PATTERN GRADING Simplified



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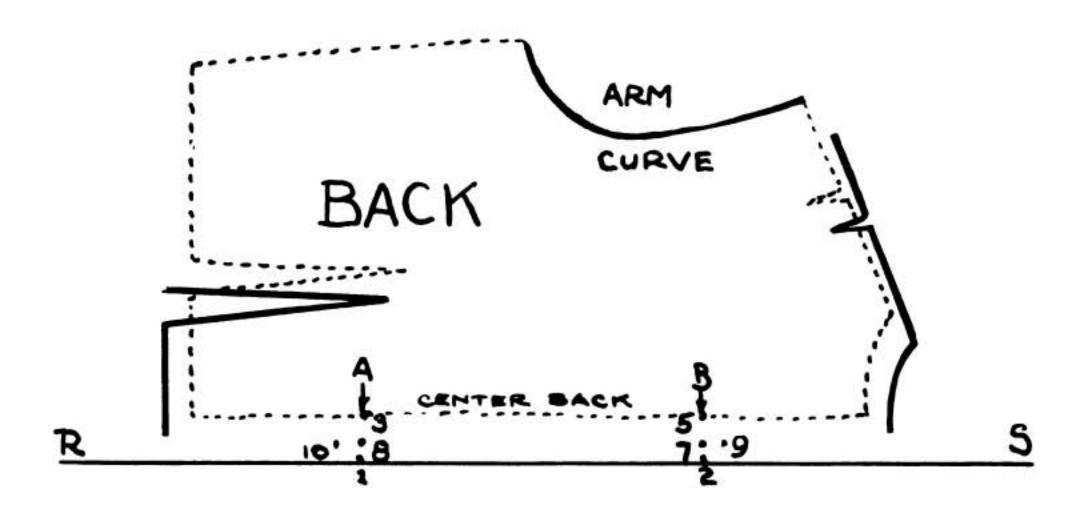




PATTERN GRADING, SIMPLIFIED

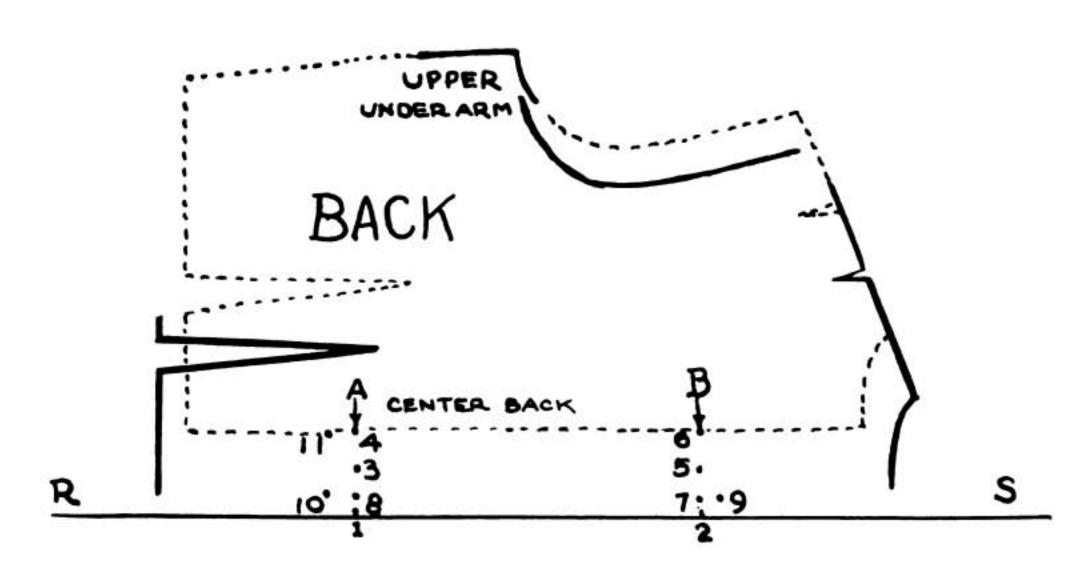
A Manual for Grading Women's, Misses', Juniors' and Children's Dresses, Suits and Coats





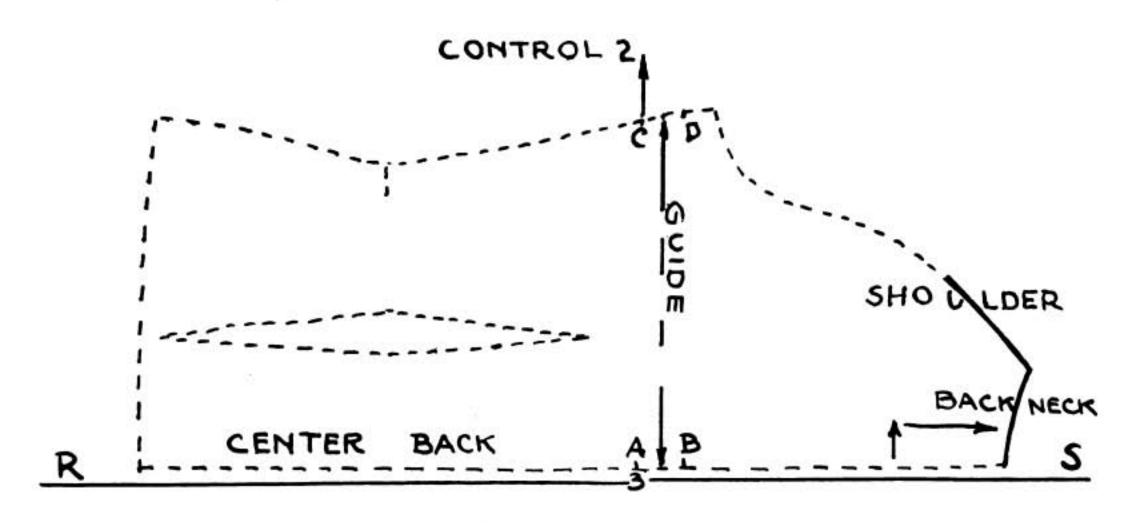
Back Grade -- Five

Place center back of the back pattern with point A on point 3 and point B upon point 5. Mark out the back arm curve. This increases the crossback by one-quarter inch.



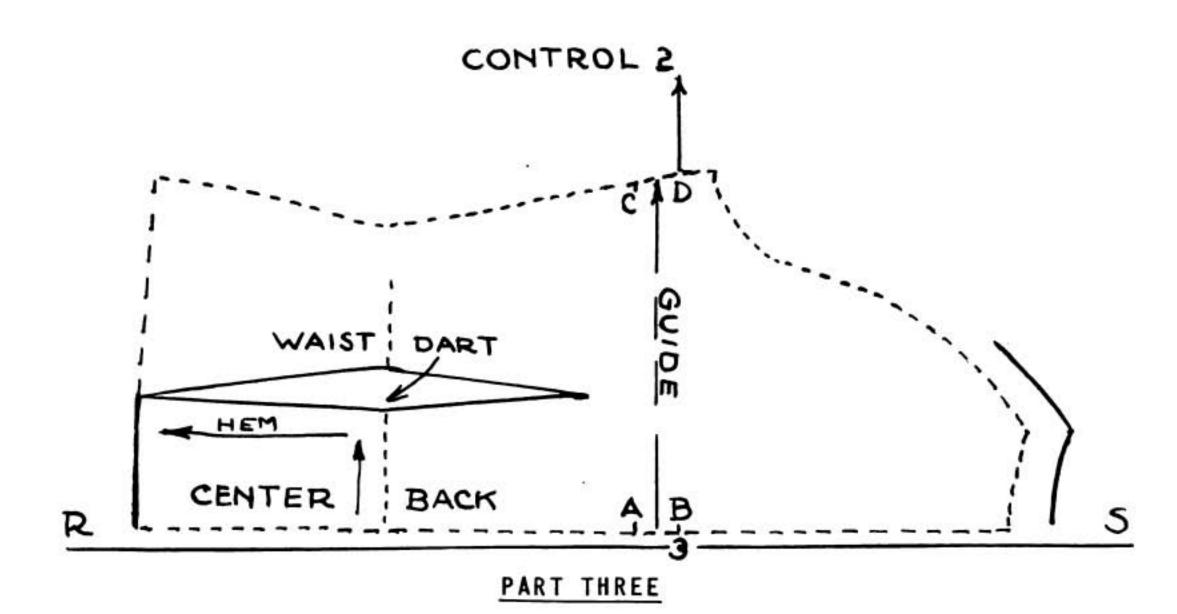
Back Grade -- Six

Place center back of the back pattern with point A on point 4 and point B upon point 6. Mark the underarm line. This increases the back, from center back to side under arm, by one-half inch.

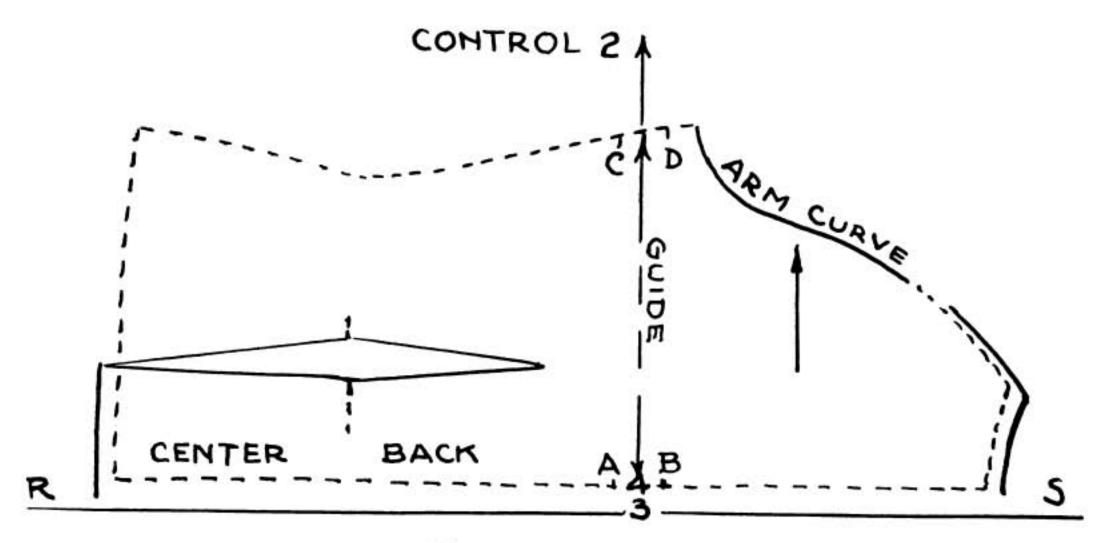


PART TWO

Move the back pattern 1/16 inch from line R-S and 1/8 inch to the right. Place point A of the pattern on point 3 of the grade, and point C of the pattern on control 2. Mark out the shoulder and the back of the neck.

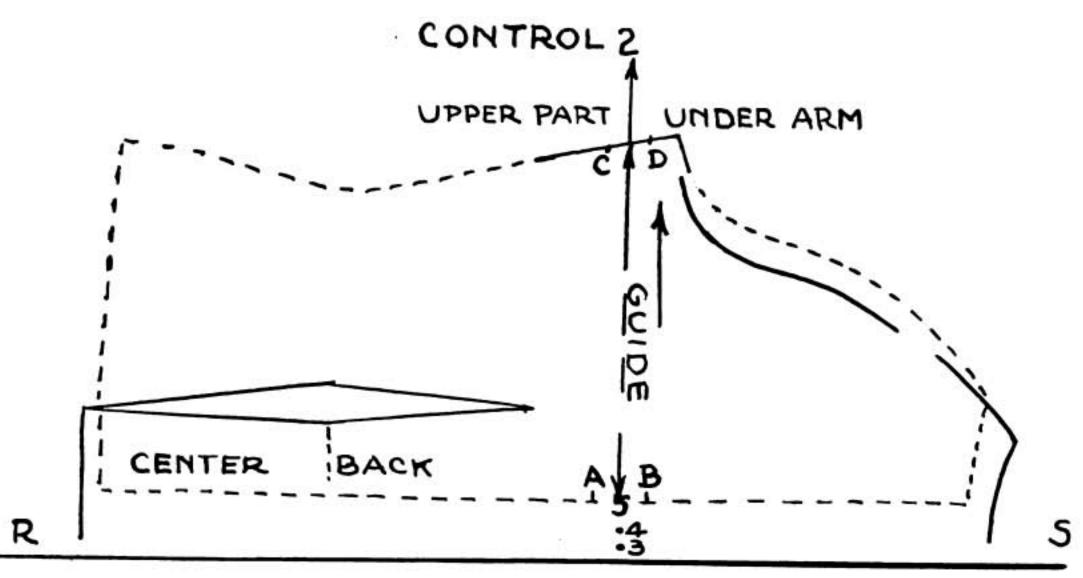


Move the back pattern center back so that point B rests on point 3 of the grade, and guide D of the pattern on guide control 2. Mark out the entire waist dart and part of the hem -- a drop of 1/8 inch of the waist.



