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/ THE DEVELOPMENT OF A METHOD
FOR USE OF A BASIC PATTERN TO CHECK THE SIZE
OF COMMERCIAL PATTERNS /

by

Delores Bonander

//

A PROBLEM

Submitted to the Faculty of the College of Home Economics
of Michigan State University in partial fulfillment of
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MASTER OF SCIENCE

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The writer also desires to express her gratitude to Miss Maloa Ebeling and the evaluation panel members for their assistance.

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CHAPTER I

INTRODUCTION

Home sewing today is one of America's most important fashion activities. The 52 million women and girls who sew at home are customers in a billion dollar industry.¹ An American Fabrics report gives the following figures for 1954-1955, indicating the scope of the home sewing business: 30,000,000 sewing machines in the United States, 1,800,000 sewing machines bought each year, 90,000,000 patterns bought every year, 4,500,000 girls study sewing in schools and colleges and 750,000 women outside of schools take sewing courses. The report further states that of the women who sew, 56 per cent are homemakers, 12 per cent are employed, 19 per cent are employed and keep house, and 13 per cent are students.

According to the American Fabrics report, sewing to save money is secondary in the mind of the home sewer. She sews first of all because she likes to. Millions of women sew as a means of expressing their individuality and sense of style. Sewing is an art in which a woman can be creative and receive great personal satisfaction.

The way a garment fits is probably the most important factor in the degree of satisfaction obtained. Women look more attractive and feel more comfortable in a well-fitted garment.

¹"Home Sewing Report." American Fabrics, Vol. 31, 1954-1955, p. 77.

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The five major pattern companies use the same standard measurements for bust, waist, hip and back waist length. These are body, not garment measurements and are based on averages which will fit the greatest number of figures. Differences in the patterns may be observed in the slant and length of the shoulder, location of the bust point, the shape of the armseye or the curve of the hip. A particular pattern shape has been developed by a company while adhering to the standard measurements set up by the National Bureau of Standards of the United States Department of Commerce. There are differences of ease each company allows beyond the standard. In addition, fashion design may allow more or less fullness.

In two recent studies¹ the majority of the respondents reported they were unable to buy a pattern which could be sewn without making alterations. Fitting is then a problem of concern to the home sewer even though there are available variations in style, type and size of patterns.

Observations indicate a current interest in and a promotion of basic patterns by commercial companies. These patterns are of simple designs which are fitted to the individual, altered, and constructed in muslin and fitted again. Basic patterns serve as guides in making further alterations in other commercial patterns.

¹Harriet Maloa Ebeling, "Some Aspects of the Personal and Social Functions of Clothing for the Older Woman," (unpublished Master's thesis, Michigan State University, 1960), p. 16.

Joan Williams, Cornell University Home Economics Alumnae Newsletter, Ithaca, April 15, 1960. p. 4.

Macy's department store in New York City has promoted a basic pattern which a woman could have adjusted to her figure for 89 cents. If she constructed this pattern in material, she could have it fitted for \$1.09. A foundation pattern based on a woman's actual dimensions and cut out of heavy paper could be purchased for \$8.41.¹

Women in Cooperative Extension Service groups, speed method workshops, adult education and college classes are making basic patterns. However, many of these women do not seem to have adequate training in how to efficiently use their basic patterns.

The objectives of this study are:

1. To establish a step-by-step method of checking the size of commercial patterns against a basic pattern in order to aid the woman who sews alone at home to obtain a desired fit of garments with few, if any, further fitting alterations.
2. To determine to what extent a basic pattern could be used in fitting a commercial pattern, the design lines of which are similar to the basic pattern.
3. To discover how style variations can be fitted through the use of the basic pattern.

¹American Fabrics, p. 83.

CHAPTER II

PROCEDURE

The preliminary preparation for this study was the construction of a basic pattern for the writer. A commercial basic pattern was pin fitted and the necessary alterations were made according to the pattern alteration method described in Mansfield's book, Clothing Construction.

The altered paper pattern was then cut out and constructed in muslin and was fitted again. Further alterations were made in the same manner as the paper fitting. The fitted muslin dress was then taken apart and construction lines trued up. A record of the alterations was made.

Four commercial patterns from four pattern companies were selected for use in the study. The patterns contained variations in bodice, skirt and sleeve styles.

A check of the pattern pieces of the four commercial patterns was made against the basic muslin pattern to determine what alterations were necessary. These changes were made in the paper patterns, again using the method described by Mansfield.

Quarter size illustrations of the alterations necessary in the basic and the four commercial patterns were drawn. These illustrations are drawn in proportion but not to scale.

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Suitable fabrics for the dress styles were selected. The garments were constructed using a combination of custom and speed methods up to the first fitting.

Evaluations of the fit of the basic muslin dress and the four other garments were made by a panel of judges, consisting of the instructor and the students of an advanced clothing construction class. A check sheet was devised for their use.

The success of this method was analyzed, using the compilation of the results of the evaluation device as one criteria. A personal evaluation on general appearance and comfortable fit of each dress was made by the writer during the first fitting.

A set of instructions was formulated which can be used as guides in the use of the basic pattern as a measuring device for checking the size of commercial patterns prior to cutting out garments in home sewing.

CHAPTER III

FITTING AND CONSTRUCTION OF BASIC PATTERN

Selection of Pattern

McCalls pattern, 4566, was selected for the fitting and construction of the basic pattern. Circumference measurements of the writer agreed with those of the pattern company for body measurements at the waist and hip. The bust measurement was one inch larger than the pattern size.

The pattern had a basic neckline, a normal waistline, an under-arm dart, waist darts in both front and back bodice and the skirt, a dart in the shoulder in the bodice back, and a normal armscye with set in long sleeves.

Fitting the Paper Pattern

"The paper pattern must fit perfectly before a garment can be cut from it successfully. Many faults in fitting cannot be corrected after the garment is cut, all alterations are easier to make in the pattern, and accurate patterns are essential to quick and easy sewing.

"Fitting a paper pattern directly on the figure and making adjustments is easier than taking body measurements and checking them against the flat pattern. Assured that the garment will fit correctly, you can permanently stitch many lines without basting, and finish

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details on small easily-handled pieces of the garment before putting them together for the first fitting."¹

The paper pattern was fitted according to the method described in Clothing Construction, by Evelyn A. Mansfield.

Preparation of Pattern

1. The paper pattern pieces were pressed with a warm iron. Darts were folded and pinned in on seam lines. Pattern was trimmed to seam line and clipped at neckline and armseye.

2. The silhouette lines, the shoulder and bodice and skirt side seams, were pinned with the seams on the outside. Seam allowances within the silhouette were overlapped.

3. The sleeve dart and seam were pinned together up to two inches of the top and bottom of the seam. The sleeve was not pinned into the bodice.

Fitting Procedure

1. The paper pattern was fitted over a slip and the foundation garments to be worn during the other fittings in this study.

2. The pattern was anchored to ribbon bands, which had been placed at the neck, bust, waist and hip lines, matching center front and center back of figure.

3. The lines of the pattern were observed to check the placement in relation to the figure and the over-all effect of the dress, including ease, spacing and the hang of the skirt front, back and sides.

¹Evelyn A. Mansfield, Clothing Construction, (New York: Houghton-Mifflin Company, 1953), p. 53.

4. Overlappings or wedges were used to pin out excess ease.

5. Points considered in judging the fit of the paper pattern were: (a) the paper pattern should stand slightly away from the body, (b) the bustline, waistline and hipline should appear parallel to the floor, (c) the shoulder line should be in a straight line between the neck and armhole, (d) the side seam and darts should divide the skirt giving a pleasing proportion and not be conspicuous from front or back (the front skirt pattern will usually measure one inch more than the back at the hipline), (e) the armhole line should appear vertical to about half way down, at which point it curves under the arm.

6. Point of bust and hip line were marked on pattern.

Alterations Made on Paper Pattern

1. After fitting the paper pattern it was taken off and all pin alterations were marked with a soft pencil.

2. All pins were removed and pattern pieces were pressed so that they would lay flat.






3. The following horizontal lines were drawn: on bodice front at bust level, across bodice back at same height (side seam) as front, at hip line of front and back skirt pattern and at girth line of sleeve.

4. The alterations as noted by pencil lines were then carefully made as described in Chapter V of Evelyn Mansfield's book on Clothing Construction.

The overlappings and wedges which were used to pin out excess ease were slashed to point of bulge, seam or dart and overlapped.

Areas where there was inadequate ease were slashed to point of bulge, dart or seam and spread. These spread areas were reinforced with an extra piece of tissue.

5. The alterations which were made on the full-size pattern were copied on quarter-size pattern to be used as illustrations in this paper. The following code was used in the illustrations:

 original pattern line
 new pattern line
 lapped out fullness
 area in which a slash was spread
 alterations made in muslin fitting

Construction of Basic Muslin Pattern

1. The altered, full-size paper pattern was pinned to muslin and all seams, notches and darts were traced in colored carbon paper.

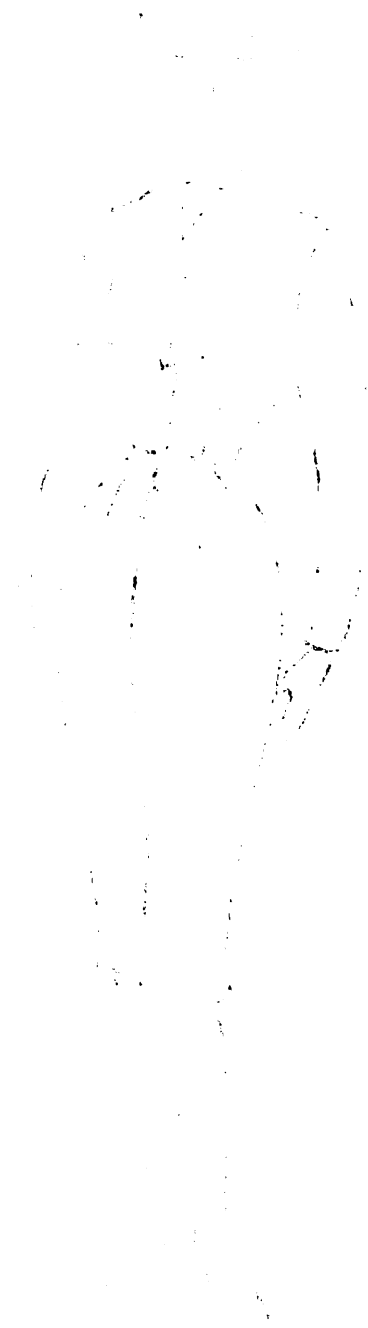
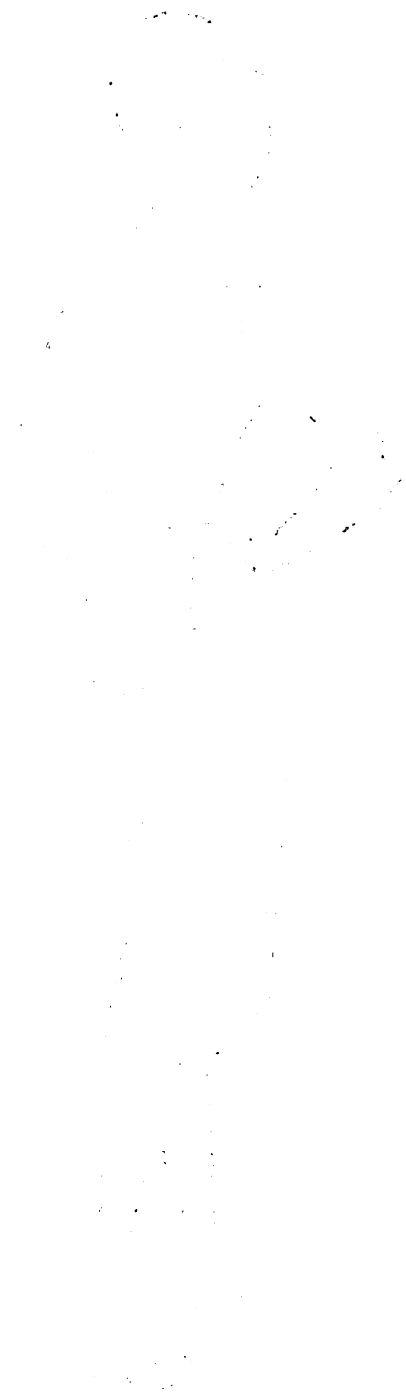
2. The pattern pieces were cut out with one inch seams, except at the neckline and armhole, where five-eighths inch seams were used.

