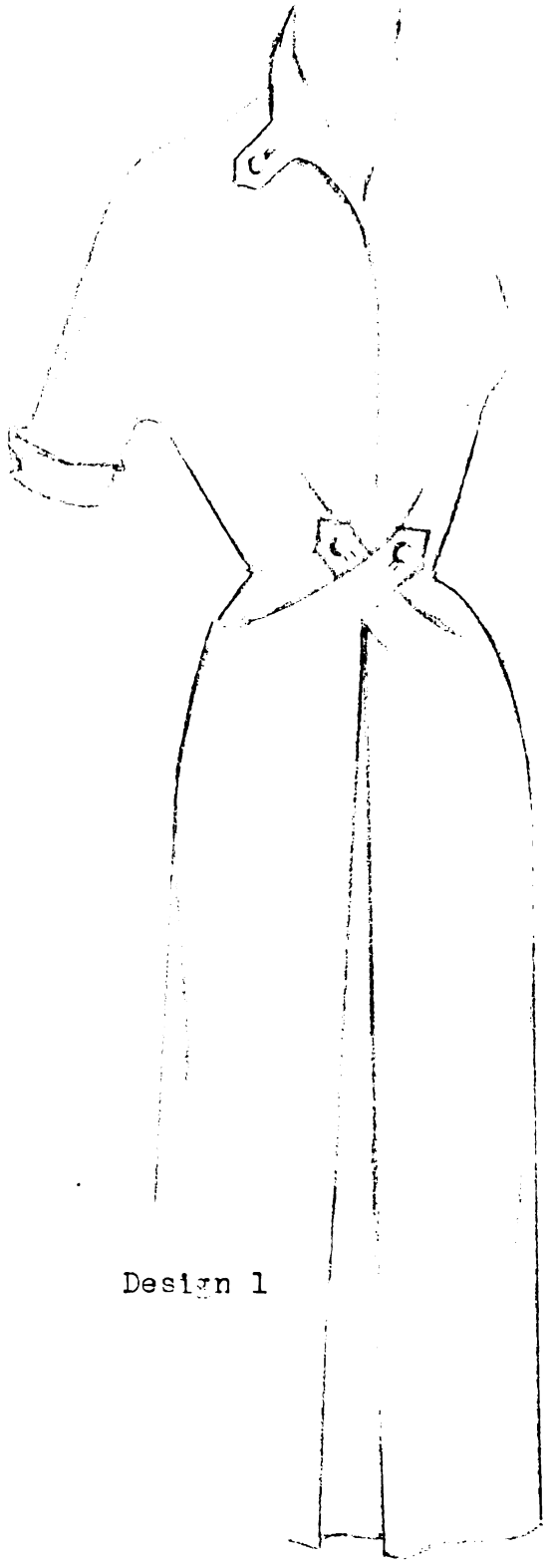
7. Shawl collars may be extended to form the complete lower bodice, but fabric extended this far requires more planning in order to produce a pattern with the grain established in such a way that good fit results in all parts of the large piece.

8. Cut-on collars fastened at neck base require an eliptical dart at neck base for close fit. If the center front is cut on a true bias, the straight grain at the neckline prevents a close fit. Therefore, for closest fit at neck base, the center front must be cut on straight grain.

9. Built-up necklines and collars cut with the bodice that are combined with a partial neckline seam have the advantage of fitting without requiring an eliptical dart at neck base.

10. Excess fabric above and within the neckline and past center front may be used to cut unusual necklines as well as bodice yokes.