PART FOUR

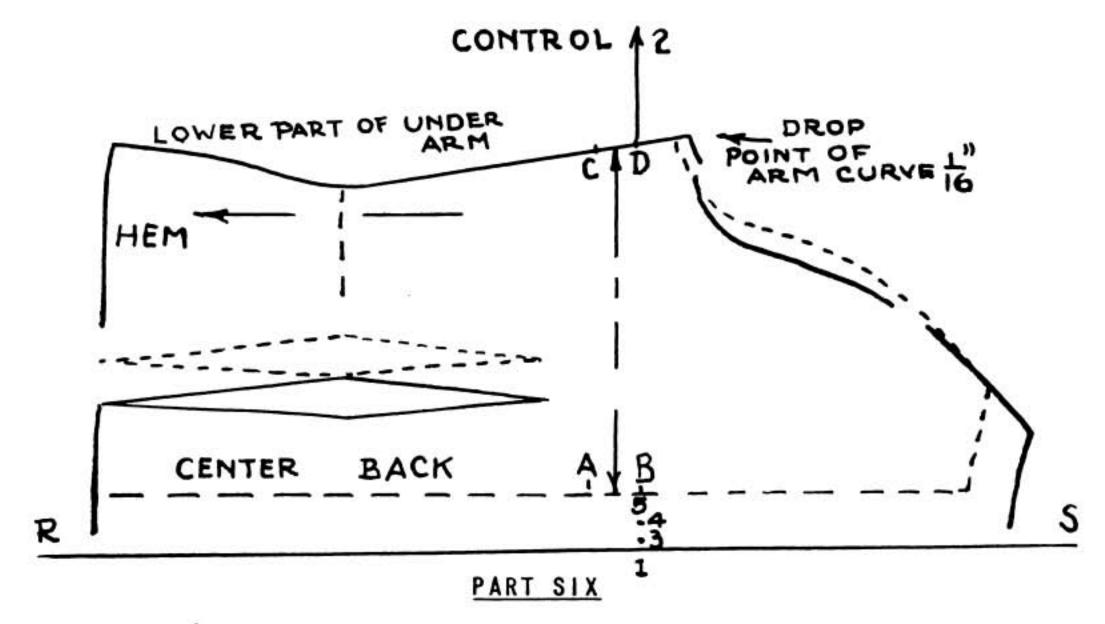
Move the pattern center back guide line so that it rests on point 4 of the grade (3/16 inch from R-S) and so that the guide point at the underarm lies on control 2. Mark out the arm curve.



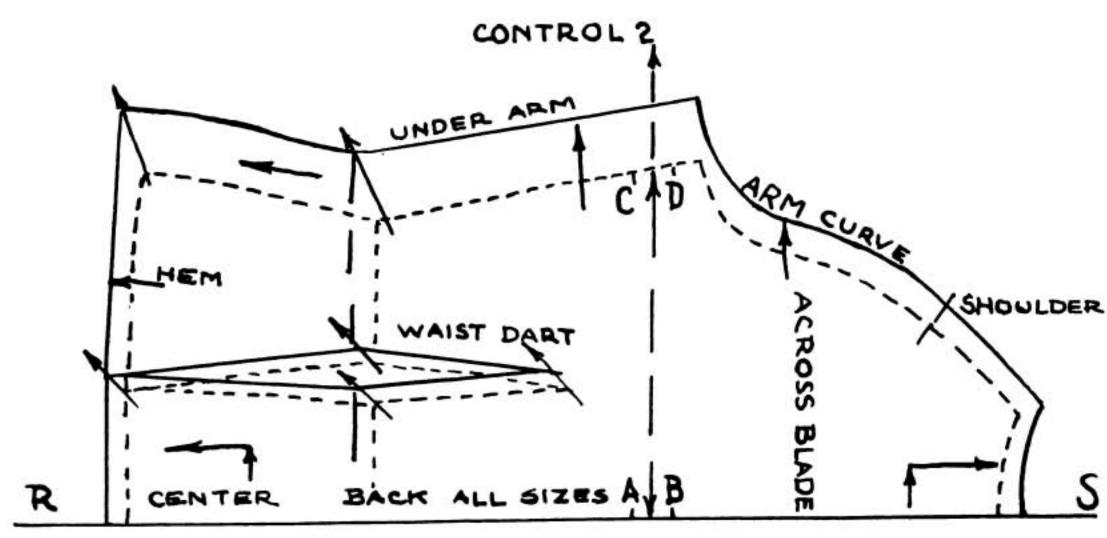
PART FIVE

Move the pattern center back guide line to rest on point 5 of the grade (3/8 inch from line R-S) so that guide point at the underarm lies on control 2. Mark out the upper part of the underarm.



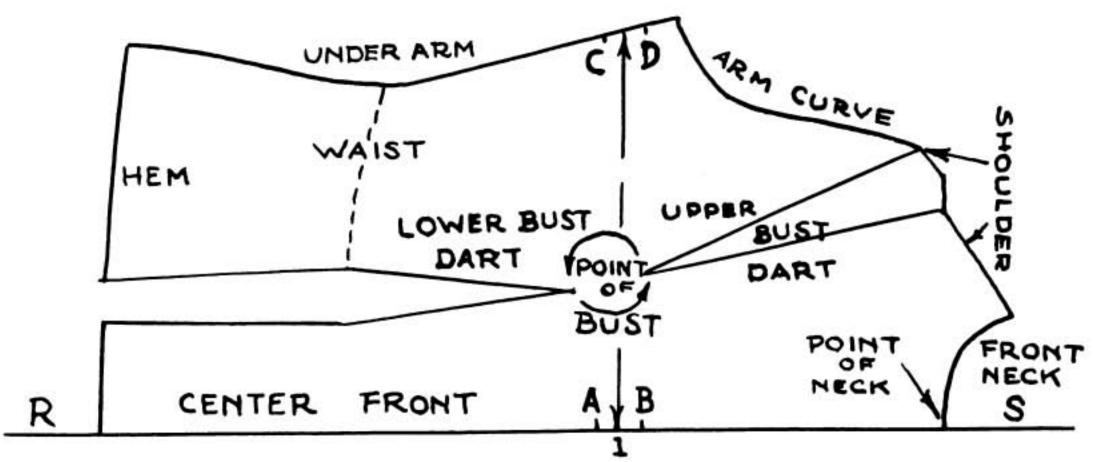


Move the pattern so that center back point B lies on grade point 5 (1/8 inch down) and so that point D (guide point of the underarm) lies on control 2. Mark out the lower part of the underarm, the waist and the hem.



PART SEVEN

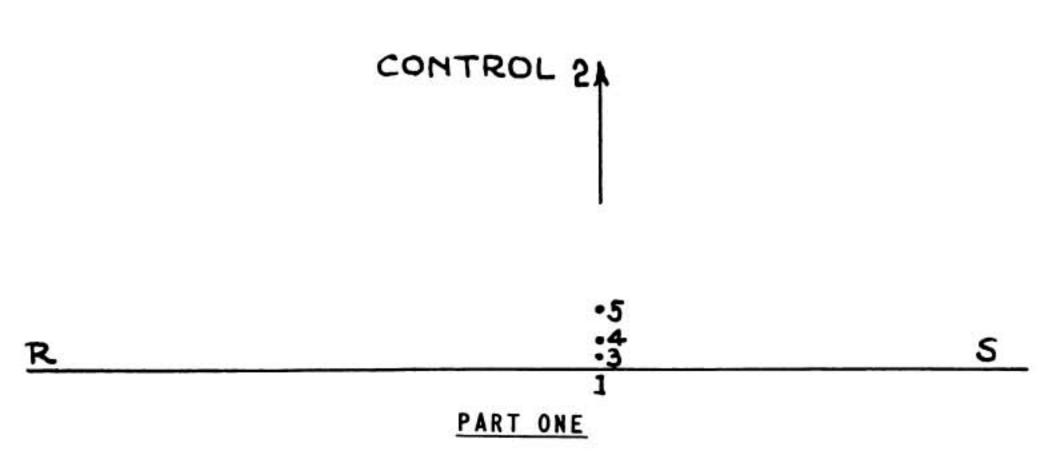
By placing the original back along line R-S, and by centering it inside the grade, the proportionate grade can be noted. The raise of the shoulders and the neck and the dropping of the waist become obvious. The increase across the blade is 6/16 inch and the total pattern increase at the underarm is 3/16 inch.



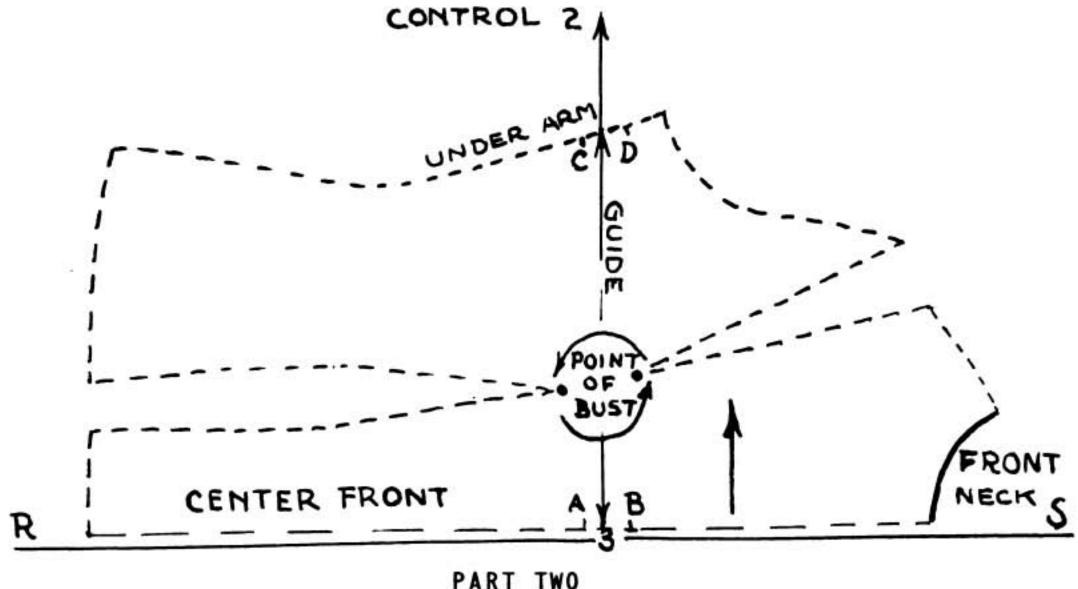
Analysis

The front pattern of the raglan pattern has an upper and a lower bust dart which divide the front pattern into two parts. It is very interesting to follow the grade and note how this type of pattern is handled.

Draw a guide line through the bust, perpendicular to the center front. Measure 1/8 inch on either side (to point A and to point B) and 1/8 inch at the underarm (to points C and D).