3. These muslin pieces were sewn together with machine basting stitch on the traced lines. All seams and darts were pressed.

4. The garment was tried on and analyzed to see how successful the paper fitting had been. Alterations which were needed were made in the same manner as in the paper pattern fitting. The fit of this basic pattern was also observed as a guide to aid in the evaluation of the fit of the other dresses to be made in this project.

5. Alterations indicated in the muslin fitting were marked.

6. The muslin dress was then taken apart and pressed. All seam lines, darts, cross and horizontal lines were trued up with red pencil. All length and width measurements and the date were recorded on muslin. This basic was then ready to be used in the completion of this study.



7. A panel of judges evaluated the fit of the garments made for this problem. The panel members were the instructor, four graduate and two senior students in an advanced clothing construction class.

A check sheet (see appendix) listing points to consider in fitting a garment was devised to assist the panel in their evaluation of the fit of the dresses.

8. Descriptions and illustrations of alterations in the paper and muslin fittings will be found on the following pages.

Alterations Made in Paper Pattern and Muslin Fittings

Basic Bodice

Alteration A

Excess width in the pattern through the shoulders.

Figure Problem

Shoulders were narrower than the average.

Correction

Excess width ($\frac{3}{8}$ ") was pinned into a vertical alteration dart tapering to nothing at the alteration line across the front and back bodice.

Alteration B

Excess length in the pattern, both in front and back between the shoulders and the scye line.

Figure Problem

Figure has less than average length between the shoulder and underarm, causing wrinkles across the upper front and back.

Correction

An even fold ($\frac{1}{4}$ ") was taken half way between the shoulder line and the underarm in both the front and back.

Alteration C

Excess length in center back between the scye line and the waistline.

BASIC BODICE PATTERN

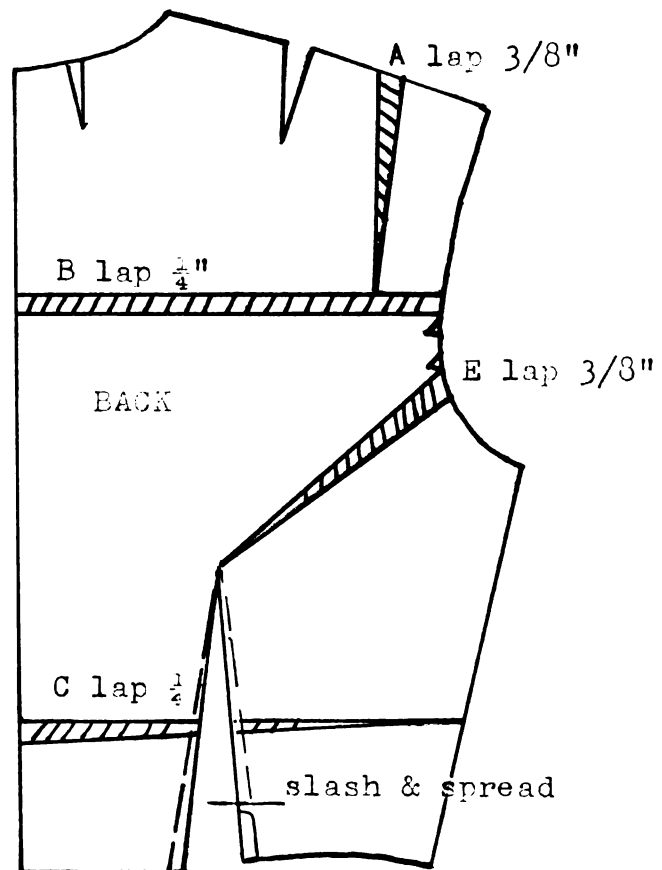
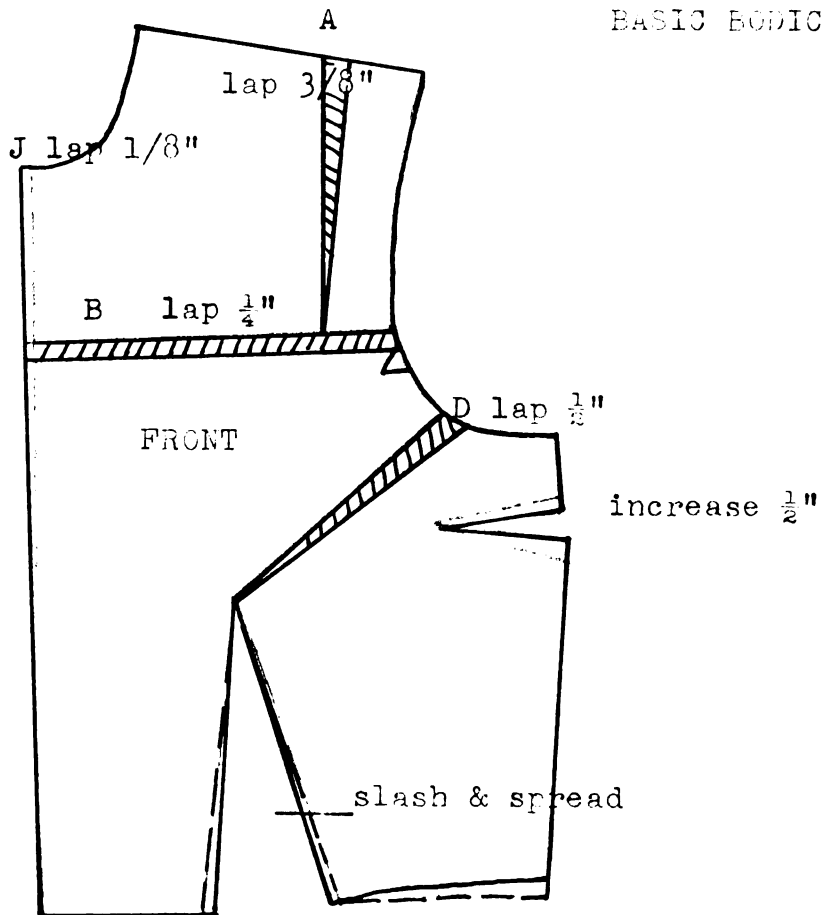


Figure Problem

Figure short between scye line and waistline at center back.
Length of underarm seam correct.

Correction

Excess length ($\frac{1}{4}$ ") at center back was pinned into a horizontal alteration dart tapering to nothing at the side seam.

Alteration D

A diagonal bulge from armscye to the bust point.

Figure Problem

Bust circumference of the figure is large in relation to bone structure.

Correction

The bulge at the front armscye was pinned into an alteration dart ($\frac{1}{2}$ ") tapering to nothing at bust point. The excess of this dart was released into the waistline dart by slashing from the waistline to the bust point. This increased the amount of darting for the bust.

Alteration E

A diagonal bulge at the lower curve of the back armscye to the end of waistline dart.

Figure Problem

Figure is full across the back.

Correction

An alteration dart ($\frac{3}{8}$ ") was pinned from the lower armscye tapering to nothing at the end of the waistline dart to remove the bulge. Excess from this alteration was released into the slashed waistline dart.

Alteration J (in muslin)

Excess width at the front neckline.

Figure Problem

Figure more narrow than average across chest.

Correction

A small dart ($\frac{1}{8}$ ") was folded out from the center front neckline tapering to nothing.

Alteration K (in muslin)

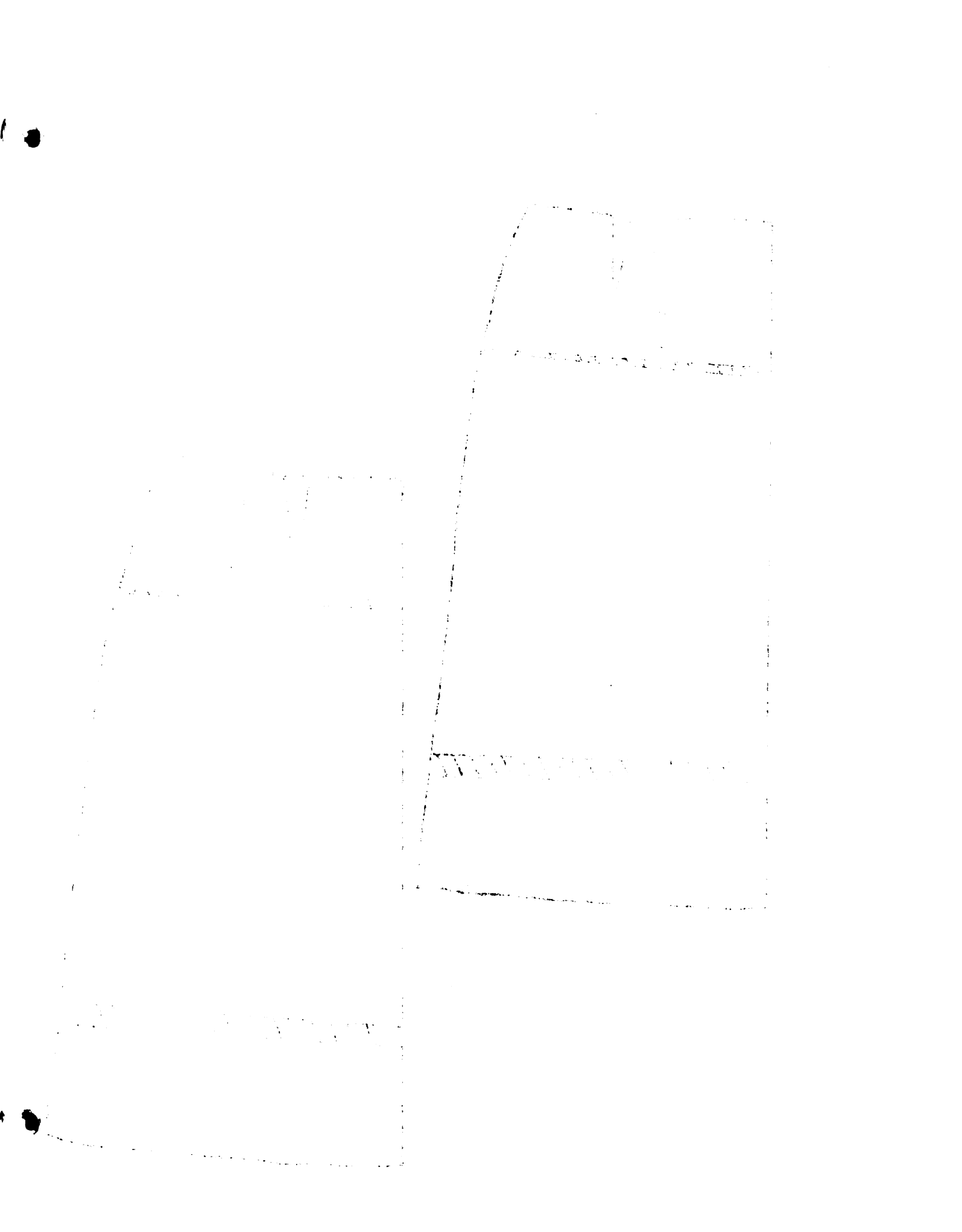
Diagonal wrinkle from under arm dart to point of bust.