11. Necklines cut with the bodice are economical, as fabric often discarded is utilized.



Design 1

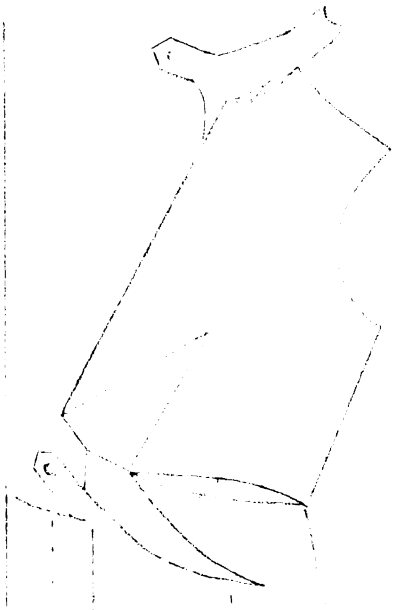


Diagram 1

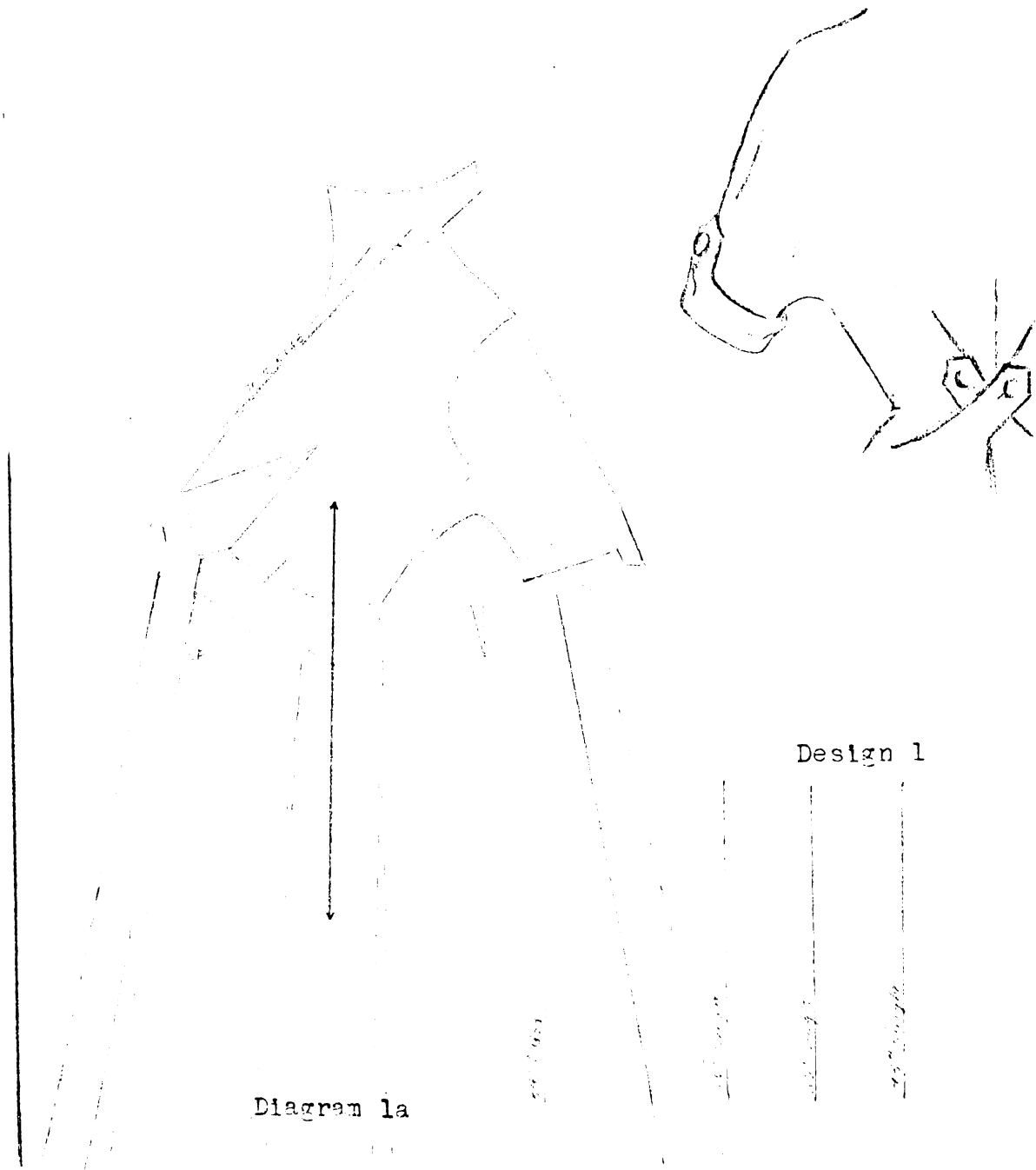
IX. DRESS CUT-IN-ONE

Design 1 This dress cut in one piece as far as possible was fitted by darting at the center front waistline. The tabs were crossed over and buttoned to the waistline, making this area the center of interest.

Fit and grain placement This design was cut several ways to determine just how much of the dress could be successfully cut in one piece. The dress was first cut with slight flare added to the skirt center front, and the bodice and skirt were joined at the waistline so that one-half of the entire dress front was cut in one piece. As the bodice and skirt waistline darts were shifted to the center front to produce the desired effect, the waistline and center front bodice fell on a partial bias. The bodice swung back and provided excess from which a collar was cut. The neckline was bias enough to provide good fit. The waistline curve was lost and because of this, the slight excess created folds across the waistline as the fabric was stretched to fit the curve.

Adaptability to fabric widths This cut was adaptable to all four fabric widths used and could be cut with the center front on a fold when 39 inch or wider fabric is used.

A second cut was tried with the bodice center front rather than the skirt center front placed on straight grain. The sleeve and skirt back was also cut with the bodice and



Design 1

Diagram 1a

skirt front. This cut was unsuccessful because of several disadvantages; 1. the neckline and waistline curves fell on straight grain and the fabric would not lend itself to stretching and shaping to fit the body curves, 2. the excess below the bodice could not be utilized advantageously, 3. the side, center back and center front seams fell on a partial bias, and 4. little excess remained at the neck region and thus limited the possibility of cutting a collar with the bodice.

The same cut was tried with the grain shifted to the normal side seam position. In this way slight flare could be introduced under both center front and center back skirt pleats. Both the neckline and waistline fell on a partial bias and fitted nicely. To prevent overlapping of parts, the sleeve was limited to a short length with the cuff cut as an extension. The waistline tab effect might be repeated on the sleeve or collar but not in both places as the detail would appear overused. The neckline fit of this cut was not as smooth as that of cut 1. This cut was not adaptable to 36 inch fabric, and must be cut singly when wider fabric widths are used.