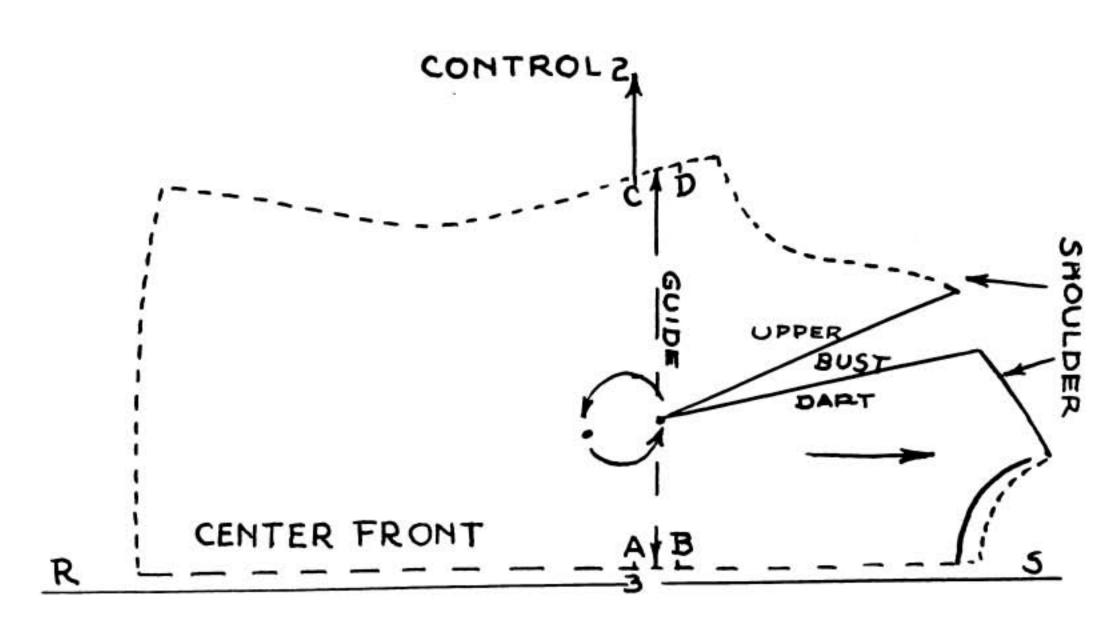


At point 1 on line R-S erect a perpendicular and continue it past the pattern for guide control 2. From point 1 to point 3 is 1/16 inch and from point 1 to point 4 is 3/16 inch, the increase across the chest in the $1\frac{1}{2}$ inch grade. From point 1 to point 5 is 3/8 inch, the total front grade per size increase.



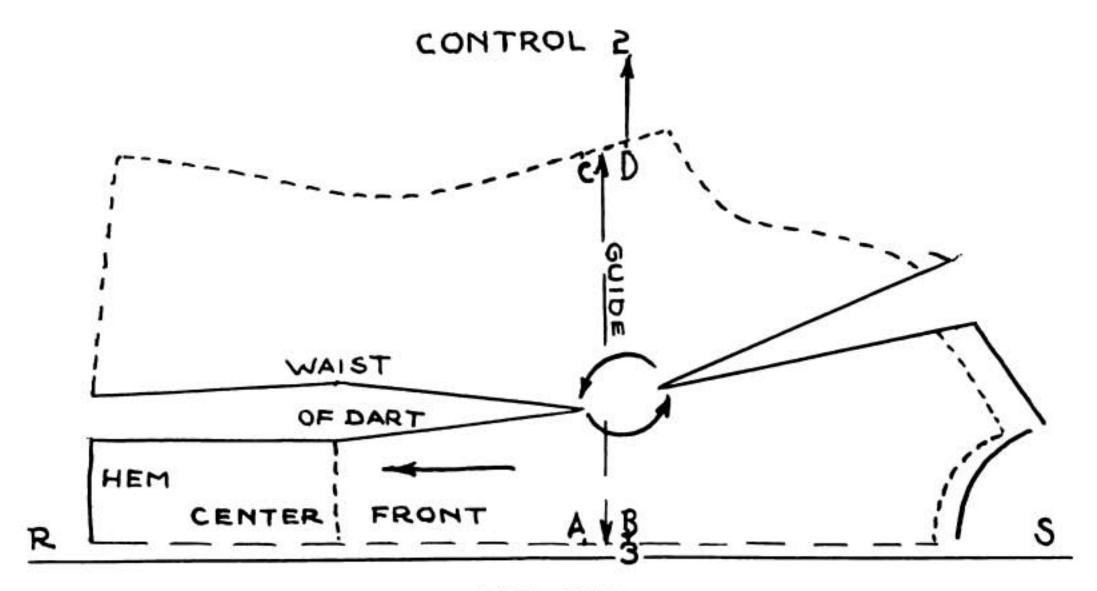
PART TWO

Move the front pattern forward 1/16 inch with the guide point of the center front on point 3 and the guide point at the underarm on control 2. Mark out the front neck and the points of the bust, and the upper and lower bust darts.



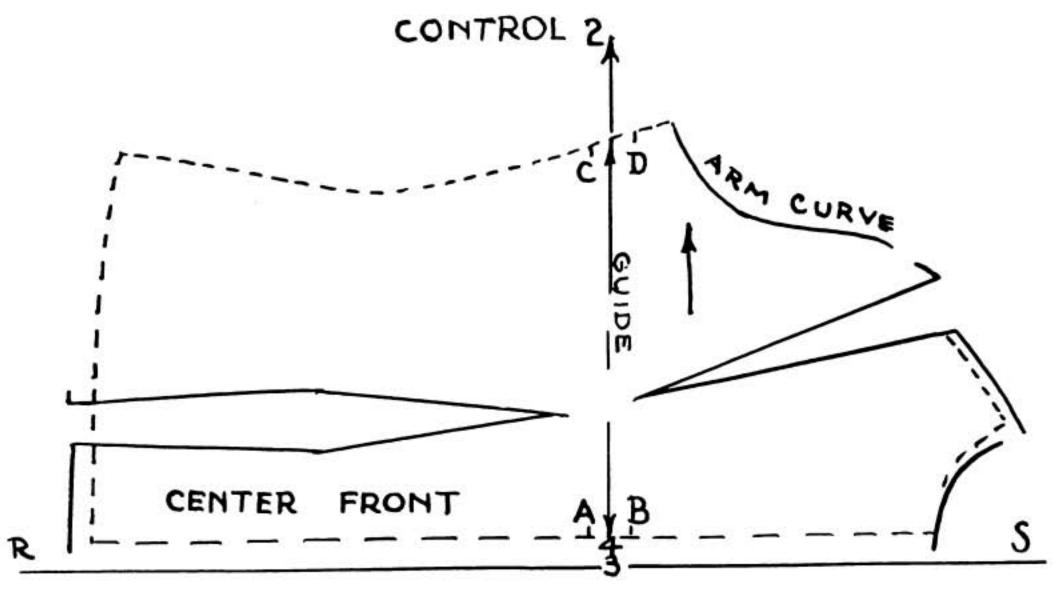
PART THREE

Move the front pattern up 1/8 inch to raise the shoulder by placing point A at the center front on point 3 and point C at the underarm on control 2. Mark the shoulder and join it to the upper point of the bust dart.



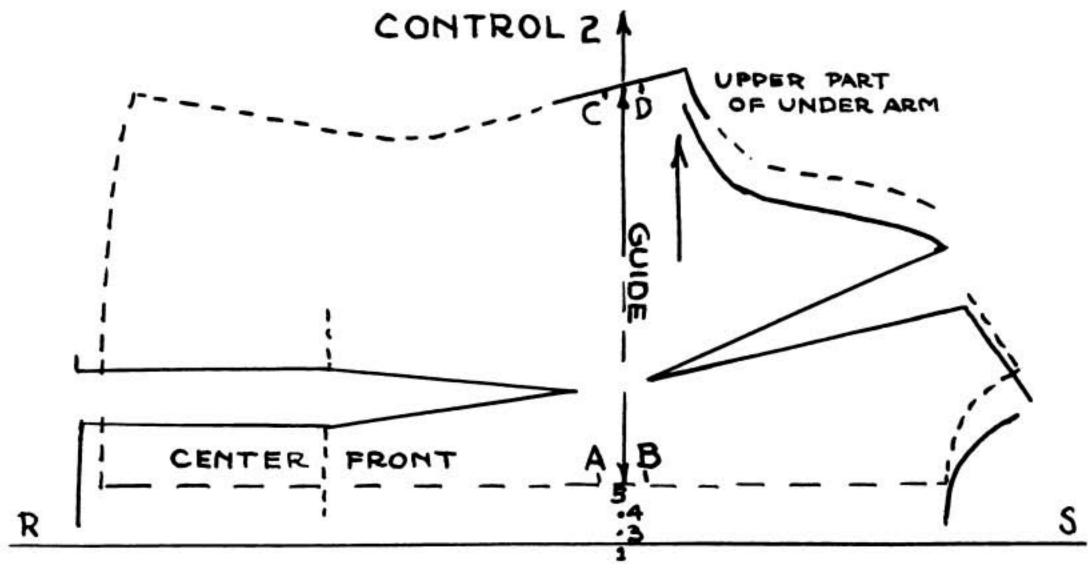
PART FOUR

Move the pattern down, dropping the waist line 1/8 inch, by placing point B of the center front on point 3 of the grade and point D (at the underarm) on control 2. Mark out the lower part of the dart from the waist to the hem and the hem, as indicated. Join it to the point of the lower bust dart.



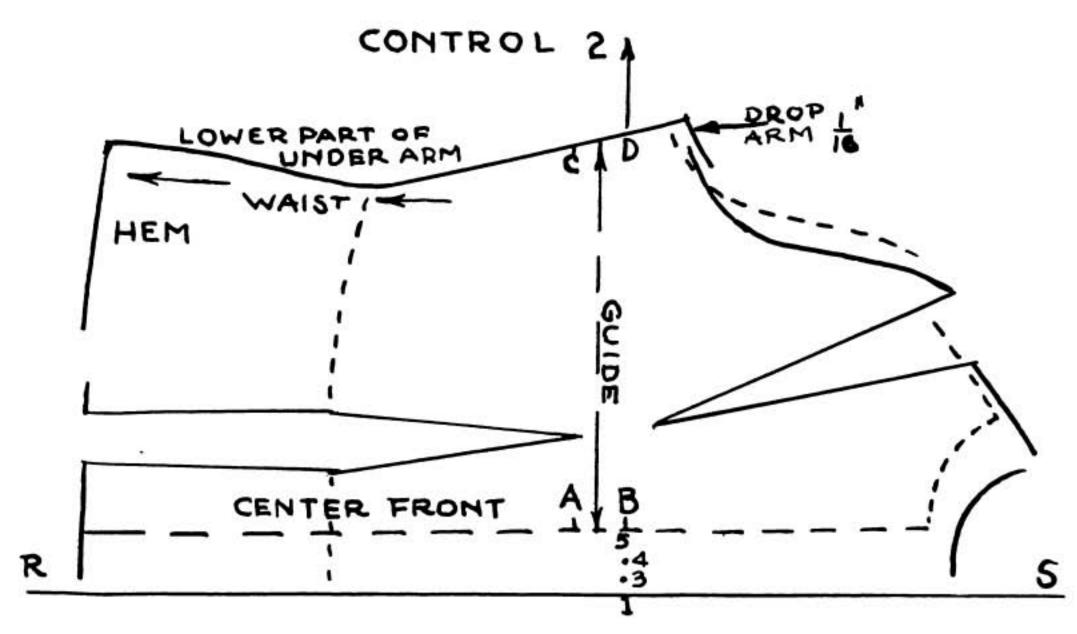
PART FIVE

Move the pattern forward 3/16 inch, increasing the across chest grade, by placing the guide at the center front on point 4, and the guide at the underarm on control 2. Mark out the arm curve, as indicated.



PART SIX

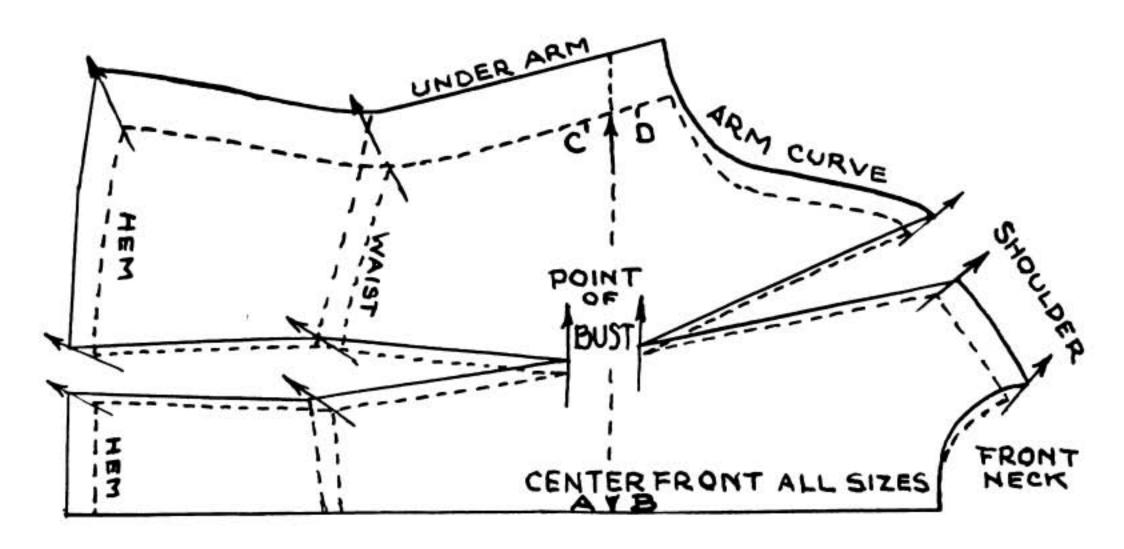
Move the pattern forward at total of 3/8 inch, with the center front guide line on point 5 of the grade and the guide at the underarm on control 2. Mark out the upper part of the underarm and part of the arm curve.