Figure Problem

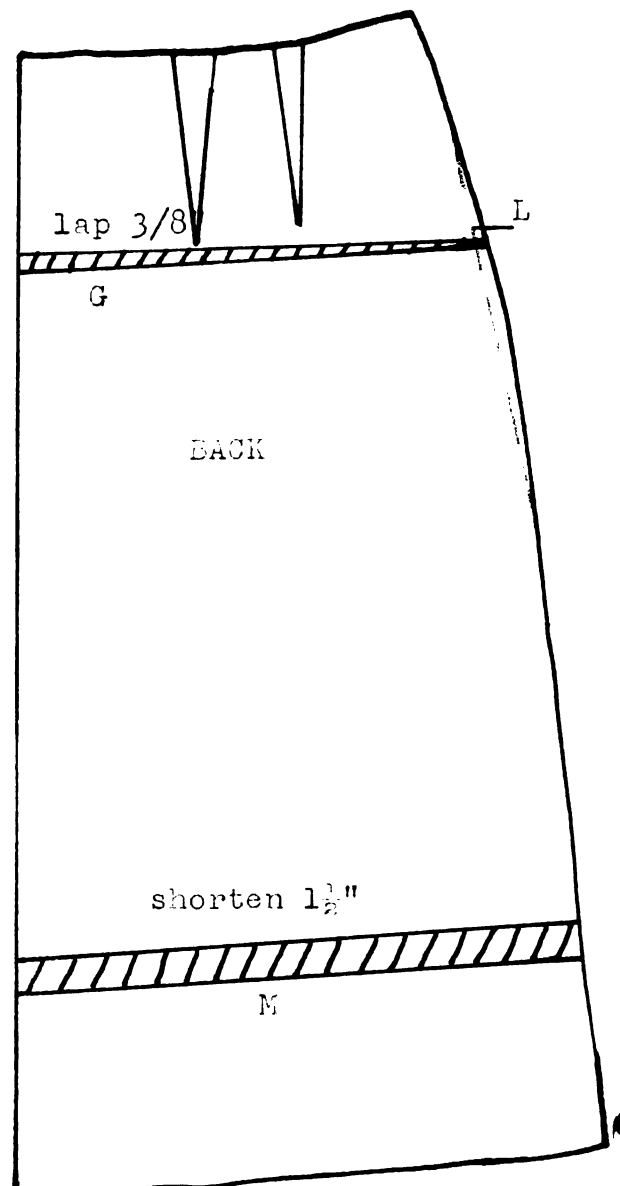
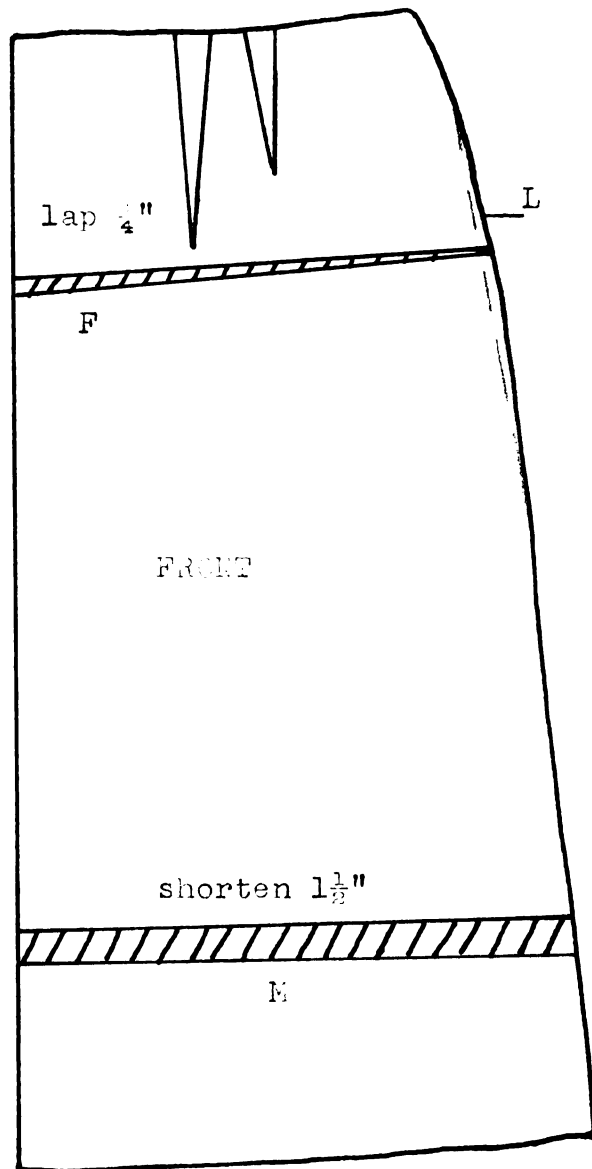
Insufficient darting for large high bustline.

Correction

Increase underarm dart by $\frac{1}{4}$ inch.



BASIC SKIRT PATTERN



Basic Skirt

Alteration F

Excess length in paper pattern between waist and hip.

Figure Problem

Figure is short between waist and hip line at center front.

Correction

Lap out a tuck ($\frac{1}{4}$ ") from center front tapering to nothing at the side seam.

Alteration G

Side seam of skirt falls forward.

Figure Problem

Figure is short between waist and hip at center back.

Correction

Lap out a tuck ($\frac{3}{8}$ ") from the center back to nothing at the side seam.

Alteration L (in muslin)

Skirt side seams are too sharply curved from waist to hip.

Figure Problem

Hipline is straighter than the average on the side.

Correction

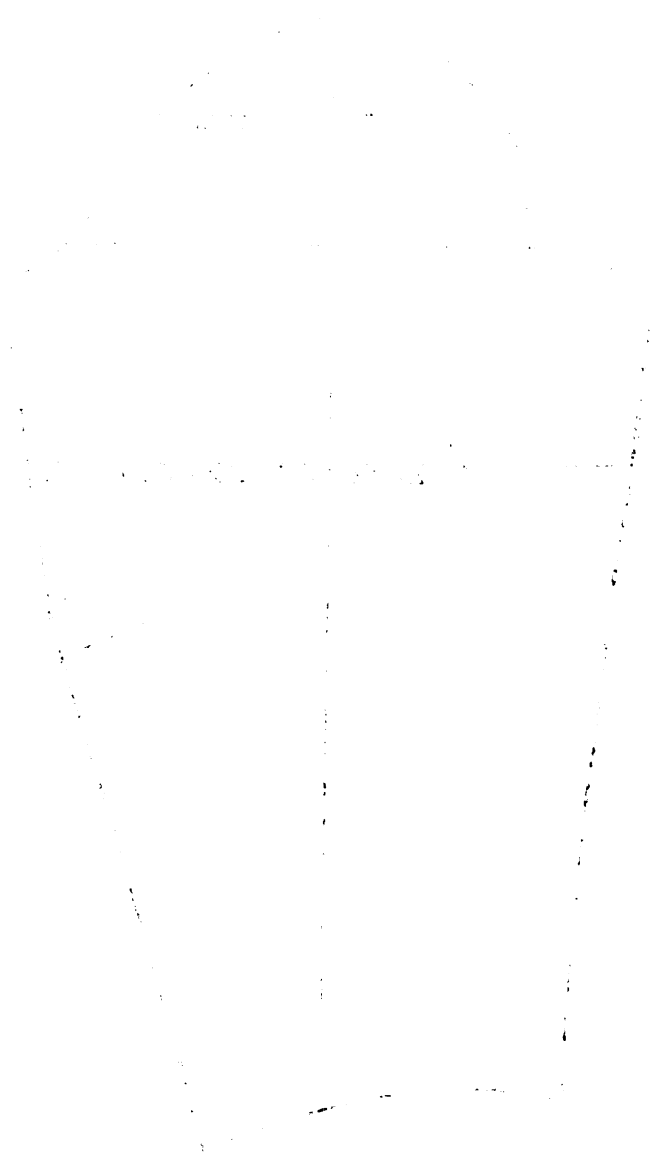
Straighten the side seams to remove the excess hip curve.

Alteration M

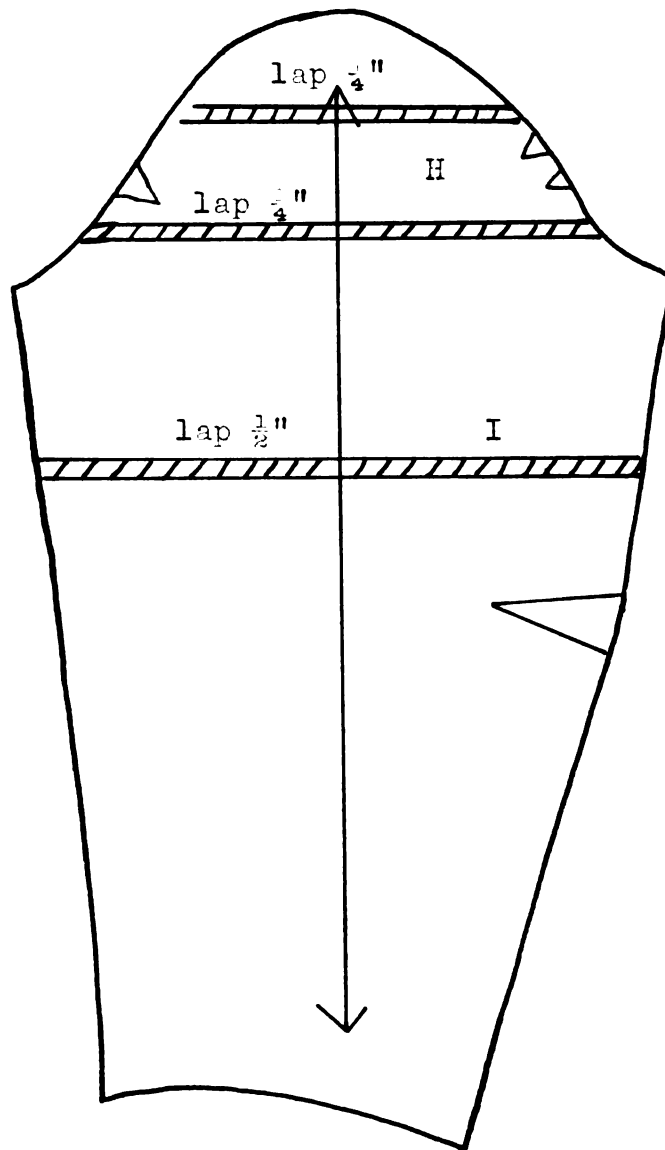
Figure is shorter than the average for pattern size.

Correction

Shorten skirt by lapping out one and one-half inches some place between lower hip and knee.



BASIC SLEEVE PATTERN



Basic Sleeve

Alteration H

Excess cap height on front and back of sleeve.

Cause

The alteration darts used to remove bulge at the front and back armseye of bodice front and back made it necessary to remove the same amount in the sleeve cap so that it would fit smoothly into the armseye.

Correction

The excess cap height was removed by pinning two horizontal alteration darts across the sleeve cap at two points. The size of these darts was determined by the amount removed in the alteration at the front and back armseyes.

Alteration I (in muslin)

Excess length between shoulder and elbow.

Cause

Arm shorter than average between the shoulder and the elbow.

Correction

A one-half inch fold was made across sleeve between shoulder and elbow.

CHAPTER IV

EXPERIMENTAL USE OF BASIC MUSLIN PATTERN AS A GUIDE IN CHECKING SIZE OF FOUR COMMERCIAL PATTERNS

Four commercial patterns, each from a different pattern company, were selected for use in this study. The patterns contained style variations in bodices, skirts and sleeves. The purpose of these modifications in style and the diversification of pattern selection was to discover to what extent the basic pattern could be used in checking size. In some instances, the pattern pieces were very different in size and shape from the basic pattern.

The pattern pieces of each of the four dresses were checked for size against the basic pattern. Problems encountered in working with the basic pattern with style designs which varied from it were:

(1) making allowance for ease differences, (2) establishment of shoulder lines, (3) determination of bodice length, (4) checking width across chest in styles without set-in sleeves.

A detailed description of the method of using the basic pattern as a guide in checking the size of patterns will be found in Chapter V.

Alterations which were needed in the commercial patterns were made so that the original lines of the design were preserved. Changes were made in the body of the pattern rather than on seam lines.