Cut 4 had the skirt terminated at side back and this made it possible to cut a full-length sleeve together with the dress. This cut was adaptable to all four fabric widths but as in cut 3, the pattern parts must be cut singly.

It was thought that the grain might be established parallel to the dart edge, but by studying the cut it was

evident that the grain of the skirt would be distorted, therefore this cut was not tried in muslin.

It was concluded that for the best grain placement in all areas of this dress "cut-in-one", the lengthwise grain should be established at the skirt center front or with slight flare at the center front. This grain placement resulted in smooth neckline and bust fit without distorting the grain in the skirt.

SUMMARY AND CONCLUSIONS

Carrying fabric beyond the normal seamlines of the bodice is an inspiring source of design. Although many cuts were unsuccessful, a greater number of those attempted were successful. The successful designs would especially appeal to those who enjoy and prefer garments with distinctive simplicity, for these cuts usually resulted in uncluttered smoothness of design and striking details not normally found except on custom tailored or high fashion garments.

Fit equally pleasing as that achieved by seaming at the standard positions can be produced with some of the standard seamlines eliminated. It is true that this elimination or substitution complicates the cutting of the pattern, the selection of the grain placement and at times even the construction of the garment. But with added experience in pattern making and garment construction, one is better able to find solutions for these problems.

Specific and detailed conclusions concerning extensions beyond the standard seams of the blouse were drawn at the end of each section. However, some of the general conclusions will be summarized here.

Of the four seamlines crossed over, the extensions beyond the neckline proved to be the richest source of

design inspiration. Because there are no drafts for collars and necklines cut onto the bodice, by draping the fabric in various ways, one sees many different possibilities. This experimentation with fabric within and above the neck area proved many times the importance of a true bias or a partial bias and a crescent dart at the neck base in order to encourage the fabric to cling closely to the neck.

The armscye was also successfully crossed over. However, as sleeves must be carefully and accurately drafted to achieve perfect fit, this realization limited the desire to experiment freely (particularly since the cuts in this study were tested in half-size). The most significant result in this portion of the study was that a sleeve cut onto the bodice, which is cut with a bias or semi-bias center sleeve seam, forms a softer, rounder shoulder and a more softly draping sleeve than one with straight grain down the center of the sleeve and a dart to fit the shoulder. Sleeve extensions were limited by fabric width more than any of the other three extension types.

The shoulder seam can be replaced by a partial seam or a horizontal seam near the standard shoulder seam, but vertical or diagonal seams will not successfully substitute for it. Shoulder extensions should be bias or semi-bias at the point where it crosses the normal shoulder seam in order to fit the slight but compound shoulder curve. These extensions limit some of the necklines and collars cut with

the bodice.

A few underarm extensions were successful. Diagonal or horizontal seams near the standard underarm position may substitute successfully for the underarm seam, but these replacements complicate fitting and alterations. It is not ordinarily recommended that the underarm seam be omitted since it is usually covered by the arm and because it is a convenient fitting location. Loose fitting garments are more successful than closely fitted bodices, for the straight grain can be established at the underarm to prevent stretching. Sleeveless bodices are also successful since the fabric can be drawn tightly around the body for smooth fit. Extensions beyond the underarm seam limit the possibility of cutting additional sleeve extensions on the same pattern piece.

A combination of these extensions may be used to produce dresses cut in very few parts. Before attempting such a dress, all parts must be carefully analyzed for grain placement and fit. This planning is time consuming, but the end result is most satisfying when successful.

GLOSSARY

1. bolero--a loose waist-length jacket open at the front which originated in Spain

2. built-up neckline--one which continues above the basic neckline

3. cut-in-one--parts of a garment cut together with another portion of the garment, such as a sleeve cut in one piece with the bodice

4. dart--wedge shaped area which removes excess width or length above, below or to the side of a body curve and holds fabric in a rounded shape where it ends.

5. drop-shoulder--the design line is dropped below the shoulder tip, and there is no armscye seam from the top of the sleeve to the point where the dropped line begins.

6. grain--the true direction of the fabric, either lengthwise or crosswise determined by following a single thread either of the warp or the weft
7. gusset--usually a diamond shaped bias inset of fabric set into slashes at the underarm of the front and back blouse, but may be used in any part of the garment where it is needed for better fit.

8. halter--a bodice with a strap going around the back neckline. The bodice may or may not have an upper back bodice.

9. mismatched grain--the lengthwise or crosswise threads of the fabric are not the same on the two adjoining edges and are noticeably and unpleasantly different.

10. multi-seaming--many-seamed, contrasted with the garment cut with very few seams, examples: French darts and princess line dresses

11. off-grain--any line on the fabric which is not parallel to either the lengthwise or the crosswise threads

12. partial, dressmaker or semi-bias--any diagonal direction of fabric, but not true bias

13. set-in sleeve--any sleeve that joins the body of the blouse with a seam at the point where the plane of the shoulder joins the plane of the arm.

14. true bias--a line at a forty-five degree angle to the crosswise and lengthwise threads. It is the most flexible of all diagonals and pulls evenly when stretched.

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