PART SEVEN

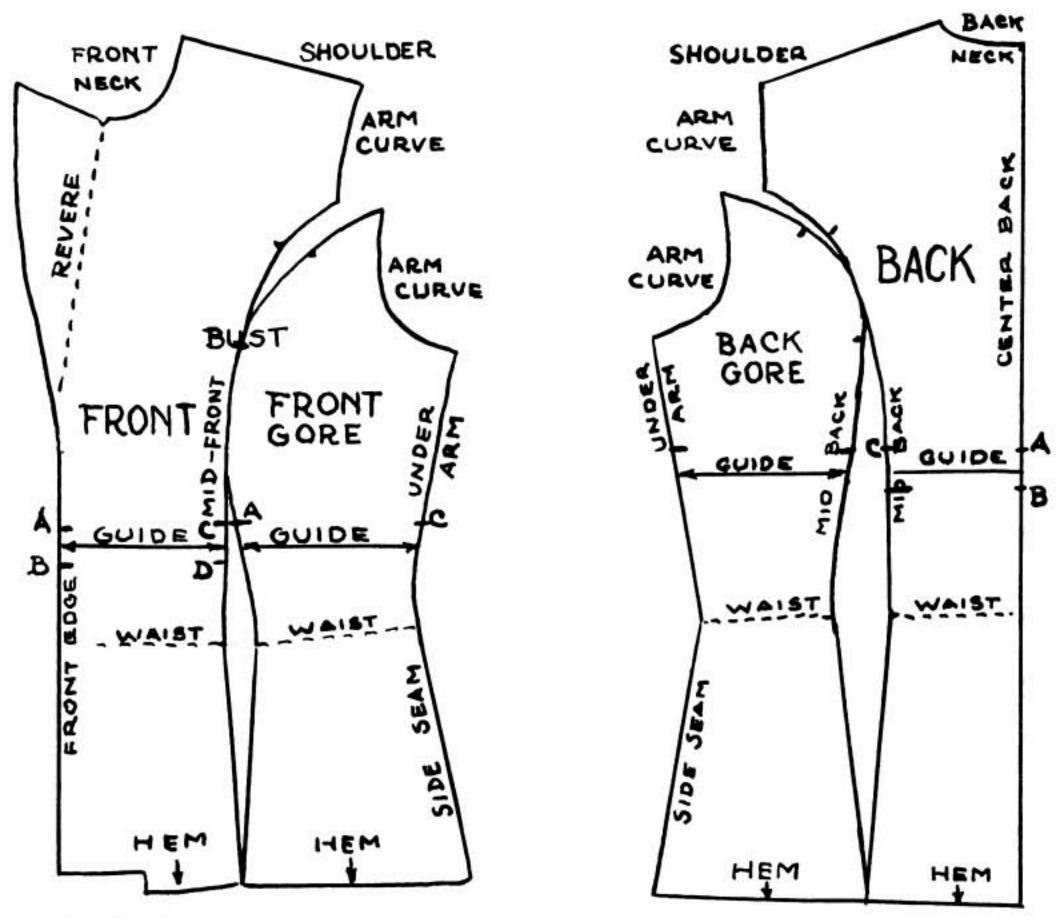
Move the pattern down 1/8 inch, dropping the waist at the underarm, by placing point B (center front) on grade point 5 and point D (underarm) on control 2. Mark out the lower part of the underarm, the waist and the hemline to the dart, as indicated.

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PART EIGHT

The comparable grade of the front graphically illustrates the proportionate increases at the various parts of the front pattern. The movement of the darts and the front neck is shown, giving the pattern grader a clear idea of what happens when patterns are graded from size to size. This chart form of the grade is the best way of checking progress and of doing a clean-cut and uniform grade.

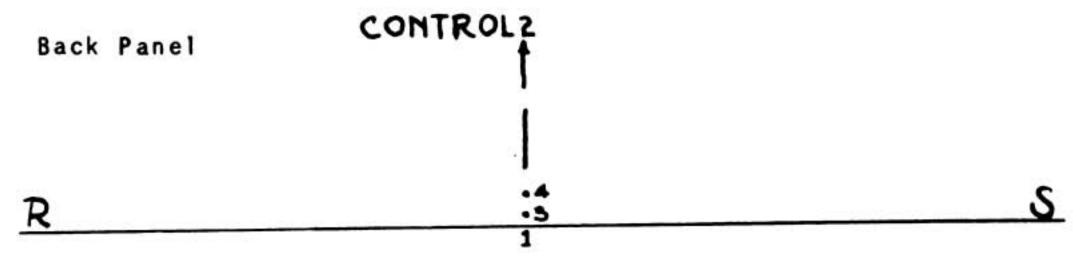


Analysis:

Collating patterns before doing the actual grading is just as important as the grading itself and reflects to a great degree upon the speed and accuracy of the job.

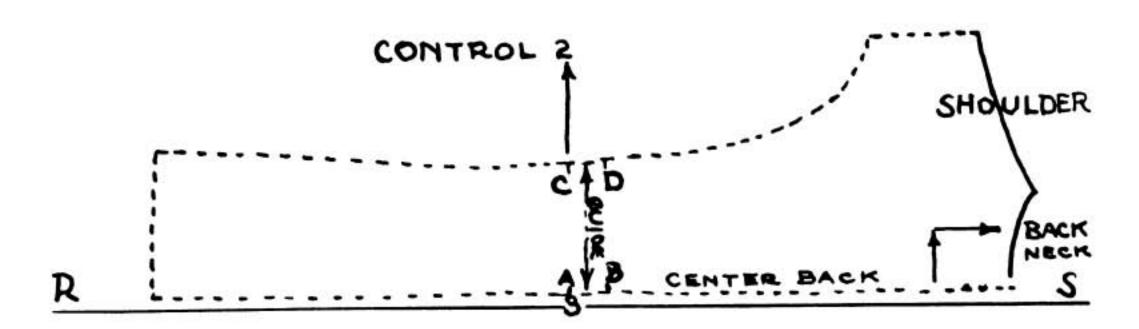
The diagram of the collated front and back parts of the French cut four-gored pattern shows graphically how the guide lines are carried through from center front and center back to and upon the side gores.

The one-eighth inch points are marked on either side of the guides at the front and back. The gores show only the points one-eighth inch above the guides, denoting that only a drop of the waist occurs in the gores. The entire shoulder rise is at the front and back panels. The increases in width will be at the mid-front (one-sixteenth inch); at the gore arm curve (two-sixteenths inch); and at the underarm and side seam (three-sixteenths inch). Action at the back will be the same.



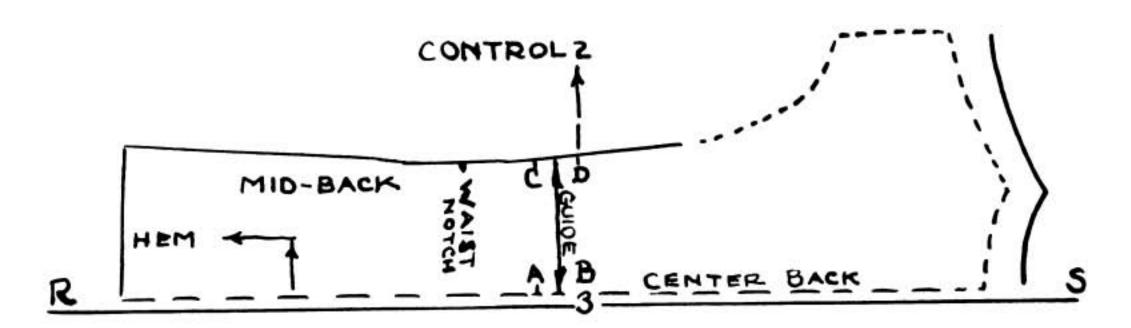
PART ONE

Draw line R-S and draw control 2 perpendicular to it at point 1. Measure up from point 1 to point 3 the amount of the dart move and measure from point 1 to point 4 the amount of the cross back grade for the armhole outline.



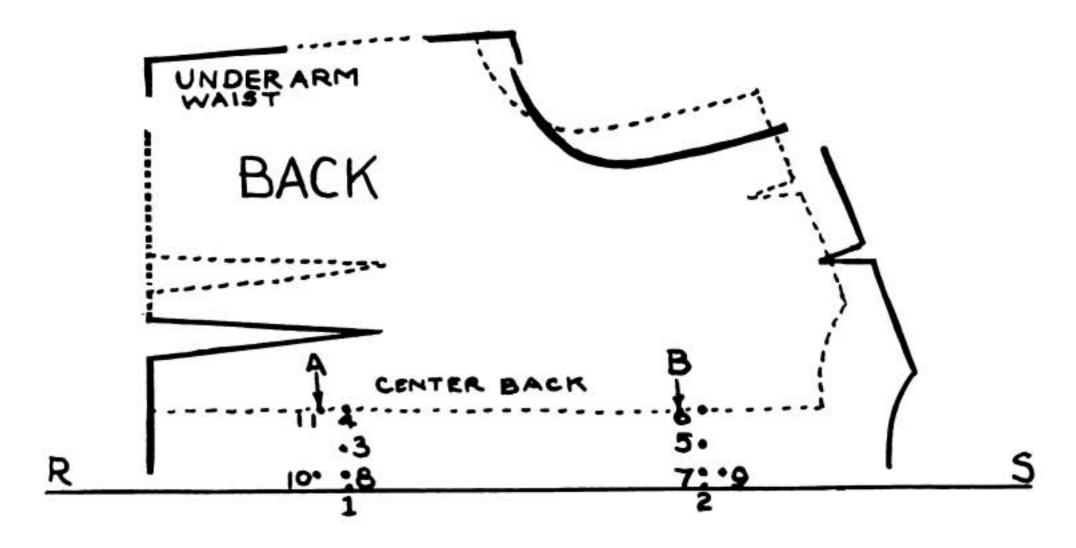
PART TWO

Place the center back so that point A is on point 3 and point C lies on control 2. Mark out the back neck and the shoulder, thus raising them 1/8 inch above normal.



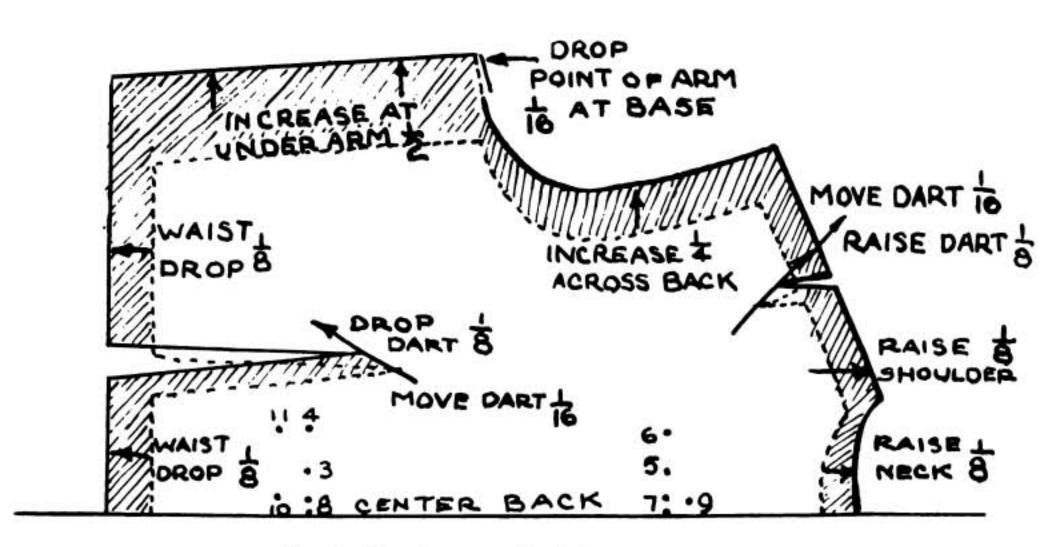
PART THREE

Move the pattern to the left with center back point B on grade point 3 and point D is on control 2. Mark out the hem, the mid-back and the waist notch (halfway up -- toward the outside of the curve), as indicated.