Cotton material suitable for each design was selected for the construction of these altered patterns. Each garment was cut out with one

1. The first part of the document is a list of names and addresses of the members of the committee. The names are written in a cursive hand, and the addresses are written in a more formal, printed hand. The list is organized in two columns, with names on the left and addresses on the right. The names are: John A. Smith, John B. Smith, John C. Smith, John D. Smith, John E. Smith, John F. Smith, John G. Smith, John H. Smith, John I. Smith, John J. Smith, John K. Smith, John L. Smith, John M. Smith, John N. Smith, John O. Smith, John P. Smith, John Q. Smith, John R. Smith, John S. Smith, John T. Smith, John U. Smith, John V. Smith, John W. Smith, John X. Smith, John Y. Smith, John Z. Smith. The addresses are: 123 Main St., 456 Main St., 789 Main St., 101 Main St., 202 Main St., 303 Main St., 404 Main St., 505 Main St., 606 Main St., 707 Main St., 808 Main St., 909 Main St., 1010 Main St., 1111 Main St., 1212 Main St., 1313 Main St., 1414 Main St., 1515 Main St., 1616 Main St., 1717 Main St., 1818 Main St., 1919 Main St., 2020 Main St., 2121 Main St., 2222 Main St., 2323 Main St., 2424 Main St., 2525 Main St., 2626 Main St., 2727 Main St., 2828 Main St., 2929 Main St., 3030 Main St., 3131 Main St., 3232 Main St., 3333 Main St., 3434 Main St., 3535 Main St., 3636 Main St., 3737 Main St., 3838 Main St., 3939 Main St., 4040 Main St., 4141 Main St., 4242 Main St., 4343 Main St., 4444 Main St., 4545 Main St., 4646 Main St., 4747 Main St., 4848 Main St., 4949 Main St., 5050 Main St., 5151 Main St., 5252 Main St., 5353 Main St., 5454 Main St., 5555 Main St., 5656 Main St., 5757 Main St., 5858 Main St., 5959 Main St., 6060 Main St., 6161 Main St., 6262 Main St., 6363 Main St., 6464 Main St., 6565 Main St., 6666 Main St., 6767 Main St., 6868 Main St., 6969 Main St., 7070 Main St., 7171 Main St., 7272 Main St., 7373 Main St., 7474 Main St., 7575 Main St., 7676 Main St., 7777 Main St., 7878 Main St., 7979 Main St., 8080 Main St., 8181 Main St., 8282 Main St., 8383 Main St., 8484 Main St., 8585 Main St., 8686 Main St., 8787 Main St., 8888 Main St., 8989 Main St., 9090 Main St., 9191 Main St., 9292 Main St., 9393 Main St., 9494 Main St., 9595 Main St., 9696 Main St., 9797 Main St., 9898 Main St., 9999 Main St.

PATTERN V



inch silhouette seams; all other seam allowances were cut like the commercial pattern with a five-eighths inch seam.

Construction was done by a combination of the custom and speed methods. If collars were a part of the design of the dress, they were included in the dress for the first fitting. The first dress was machine basted together for the evaluation of the fit. Since this first evaluation indicated a good fit could be obtained, the bodices and skirts of the next three dresses were permanently stitched from the beginning. The bodice and skirt were machine basted together for fitting.

As each dress was constructed, it was evaluated by the panel of judges. Evaluations were made on the assumption that a good fitting dress has silhouette lines which are in good proportion to the figure, and the fit is smooth, without wrinkles or evidence of pull or strain.

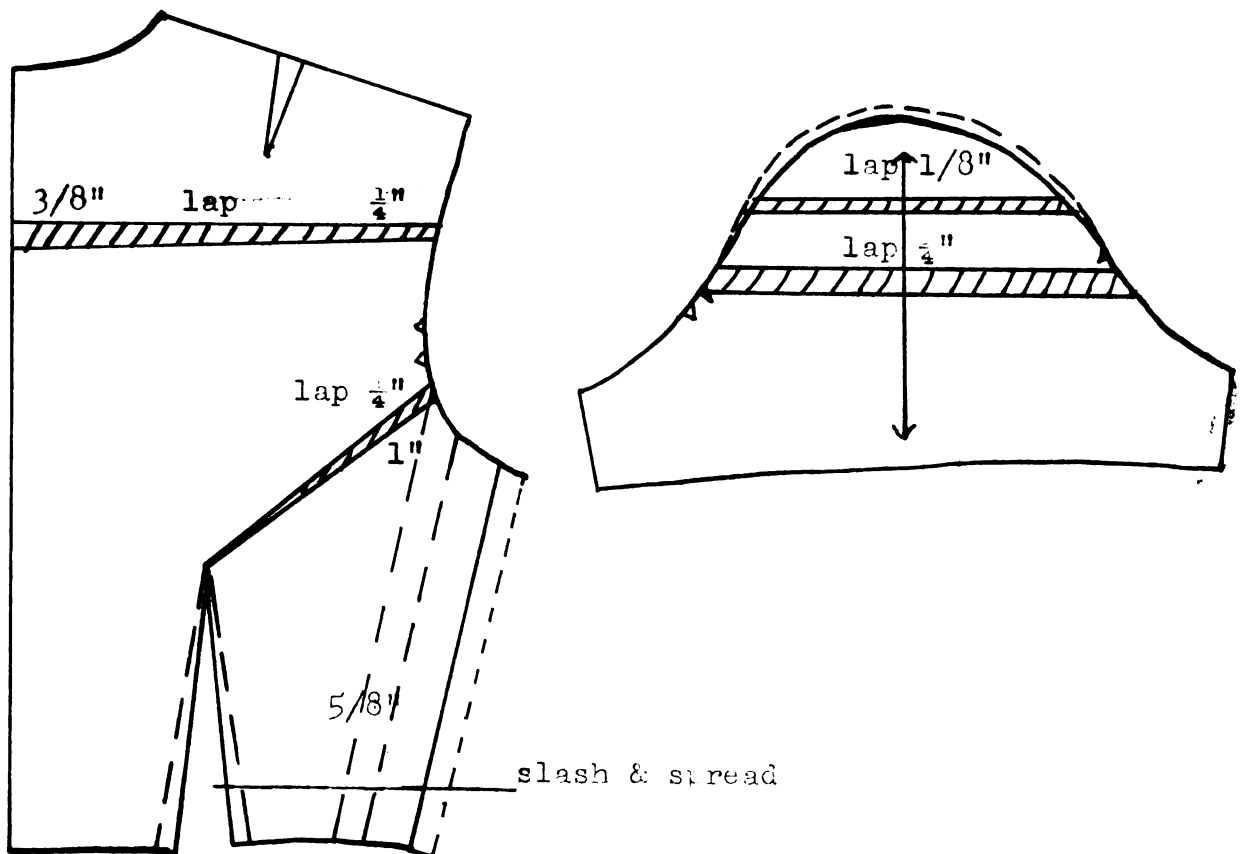
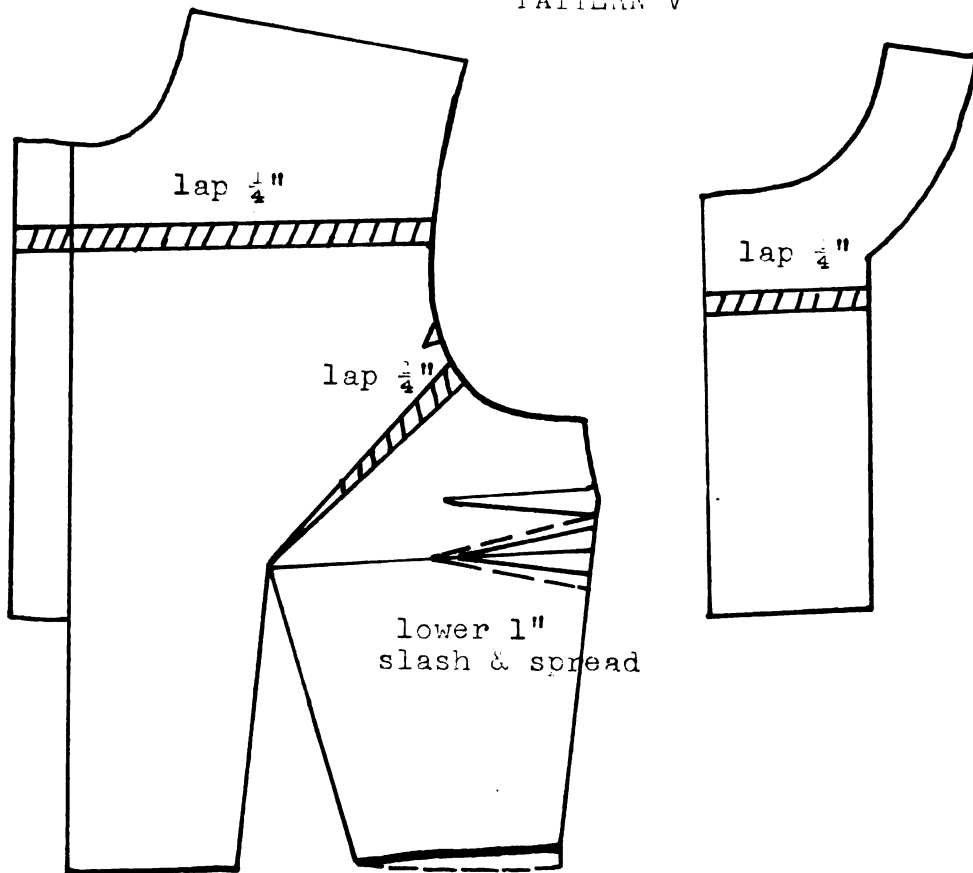
A sketch of each dress, details concerning reasons for its selection, the alterations needed, evaluation of fit and quarter-size illustrations of the alterations will be found on the following pages.

Selection of Pattern V

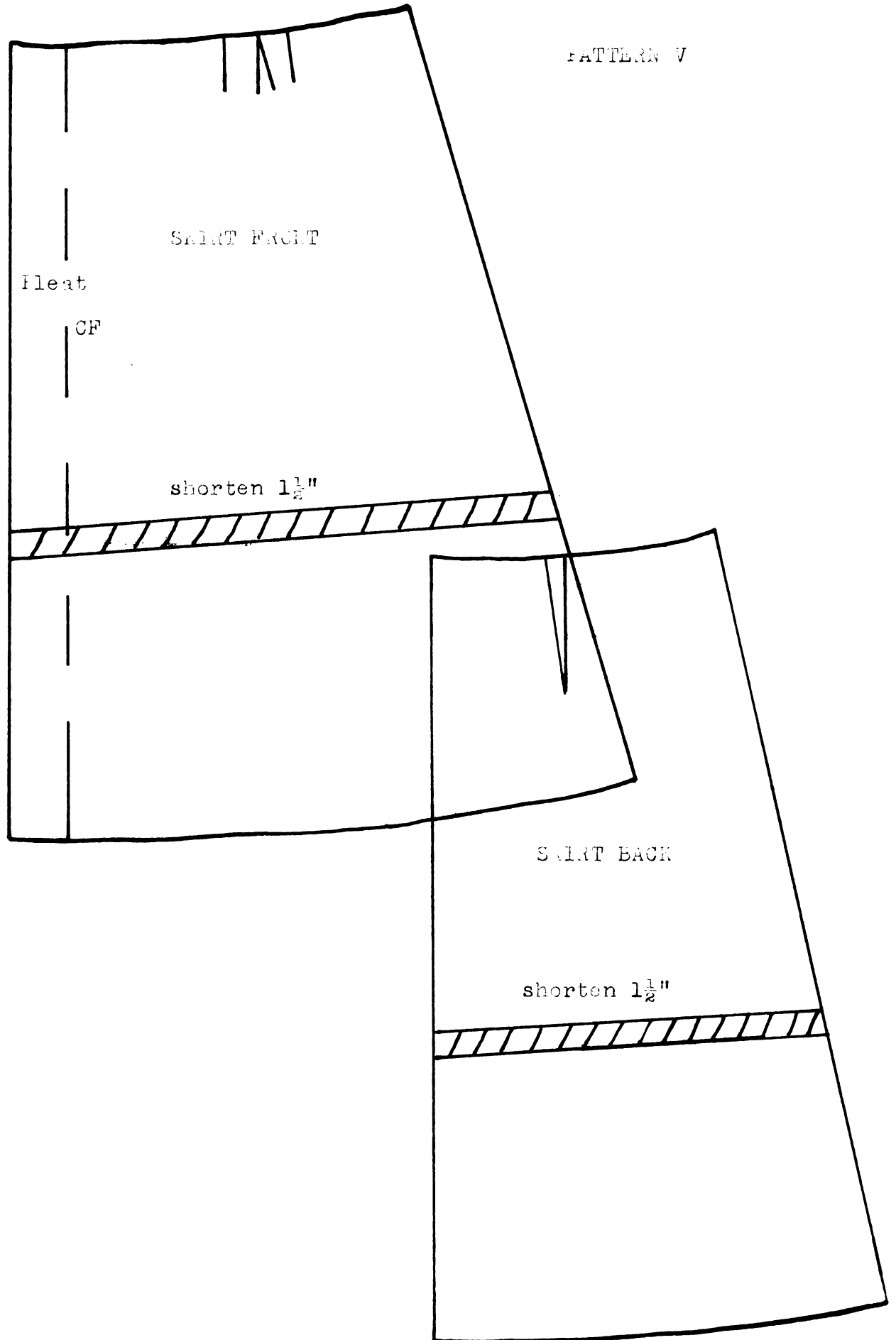
Pattern V was selected because it had style lines similar to those of the basic pattern. The two variations included a lowered neckline with a collar and additional flare in the skirt.

Alterations were made in the following areas which were similar to those in the basic pattern:

PATTERN V



PATTERN V



a. Shortened between shoulder and underarm in both bodice front and back.

b. A tuck was made at the lower curve of the back armscye, and released in the waistline dart.

c. A tuck was made in the front armscye, and released in the underarm dart.

d. The sleeve cap was shortened by horizontal folds, cap line was restored.

e. The skirt length was also shortened.

Additional changes needed were:

a. Added width in back bodice at waistline and up to scye line.

b. Added width in waistline of back skirt.

Evaluation of Fit of Dress

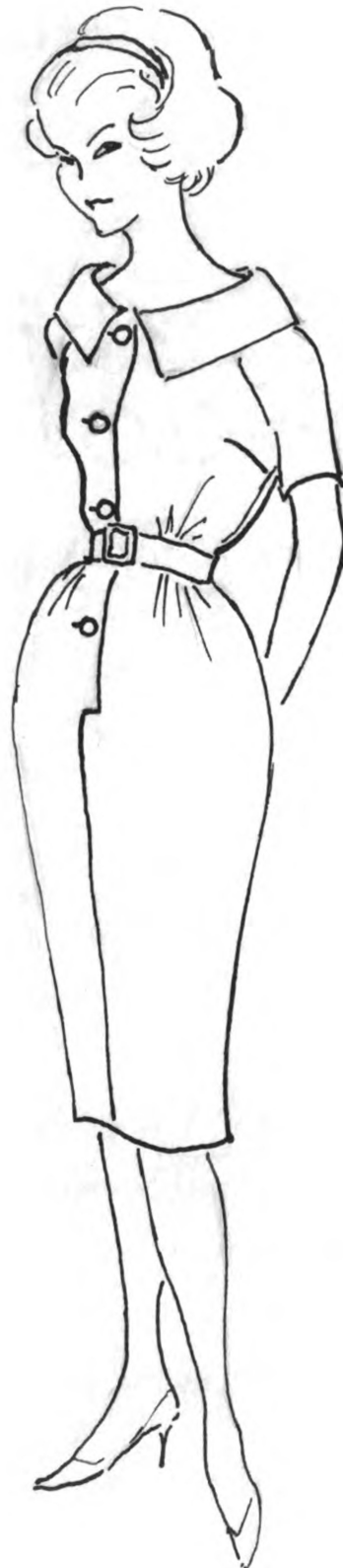
All panel members agreed on the fit at these points: the shoulder seam fell at the top of the shoulder, side seams hung straight, ample ease at hip and sleeve, there was good proportion of spacing at the shoulder, front and back bodice and skirt.

The majority agreed that the length of the darts in the bodice was pleasing. One panel member indicated that the left bodice waistline was high. The need for increasing underarm bust darting and raising the dart was mentioned by two panel members.

Selection of Pattern B

Pattern B was selected for its variation in sleeve style. The raglan sleeve in pattern B had a deeper than normal armhole and a wider arm girth. A normal set-in sleeve has $1\frac{1}{2}$ to 2 inches of ease. In the raglan sleeve the upper part of the sleeve is cut in one with the blouse and there is no shoulder seam where ease may be distributed.

PATTERN B



A shoulder dart is used in the raglan sleeve to hold in a part of the ease.

There were no waistline darts in the bodice or skirt front in pattern B. Fullness was gathered in. A collar on a lowered neckline was also a feature.

Alterations needed were:

a. Both bodice back and front were long between shoulder and scye line.

b. The shortening of the bodice front and back at this point necessitated the reduction of length across the sleeve.

c. The waistline curve in the side back skirt was too high, so a tuck was made from the side seam, tapering to nothing at the center back. The hemline was corrected.

d. Too much fullness in the back side seam was removed by straightening the hip curve.

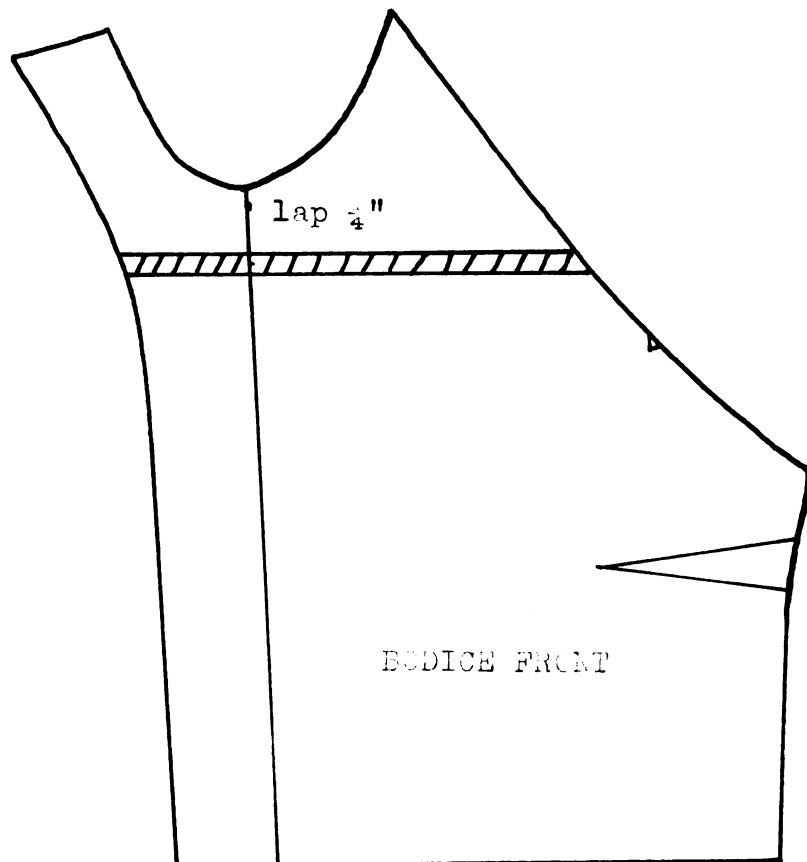
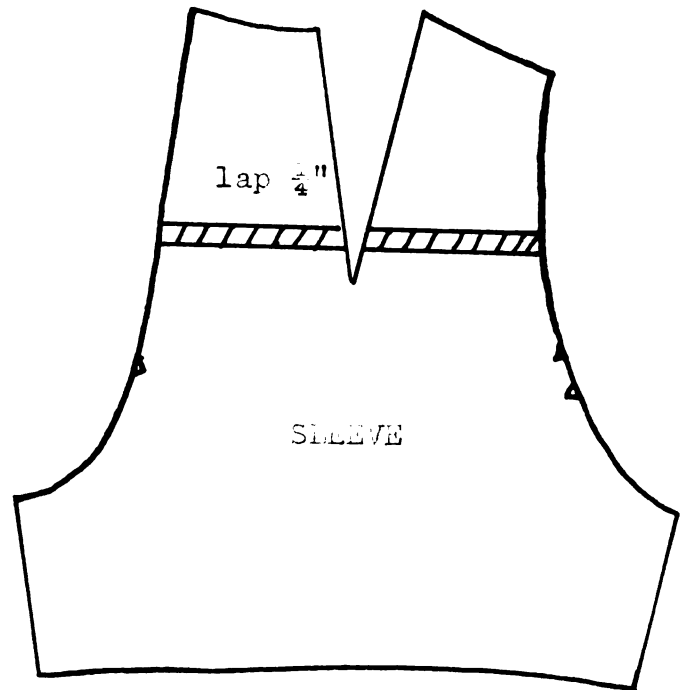
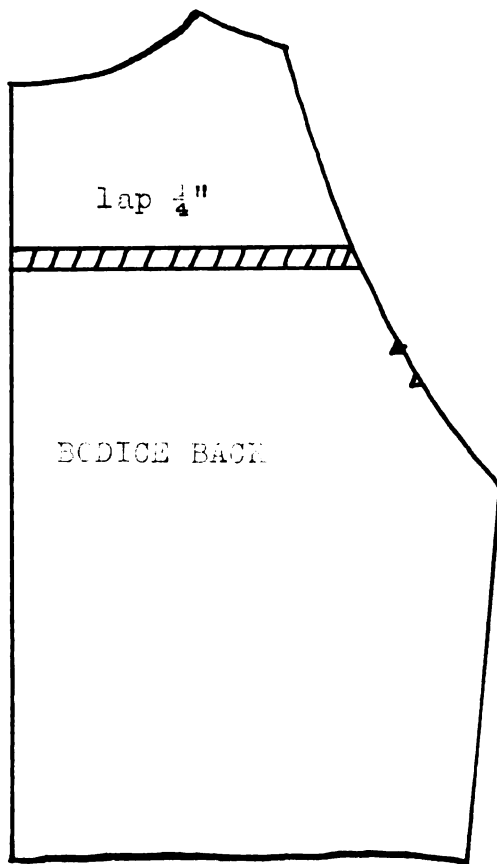
e. The waistline curve of the side skirt front was increased. A new balance point for side seams was established and the hemline was corrected.

Evaluation of Fit of Dress

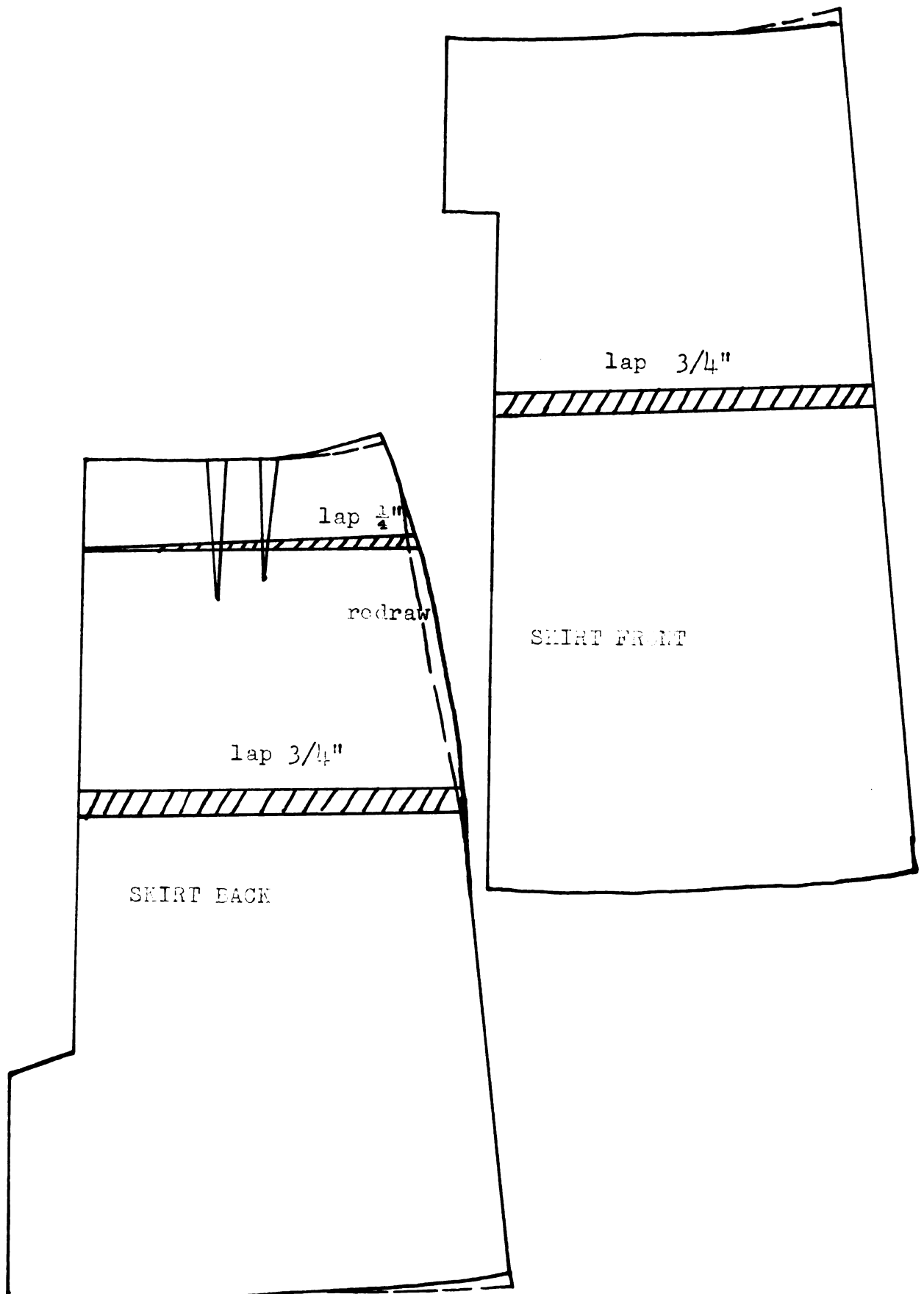
The evaluations pointed to good fitting at the waistline seam, the side seams, ample ease at hip and sleeve and good proportion of spacing in the bodice and the skirt.