Back Grade -- Seven

Place center back of the back pattern with point A on point 11 and aligned with points 4 and 6. Mark out the lower part of the underarm and part of the waist at that point. This drops the waist line by one-eighth inch at the underarm.

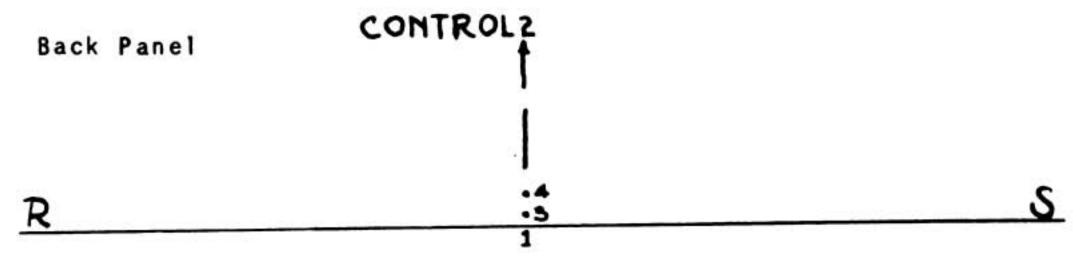


Back Grade -- Eight

Line R-S becomes center back of increased grade. As shown, the shoulder and neck raised one-eighth inch; the crossback increased one-quarter inch; the waist dropped one-eighth inch; the underarm increased one-half inch. The darts moved forward one-sixteenth inch, and moved with the shoulder and waist lines.

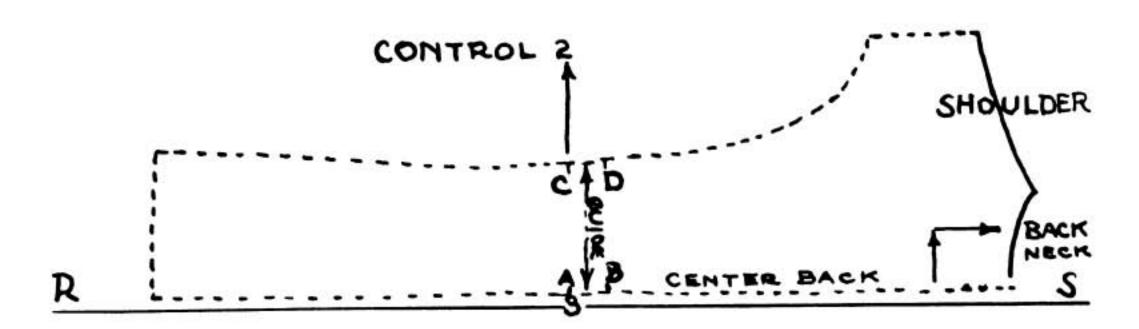
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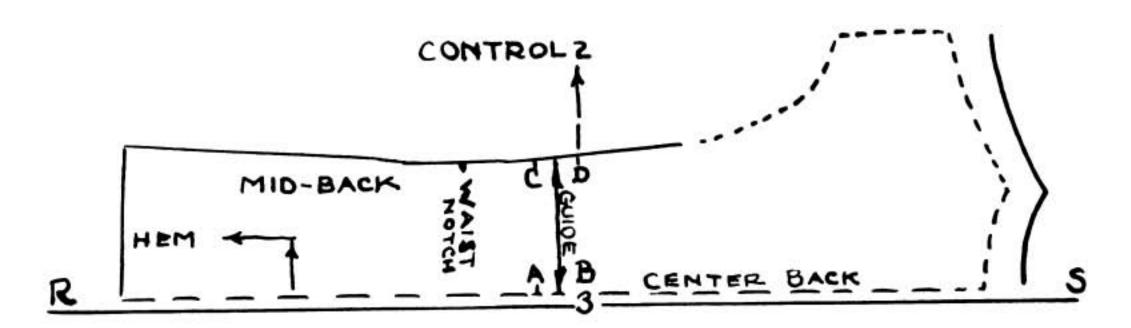
PART ONE

Draw line R-S and draw control 2 perpendicular to it at point 1. Measure up from point 1 to point 3 the amount of the dart move and measure from point 1 to point 4 the amount of the cross back grade for the armhole outline.



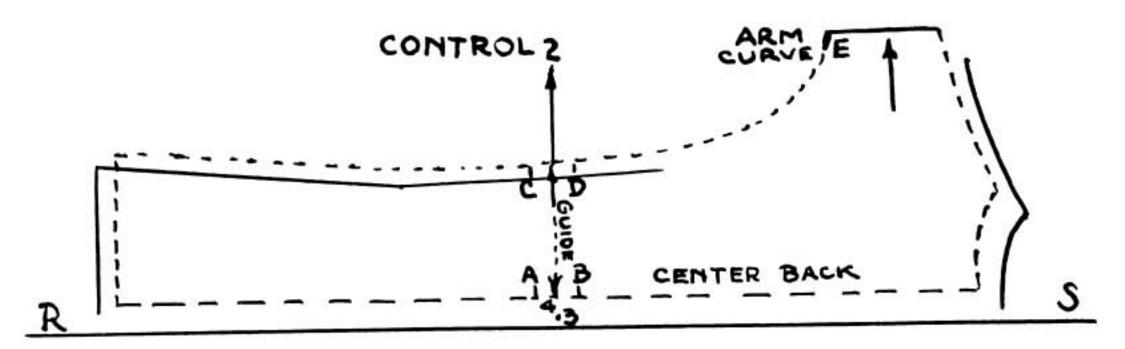
PART TWO

Place the center back so that point A is on point 3 and point C lies on control 2. Mark out the back neck and the shoulder, thus raising them 1/8 inch above normal.



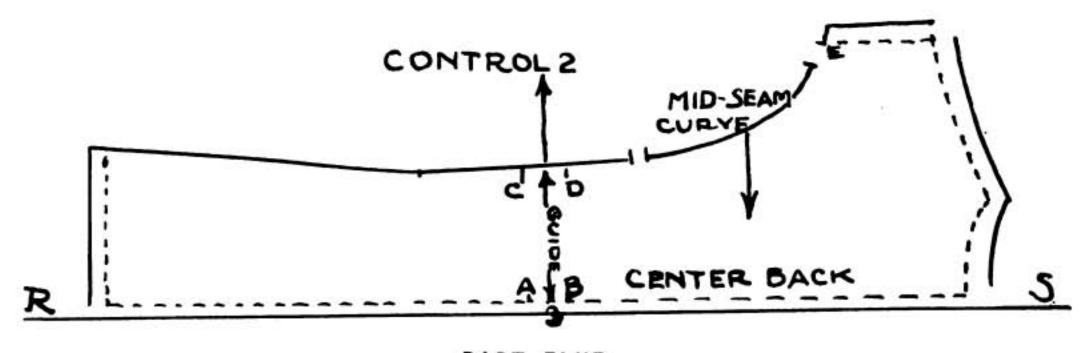
PART THREE

Move the pattern to the left with center back point B on grade point 3 and point D is on control 2. Mark out the hem, the mid-back and the waist notch (halfway up -- toward the outside of the curve), as indicated.



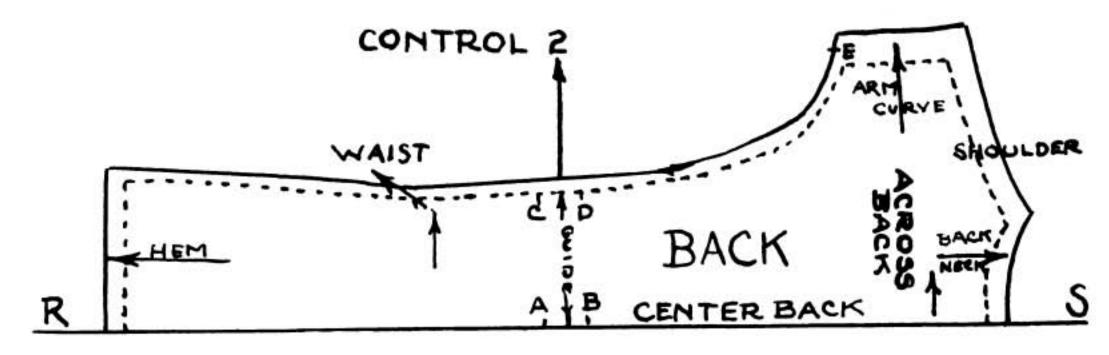
PART FOUR

Move the pattern forward so that the guide line on the pattern coincides with control 2, and the center back touches point 4 for the increase across the back. Mark out the arm curve with a little hook at point E.



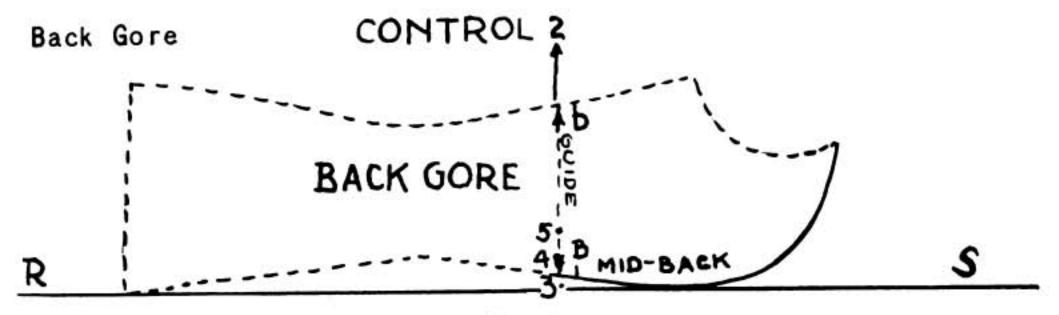
PART FIVE

Move the pattern so that the mid-back grade line and the pattern mid-back coincide and so that point E of the pattern touches the hook at E (graded). Mark out the curve of the upper mid-back.



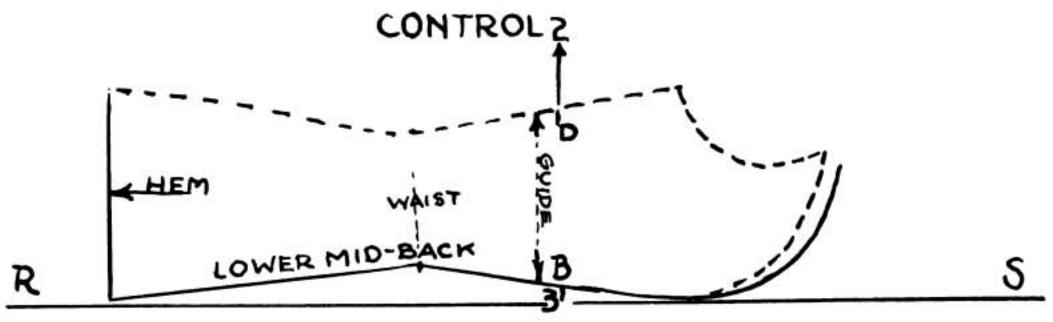
PART SIX

Note how evenly the curved line of the mid-back appears when the pattern and the grade are lined up at the center back.



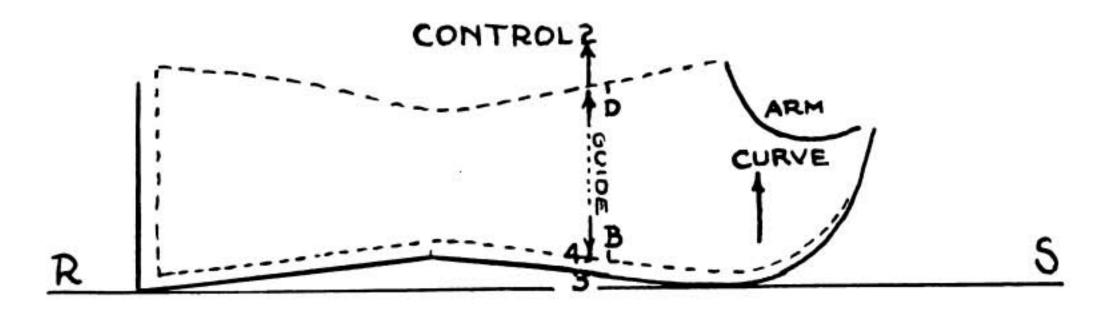
PART SEVEN

Draw a line (R-S) and draw control 2 perpendicular to it at point 3. Place the back gore along R-S with the pattern guide resting on control 2. Mark out the mid-back curve. From where this curve cuts control 2 measure to point 4. This is the balance of the back grade. Point 5 indicates the total back gore grade.



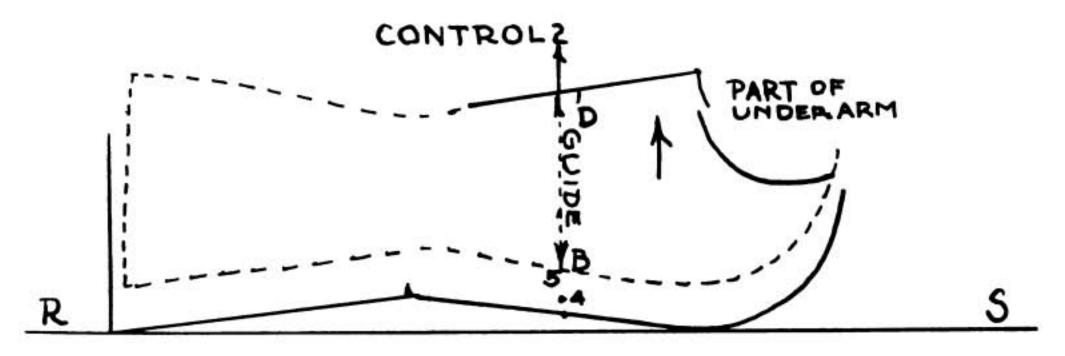
PART EIGHT

Move the pattern to the left with point B on point 3 and with point D on control 2. Mark out the hem and the lower half of the mid-back. This drops the waist 1/8 inch.



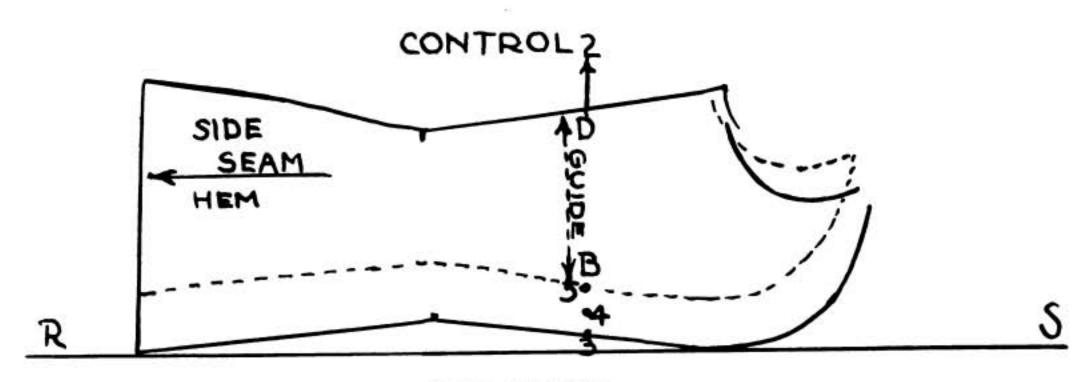
PART NINE

Move the pattern forward until the pattern guide rests on control 2 and until point B touches point 4. Mark out the arm curve for the balance of the cross-back increase.



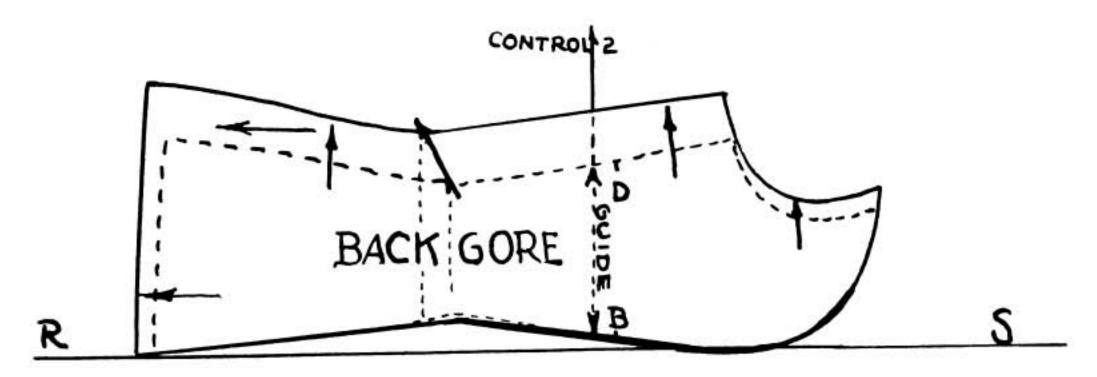
PART TEN

Move the pattern forward with the pattern guide on point 5 coinciding with control 2. Mark out the corner of the underarm and the side.



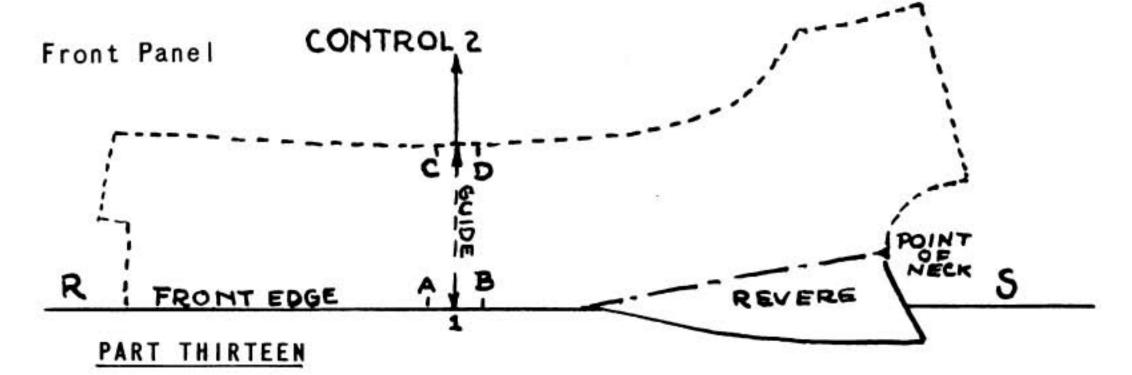
PART ELEVEN

While still on point 5, move the pattern to the left with point B on point 5 and point D on control 2. Mark out the waist, the side seam and the hem.

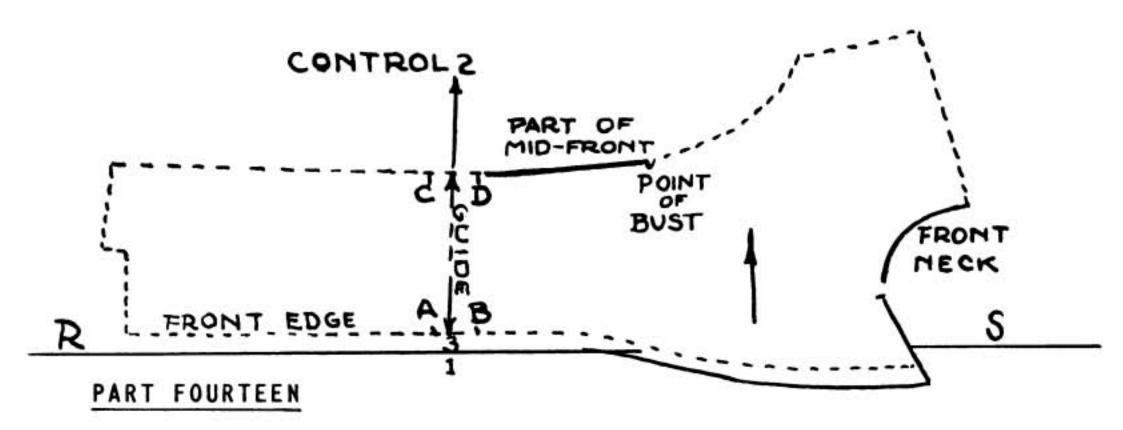


PART TWELVE

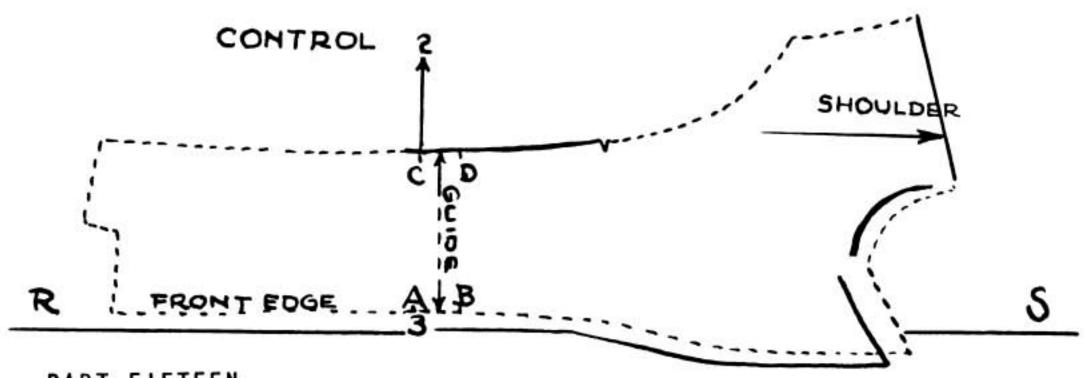
This shows how the back gore grade appears by superimposing the original pattern and the grade.



Mark line R-S, and at point 1 erect control 2. Outline the front edge and revere to the point of the neck, as indicated.

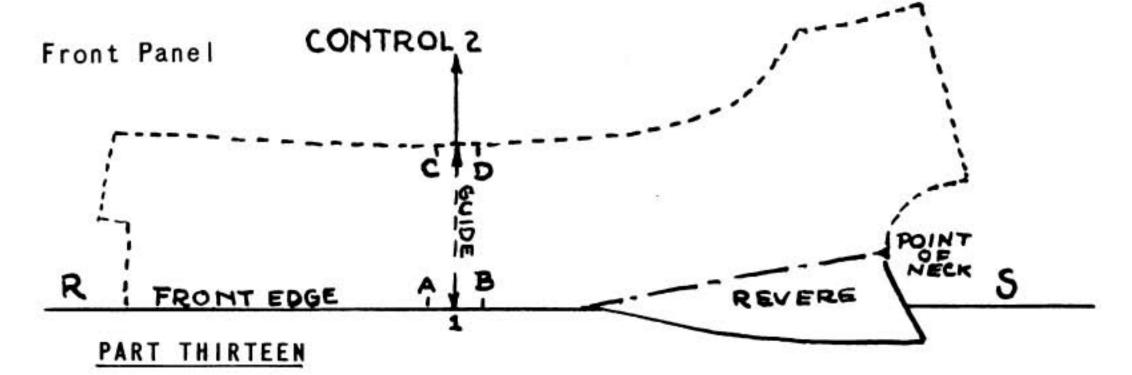


Move the front pattern forward with the guide on point 3, and coinciding with control 2. Mark out part of the mid-front to the bust notch and, also, the front neck.