Two members of the panel felt the shoulder seams slanted toward the back. One specified that the skirt back darts were too long for the figure with high flat hips. The majority of the members felt that the underarm dart was low and needed to be increased in size. The dart was in line with the point of bust when checked with the master pattern. It may have been that the extra ease allowed in the raglan sleeve caused the underarm dart to fall in a lower position when the dress was on the figure.

PATTERN B



PATTERN B



Selection of Pattern A

The selected variation in pattern A was the kimono sleeve with a gusset. Since the kimono sleeves are cut in one with the bodice, the original curve of the armhole was lost. This presented different techniques in checking size with the basic pattern (details described in Chapter V). Three other variations in pattern A were: position of bust darting in center front seam, lowered neckline with collar and a circular skirt.

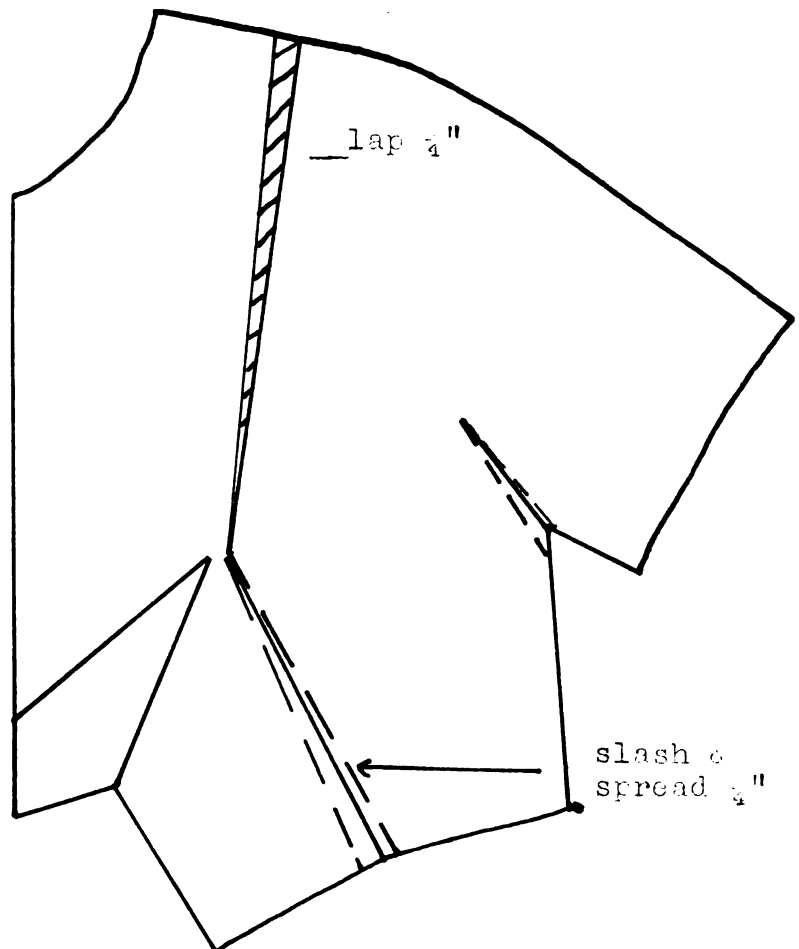
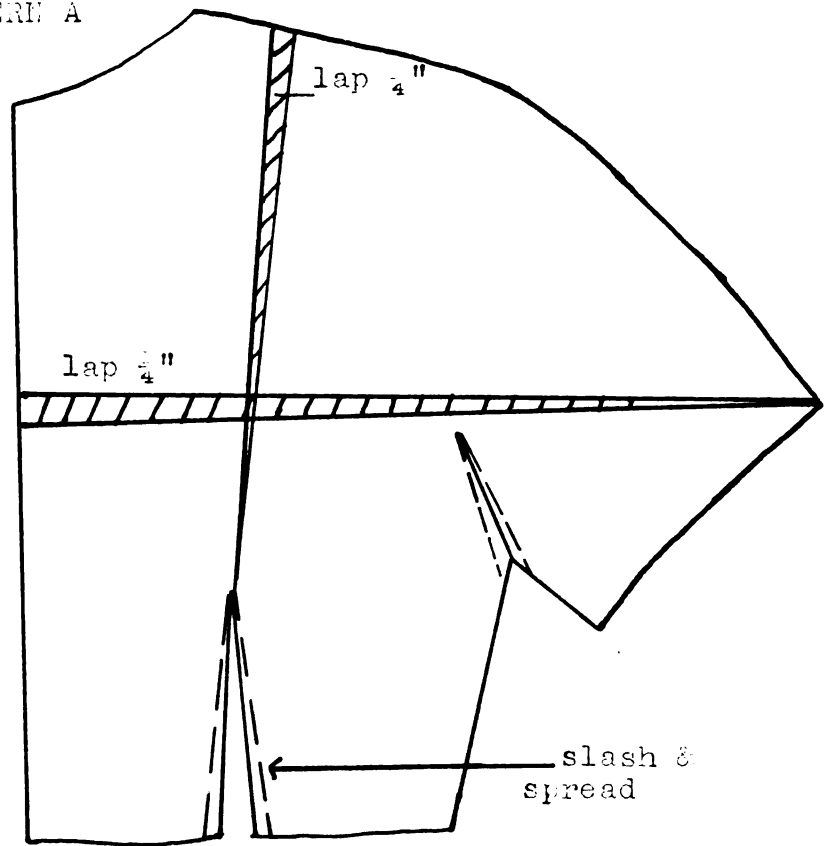
Alterations Necessary

Both bodice front and back were too long over the shoulders. The excess resulting from the tuck in the bodice back was released into the waistline dart. In the front the pattern was slashed from waistline to point of bust. The amount released was the total needed to increase the size of the front waistline. An additional one-fourth inch ease added to the side seam of the skirt front to balance this amount. The skirt length had to be shortened.

Evaluation of Fit of Dress

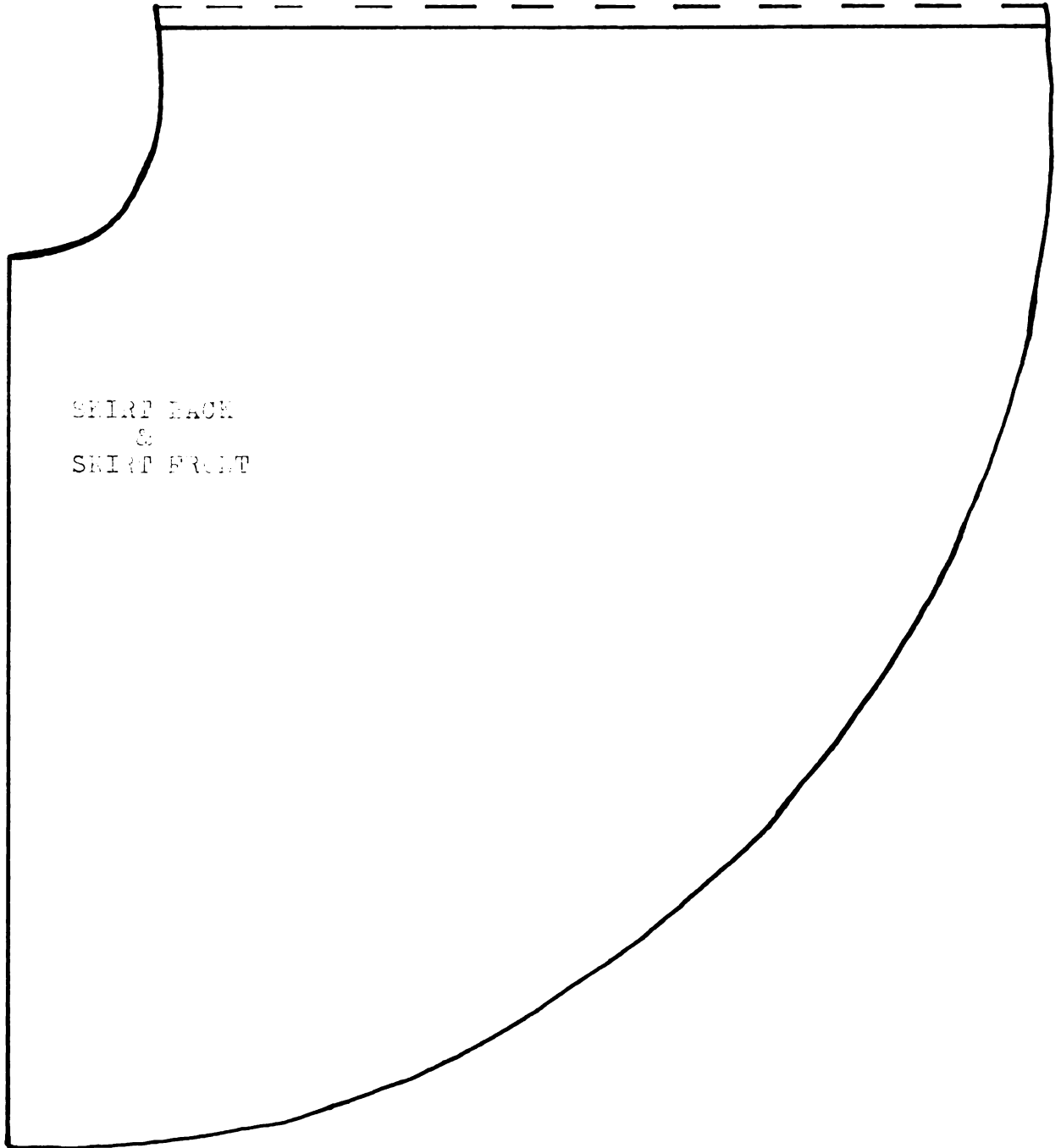
All panel members were in complete agreement with a rating of "excellent" for the fit of dress A. The shoulder line fell exactly on top of the shoulder. The waistline seam was at the natural waistline. The side seams hung straight. There was ample ease at bustline and in the sleeve. The majority of the members of the panel indicated they particularly liked the fit and effect of the bust darting. Because of the gusset there was no excessive wrinkling under the arm.

PATTERN A

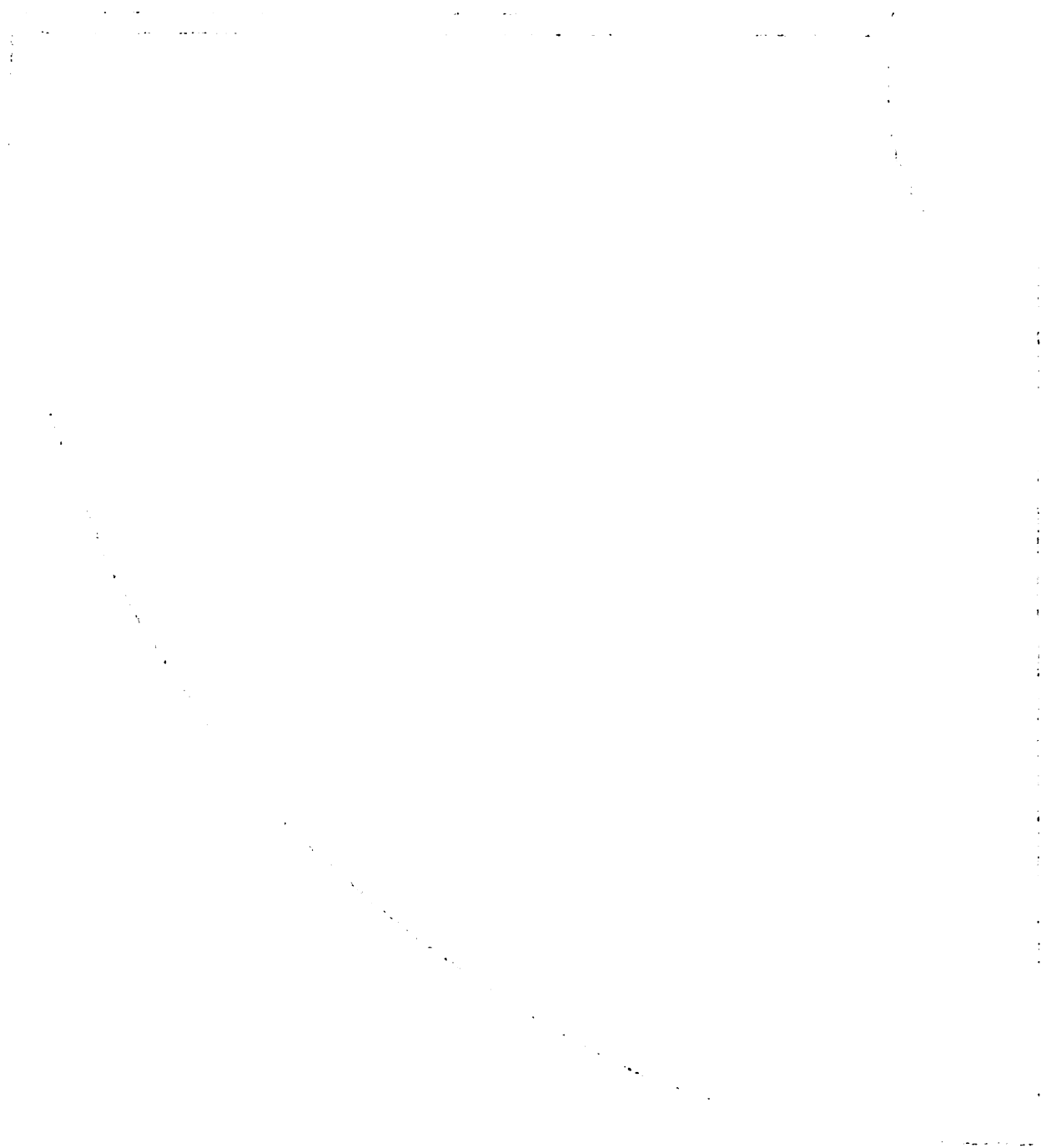


PATTERN A

add $\frac{1}{4}$ " in front only



SHIRT BACK
&
SHIRT FRONT



PATTERN M



Selection of Pattern M

Pattern M was selected because it contained more pattern pieces and those which were quite differently shaped from the basic muslin. The details included a dropped shoulder line, a French dart line and a six gore skirt.

Alterations Necessary

Tucks were taken in the front bodice piece at the shoulder and neckline. The bodice side front was slashed between the side seam and waist dart to the top of the piece and was spread to increase the size of the waistline.

A fold was made in the shoulder line of the bodice back. Two tucks were made in the bodice back--one across from center back to the middle of the armscye and the other from the neckline to near the top of the armscye.

The additional width which was needed across the bodice at the underarm and waistline was obtained by slashing and spreading the pattern.

The sleeve and neck facings have corresponding alterations.

Additional width in both skirt side front and skirt side back was needed. These alterations made it necessary to move the bodice back dart to correspond to the seams in the skirt back.

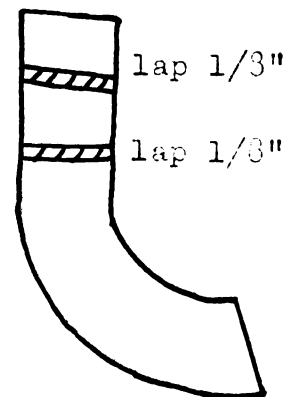
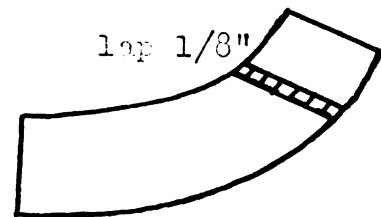
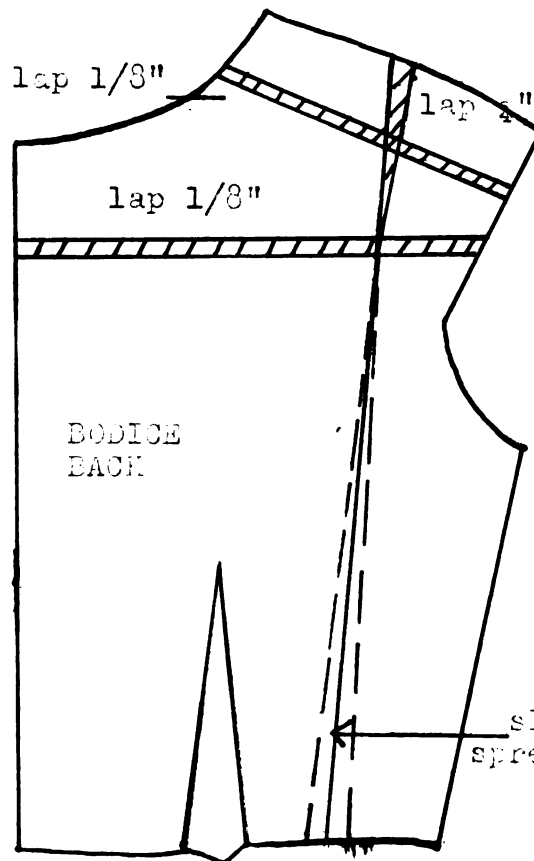
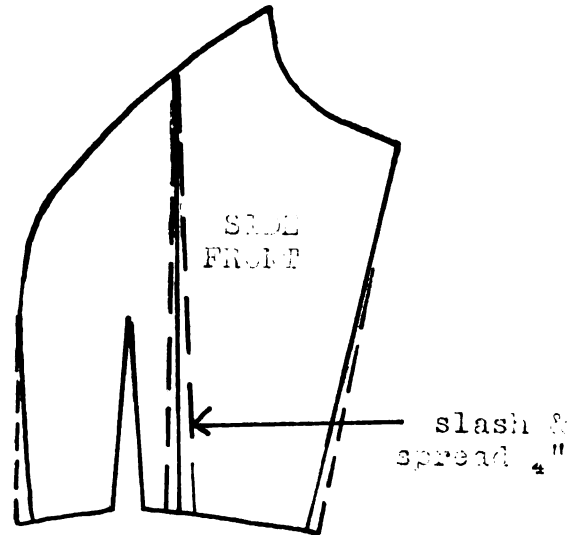
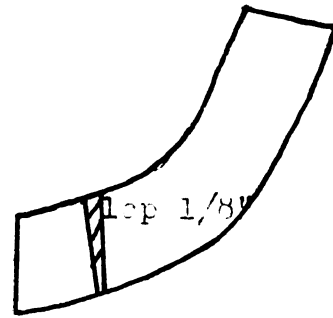
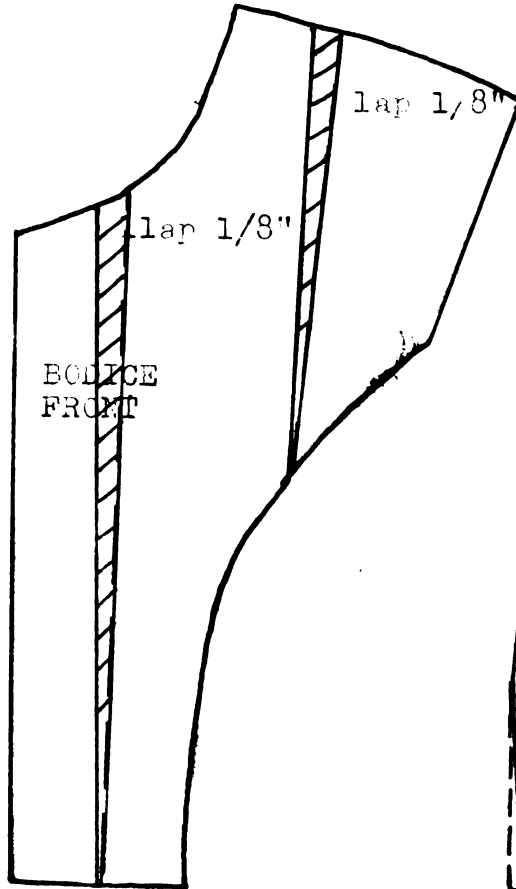
The skirt length of the pattern was reduced.

Evaluation of Fit of Dress

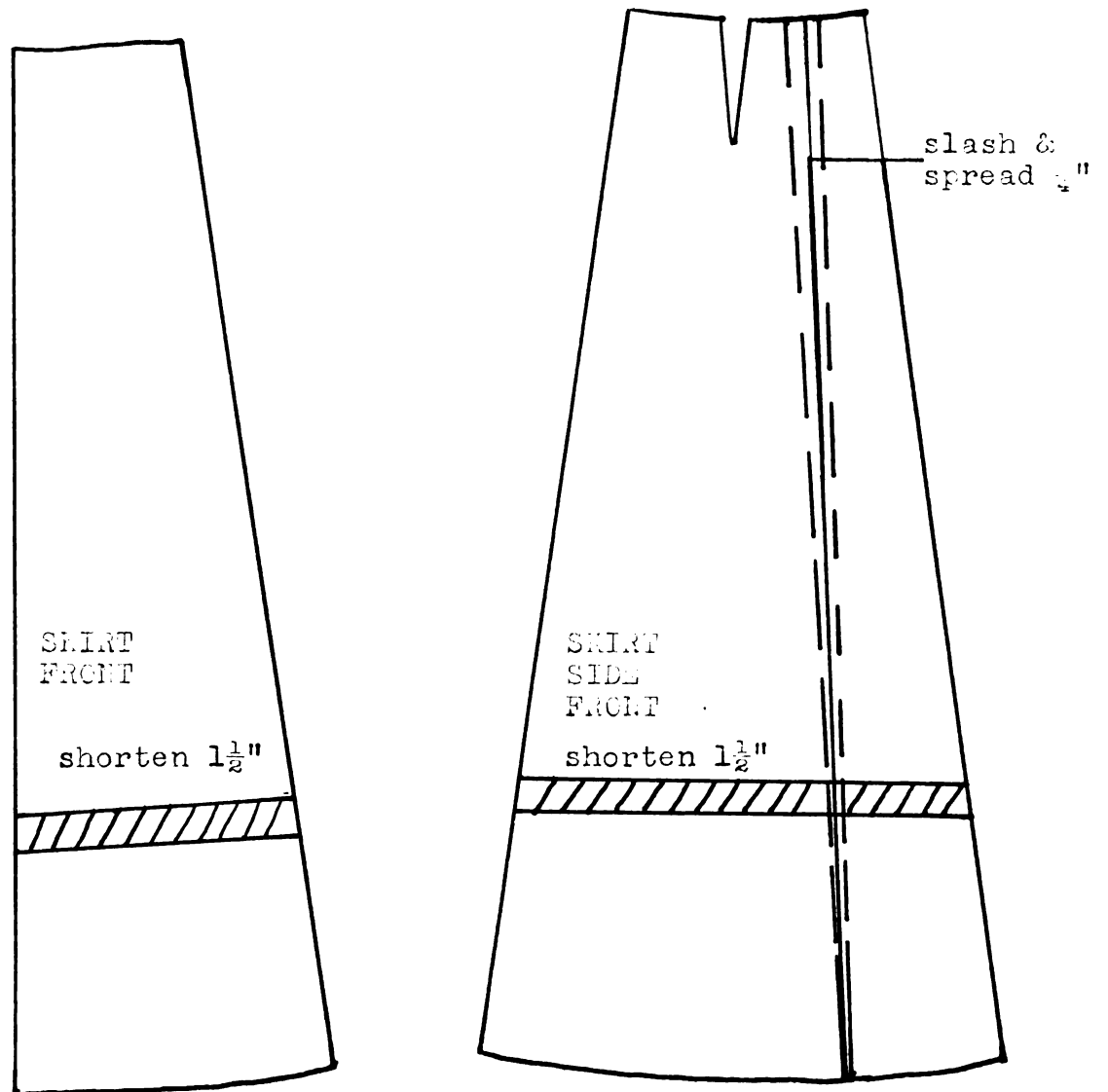
Panel members all agreed that dress M fit well at the shoulders and waistline. There was ample ease at the hip and sleeves. The spacing and proportion of the French dart line and skirt seams were pleasing on the figure.

Two panel members indicated that the side seams hung slightly forward. All panel members observed diagonal wrinkles in the side bodice and indicated a need for additional bust darting.