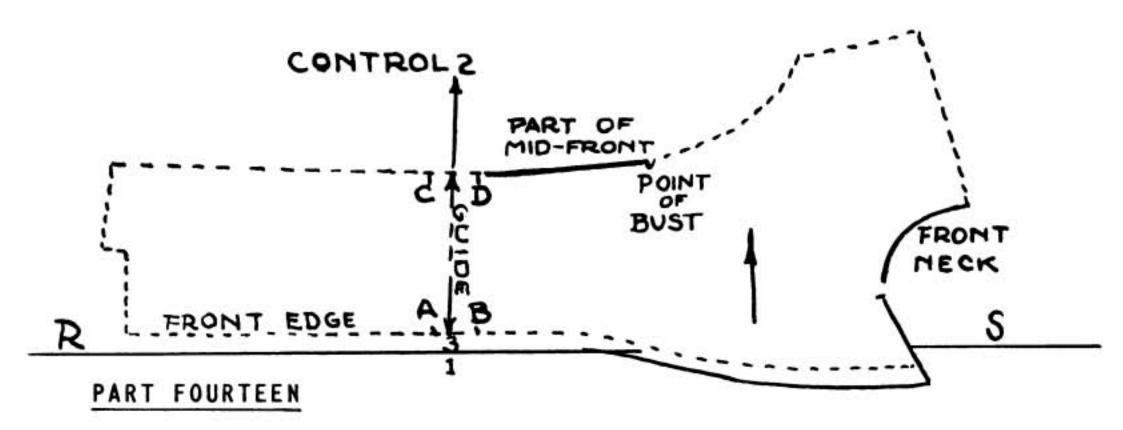


PART FIFTEEN

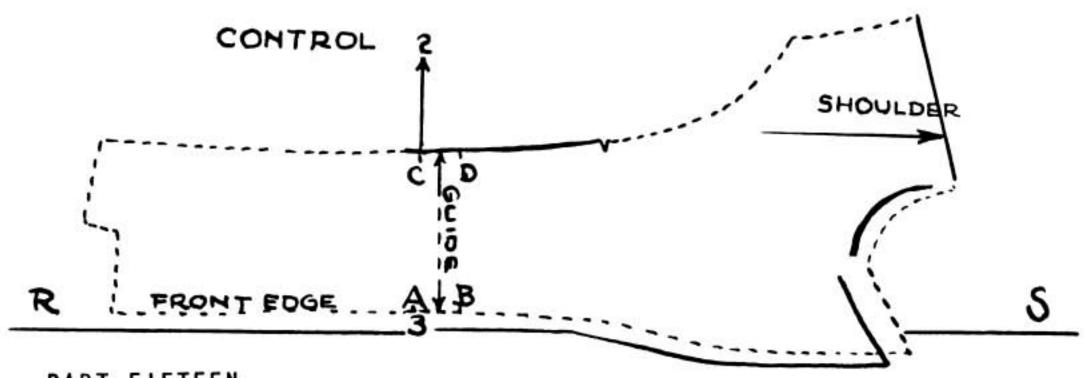
Move the pattern to the right to raise the shoulder 1/8 inch, until point A of the guide is on point 3, and point C coincides with control 2. Mark out the shoulder line.



Mark line R-S, and at point 1 erect control 2. Outline the front edge and revere to the point of the neck, as indicated.

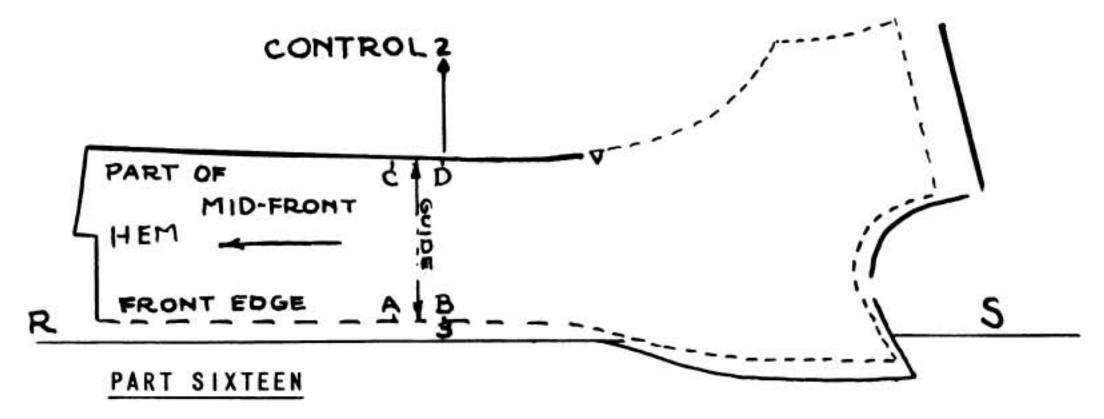


Move the front pattern forward with the guide on point 3, and coinciding with control 2. Mark out part of the mid-front to the bust notch and, also, the front neck.

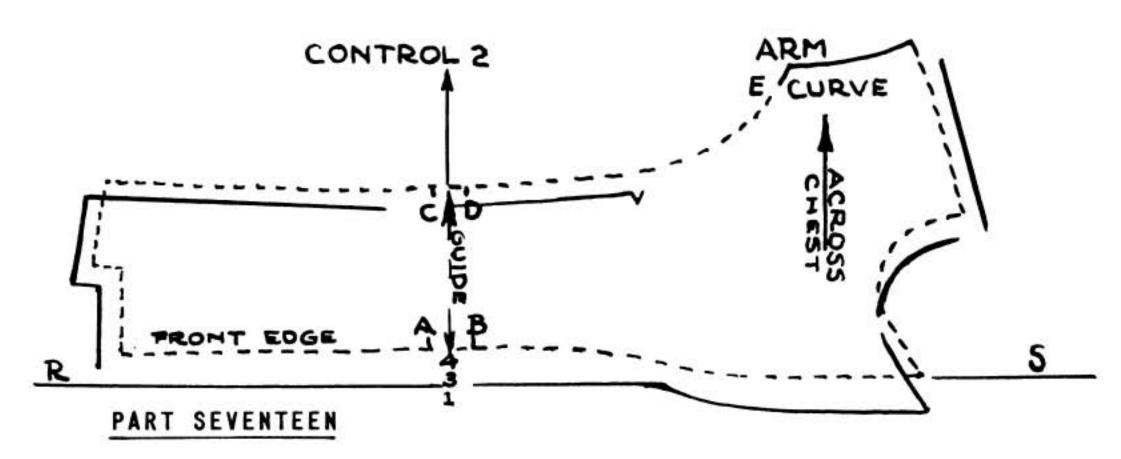


PART FIFTEEN

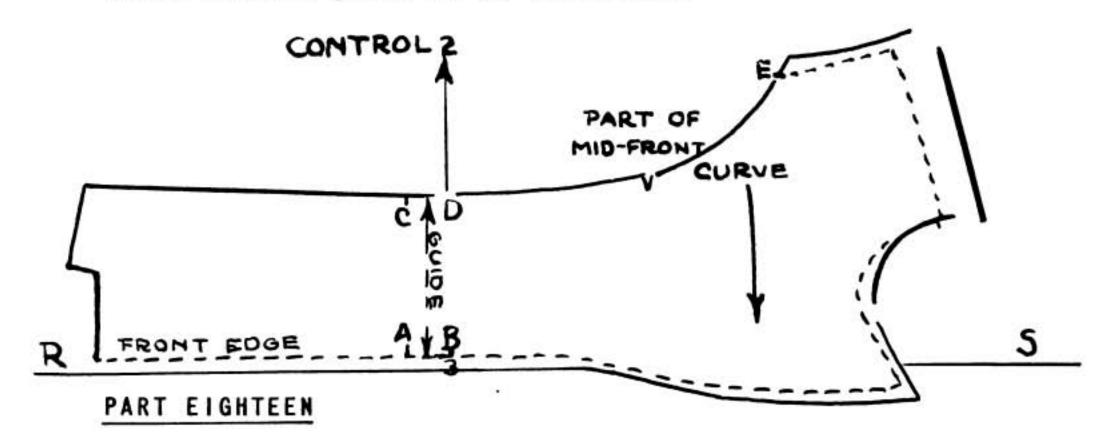
Move the pattern to the right to raise the shoulder 1/8 inch, until point A of the guide is on point 3, and point C coincides with control 2. Mark out the shoulder line.



Move the pattern to the left to drop the waist line, until point B of the guide is on point 3 and point D is on control 2. Mark out the lower part of the mid-front, the waist and the hem.



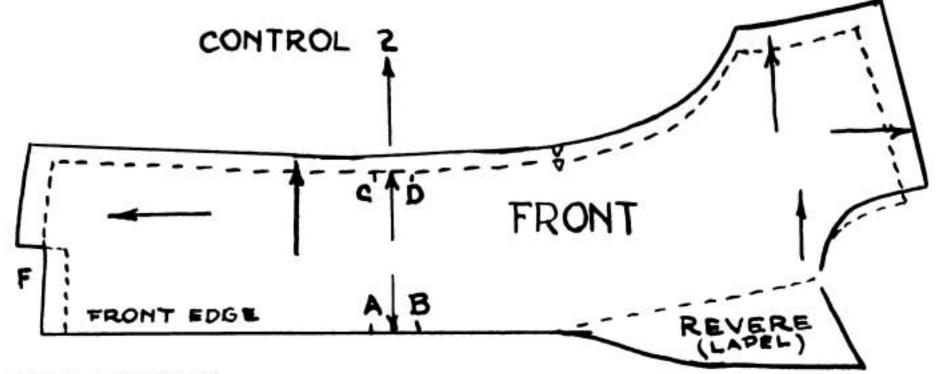
Move the pattern forward the amount of the cross chest grade with the pattern guide (front edge) on point A and coinciding with control 2. Mark out the arm curve and a small hook at point E, as indicated.



Place the pattern on the grade so that the mid-fronts coincide and move it until corner E of the pattern touches E of the grade. Draw the curve, as indicated.

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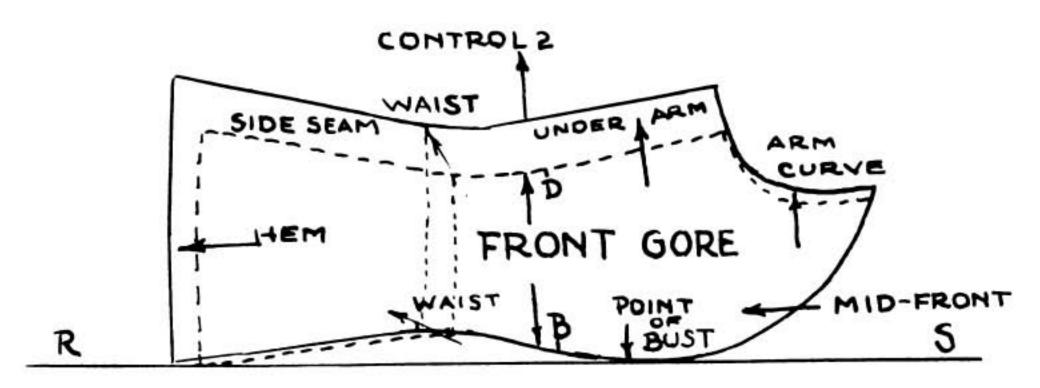
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PART NINETEEN