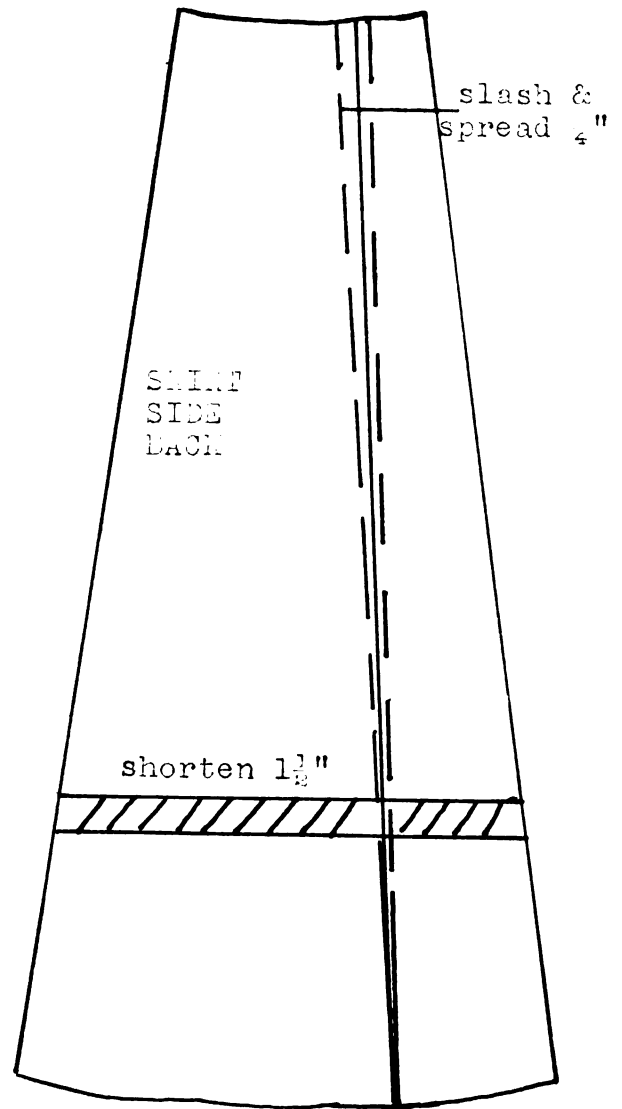
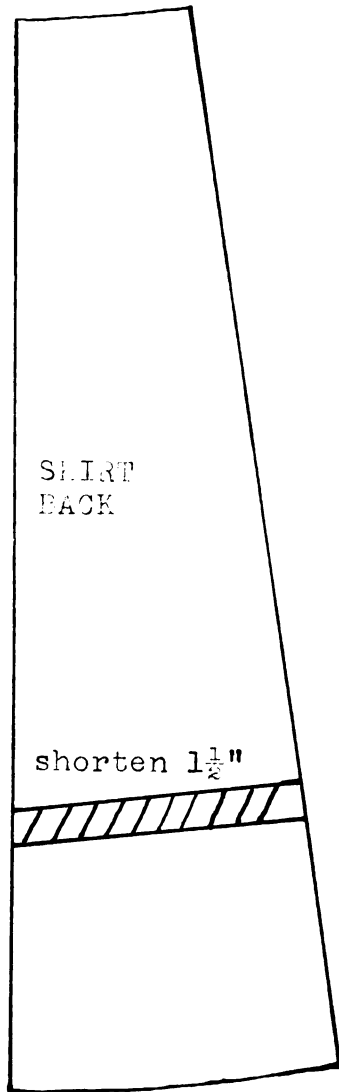
PATTERN 11



PATTERN 1



PATTERN M



CHAPTER V

GUIDES IN USING THE BASIC PATTERN TO CHECK SIZE OF COMMERCIAL PATTERNS

The basic muslin pattern can be used as an aid or device to determine what alterations are needed in a commercial pattern.

General Directions

1. Press commercial paper pattern with a warm iron. Do not use steam in iron.
2. Extend grain lines on each pattern piece.
3. Draw a scye line on the front bodice. (A line which is perpendicular to the center front and about one-half inch below armhole.) Draw this same line across bodice back at the same height as on the bodice side front. In a bodice without a marked armhole use the basic pattern to determine where the armhole would be located in order to draw in the scye line. This line will be used as an aid in determining amount of ease at bust line and across back.
4. Mark point of bust by extending lines of waist and underarm darts.
5. Checking the commercial pattern against the muslin pattern involves more than comparing size. Judgment as to whether a change or alteration needs to be made enters into checking size. In checking,

it is important to take an overall look at the pattern pieces as well as the specific changes which are to be made. The next step is the actual follow-through in making alterations which are necessary in the pattern.

6. It is important when comparing the basic pattern with a commercial pattern to make allowances for differences which are due to the amount of ease required by design variations.

7. Lay smoothly pressed basic muslin pattern flat on a table. Place on top of each piece the corresponding paper pattern.

Order for Checking Pattern Pieces

Front Bodice

1. Check length of waist.
 - a. Match patterns at point of shoulder, at neckline and down center front. Make allowances for the difference in depth and width of neckline due to design variation.
 - b. Note the difference in length from the pit of the neck to center front at waist. If there is a lowered neckline, check difference at center of shoulder line down over bust point to waistline.
 - c. Check the length and shape of armhole with the master pattern.
 - d. Check length of seam from underarm to waistline.
 - e. Match bust points.
 - f. If there is a difference in length in bodice, decide whether the pattern should be lengthened or shortened between bustline and shoulder or between bustline and waistline.

- g. To check length of waist in a bodice with a raglan sleeve, it is necessary to pin the sleeve onto bodice front from shoulder to notches. The armhole may be lower in some types of raglan sleeves, making underarm seam appear shorter than the basic pattern.
- 2. Check the location of the darts. The waist dart should end one to one and a half inches below the point of bust. If there is an underarm dart, the point of the dart should be in line with the point of bust or slant up in the direction of bust point.
- 3. Check shoulder length. This is easily done if the pattern has set-in sleeves. A lowered neckline will make the shoulder length shorter. Checking the chest width would help in determining length of shoulder.
 - a. In a style where there is no definite shoulder length indicated, the shoulder length should generally be altered if the basic pattern had been changed in fitting the shoulder.
- 4. Check bust width at scye line from underarm side seam to center front.
 - a. If there is more than one piece in the bodice, pin them together to check width.
 - b. In a fitted bodice, there will be slightly less than the normal 3 to 4 inch ease for the bust line. In some styles, much more ease may be allowed.

5. Check the waistline size. Remember to exclude darts and tucks.
6. After taking an overall view of the bodice front pattern, make the specific alterations based on judgment and experience to make the commercial pattern as much like the basic as possible.

Bodice Back

1. Match and check back length from neckline (base bone at back of neck) to waist.
 - a. A lowered neckline will make this checking more difficult.
 - b. Bodice back length can also be checked by matching under-arm seams. This will indicate if pattern needs alteration between waist and scye line.
 - c. Another checking point is the length of the armhole. This will show if alteration is needed between scye line and shoulder.
2. Check the width of the back bodice at the scye line.
 - a. Remember to take into consideration the amount of ease allowed for the style variations.
3. Check the position of dart or darts.
 - a. Observe position to see if darts are too close or too far away from the center back to give a pleasing proportion.
4. Check shoulder length if both patterns have set-in sleeves. Allowances must be made for design variations in neckline.

- a. The ease allowed in the back shoulder length can vary from none to one-half inch. For most fabrics, three-eighths to one-half inch is desirable if there is no shoulder dart. Crease resistant fabrics require less ease.
- b. Pin raglan sleeve into bodice back from shoulder to notches in order to check shoulder length.
5. Check waist size. Exclude darts and tucks.
6. After taking an overall view of the bodice back pattern, make the specific alterations based on judgment and experience to make the commercial pattern as much like the basic as possible.

Skirt Front and Back

Check skirt front and back separately as follows:

1. If skirt front or back has more than one piece, pin together to below hip level.
2. Match skirt patterns with muslin at center front and at center back.
 - a. Check length of skirt.
 - b. Check waist width, excluding darts, pleats and tucks.
 - c. Note curve of waistline seam. This may vary from one style to another.
 - d. Check hip width. Importance of amount of ease in hip will depend upon amount of flare in skirt. If hip width varies on front skirt, check to see if the difference has not already been added to the back skirt before making an alteration.

3. Check hip curve.
 - a. A slight variation in hip curve may be due to the difference in size and location of the darts.
4. After taking an overall view of the pattern pieces, make the specific alterations based on judgment and experience to make the commercial pattern as much like the basic as possible.

Sleeve

1. Compare girth or width at underarm, elbow and wrist.
 - a. In a kimono sleeve with a gusset, girth may appear narrow, but the gusset will add to the width of the sleeve.
 - b. In a raglan sleeve which is set in a deepened armhole, the girth will be wider to allow arm to be raised comfortably.
2. Check length between cap and elbow, and elbow and wrist.
3. Check the position of dart or darts.
 - a. The ease provided by darts at the elbow should direct fullness at the point of elbow.
 - b. One dart, the middle of three darts, or the space between two darts should be in line with point of elbow when arm is bent slightly.
4. If alterations were made in armhole of bodice, similar changes will probably be needed in cap of sleeve.

5. Check for amount of ease in sleeve cap.
 - a. Measure armhole (armscye) length of both front and back bodice pieces and sleeve.
 - b. The total ease in sleeve should not be more than 1 to $1\frac{1}{2}$ inches for most fabrics on the market today. Fabrics with crease resistant finishes require 1 to $1\frac{1}{4}$ inches ease for a smooth fit. When using 100 per cent wool fabrics, as much as 2 to $2\frac{1}{2}$ inches extra in sleeve can be eased into armhole.

Facings and Collar

1. Any changes in neckline and armhole size will necessitate alterations in their facings.
2. If dress has a collar and neckline has been altered, this change must be made in collar to insure a perfect fit.

CHAPTER VI

CONCLUSIONS

From the evaluation of the results of this study, the following conclusions may be made.

1. A basic pattern can be successfully used as a guide to indicate alterations which are needed in a commercial pattern.
2. A good fitting basic muslin pattern is a prerequisite to this method of checking size of commercial patterns.
3. Alterations similar to those made in the basic pattern usually will need to be made in another pattern of the same company.
4. If a commercial pattern does not vary a great deal from the basic pattern, i.e., it has the same type of sleeve and the bodice has similar darting, less difficulty in checking size of pattern will be encountered by the individual less experienced in pattern alteration.
5. The more the pattern varies from the basic, the more experience and understanding of pattern alteration principles are needed for success in using this guide for indicating pattern size.
6. Making a dress using a basic pattern in checking size does not insure a perfect fit; however, this method can eliminate many of the problems of pattern fitting, especially for the woman who sews alone.

7. It is best that dresses have at least one fitting before completion. More involved dress designs or problem figures may require additional fittings.

8. Because the basic pattern was fitted in muslin, it should be remembered that other fabrics differing in texture and body might fit differently. The dress may look and feel larger or smaller than the basic muslin.

9. In this study, fitting evaluations of the panel indicated that patterns V, B, and M had insufficient underarm bust darting. This may have been caused by too little bust darting in the basic muslin or the difference in fit caused by the type of material chosen for the dresses.

APPENDIX

UNITED STATES GOVERNMENT DEPARTMENT OF COMMERCE BUREAU OF STANDARDS PATTERNS

A good-fitting dress has silhouette lines which are in good proportion in relation to the figure. The fit is smooth without wrinkles or strain.

Garment Checked _____

Please check the following points:

	Yes	No	How change?
1. Shoulder seam falls at top of shoulder	_____	_____	_____
2. Waistline seam falls at waistline	_____	_____	_____
3. Side seams hang straight	_____	_____	_____
4. Front armseye falls straight from shoulder to underarm	_____	_____	_____
5. Amount of ease:	Ample	Too little	Too much
Bust	_____	_____	_____
Hip	_____	_____	_____
Sleeve	_____	_____	_____
6. Check proportion of widths (spacing) at the following points:	Good	Poor	How change?
Shoulder	_____	_____	_____
Front bodice	_____	_____	_____
Front skirt	_____	_____	_____
Back bodice	_____	_____	_____
Back skirt	_____	_____	_____
7. Length of darts:			
Underarm	_____	_____	_____
Bodice waist	_____	_____	_____
Bodice back	_____	_____	_____
Skirt front	_____	_____	_____
Skirt back	_____	_____	_____
8. Analyse the line direction and spacing of the following design effects within the silhouette (those which apply to dress to be checked)			
Collar			
Neckline			
Yokes			
Others			

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