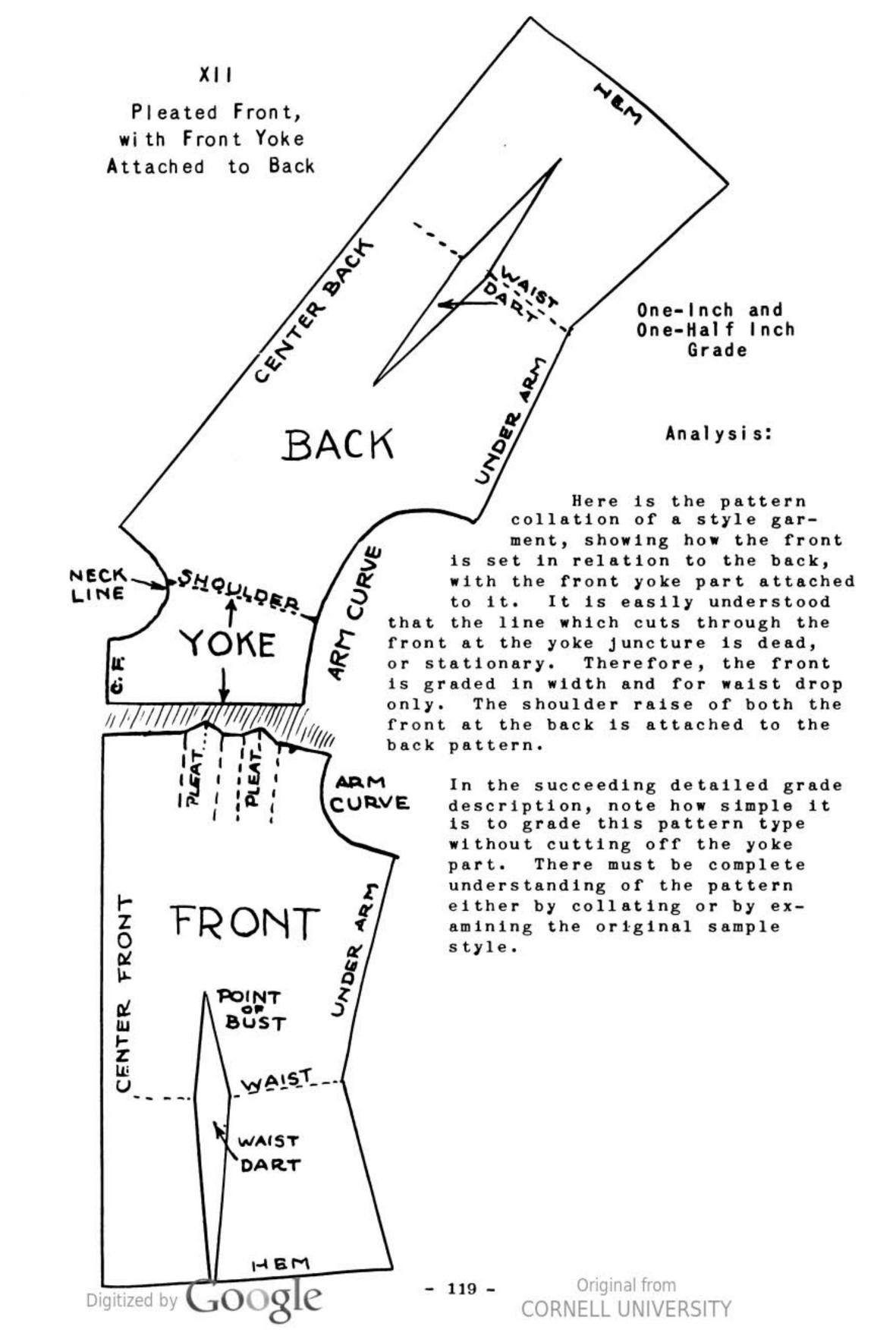
In this completed grade of the front note the result as it compares with the original pattern -- allowing for the proper increases at the desired points of the mid-front and the arm curve.

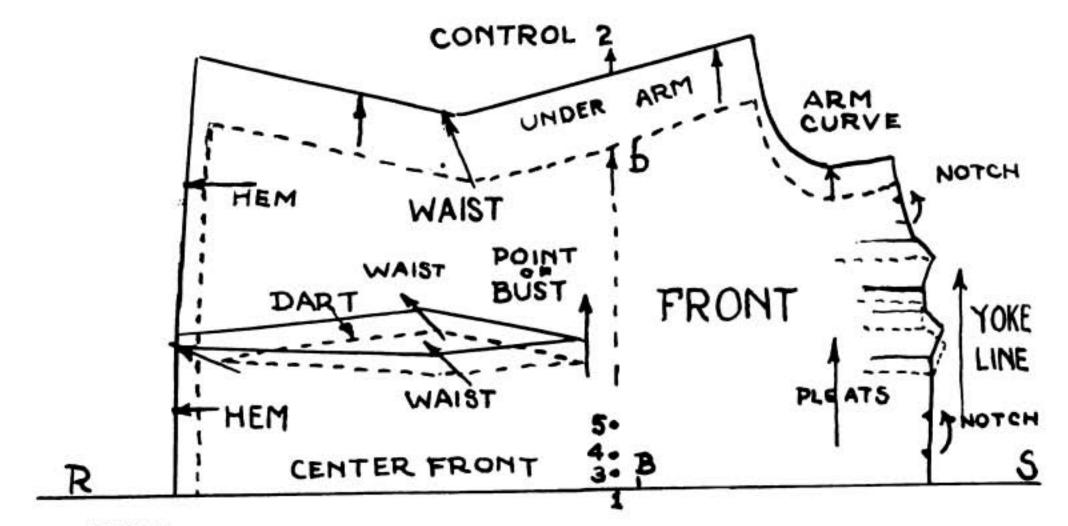
Front Gore



PART TWENTY

The front gore grade is carried out in a like manner as the back gore grade. Note that the point of the bust remains stationary. There is no raise -- only a waist drop and an increase in width at the arm curve and at the side. Note also that the balance of the entire front grade is in this section of the front.

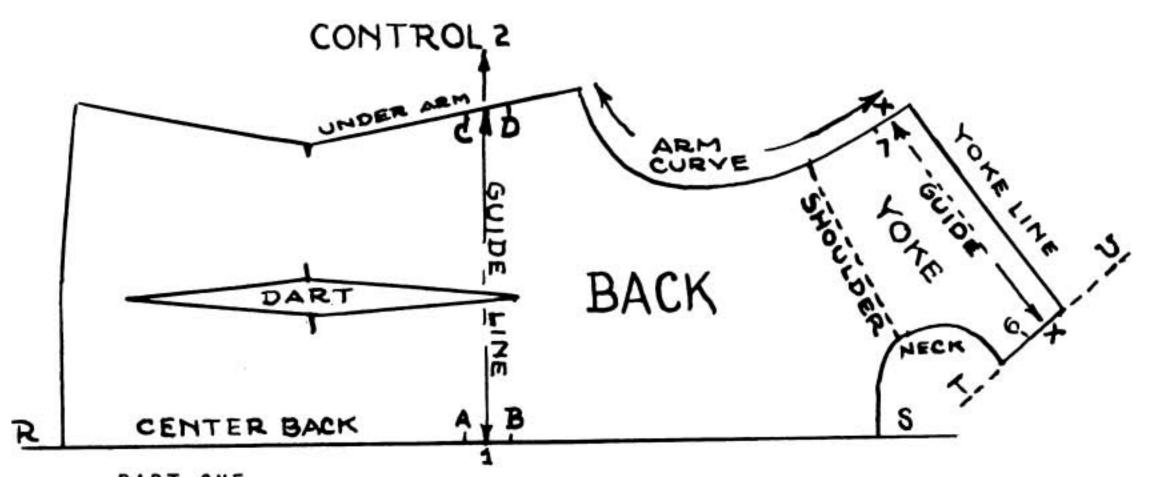




FRONT

The finished front grade, diagrammed above, clearly shows the various increases -- and how and where they were made. It also shows yoke line (which is constant) with the entire grade completed -- down for the waist drop, and out for the increase across the chest and the total width at the side.

Back and Yoke Attached

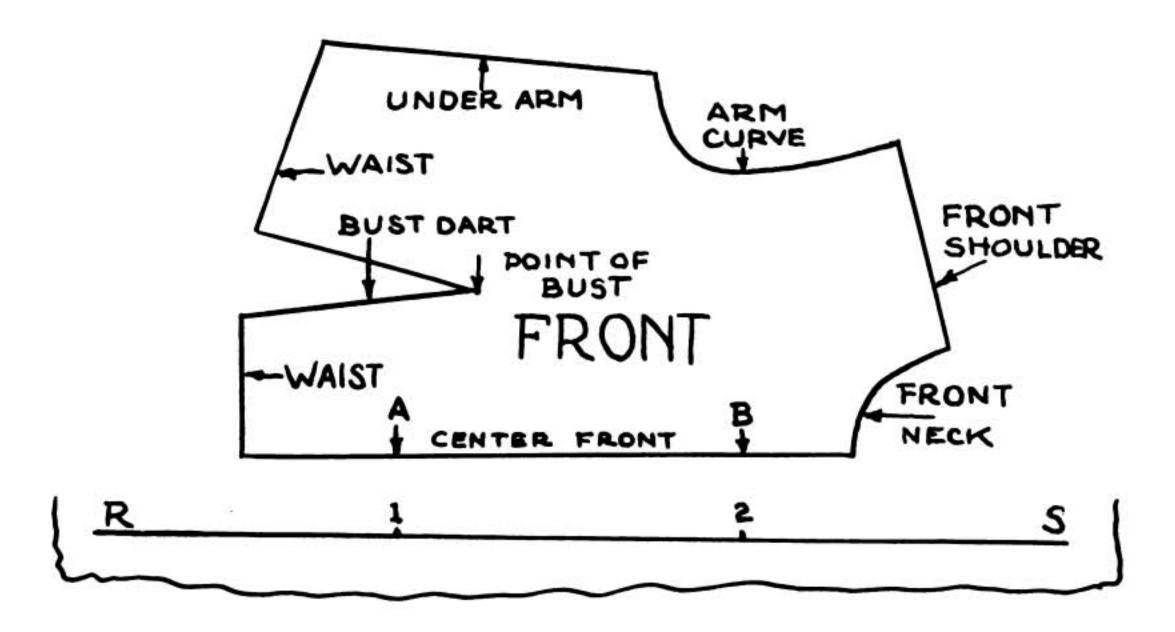


PART ONE

Mark out line R-S, so that it coincides with the center back. Transfer the guide to point 1 and control 2. Set up A-B and C-D on either side of the guide for the raise of the shoulder and for the waist drop. Draw a guide line (X-X) through the yoke to line T-U. Line T-U is part of the center front. Points 6 and 7 are above the guide for the shoulder raise.

The front pattern is graded in the same manner as the back. Grade in all ways the shoulder arm curve for cross chest increase, and the underarm and waist, with the following exceptions:

The point of the front neck at the center front remains on a line perpendicular to it. The point of the bust also remains on a straight line perpendicular to the front edge. The darts (instead of moving up and down with the shoulder raise or waist drop) just move out a sixteenth inch and elongate one-eighth inch.



On line R-S, or paper edge, place the front edge of the front pattern. Transfer points A and B on this line as noted points 1 and 2.

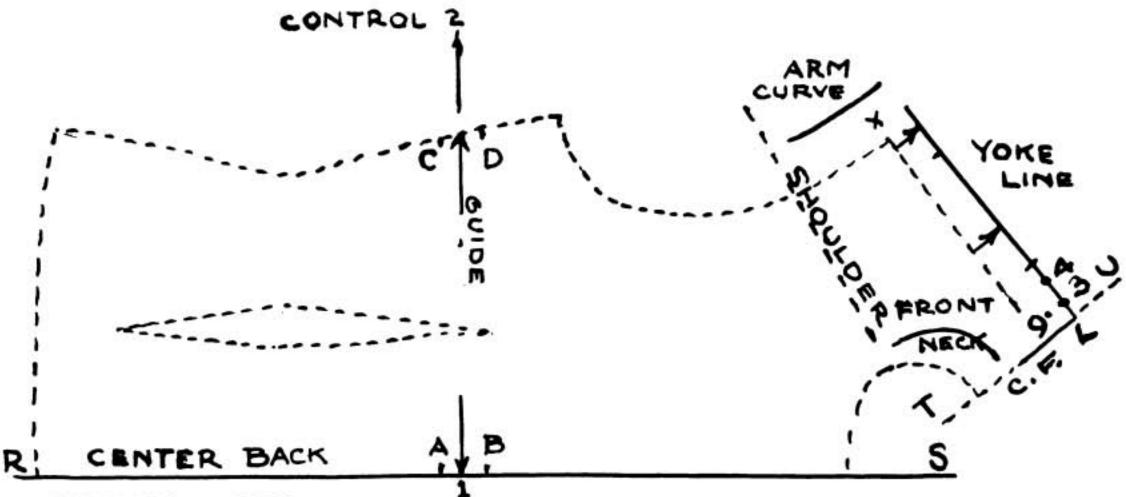
	117.4	6.	
_	•3	5 •	22
R	10 : 8	7::9	<u>S</u>

At point 2 on line R-S, draw aperpendicular line upon which measure 2 to 5, one-quarter inch; 5 to 6, one-quarter inch; 2 to 7, one-sixteenth inch. Point 9 is one-eighth inch to the right of point 7.

At point 1, draw a line perpendicular to R-S. 1 to 3 is one-quarter inch; 3 to 4 is one-quarter inch; 1 to 8 is one-sixteenth inch. Point 10 is one-eighth inch to the left of point 8, and point 11 is one-eighth inch to the left of point 4.

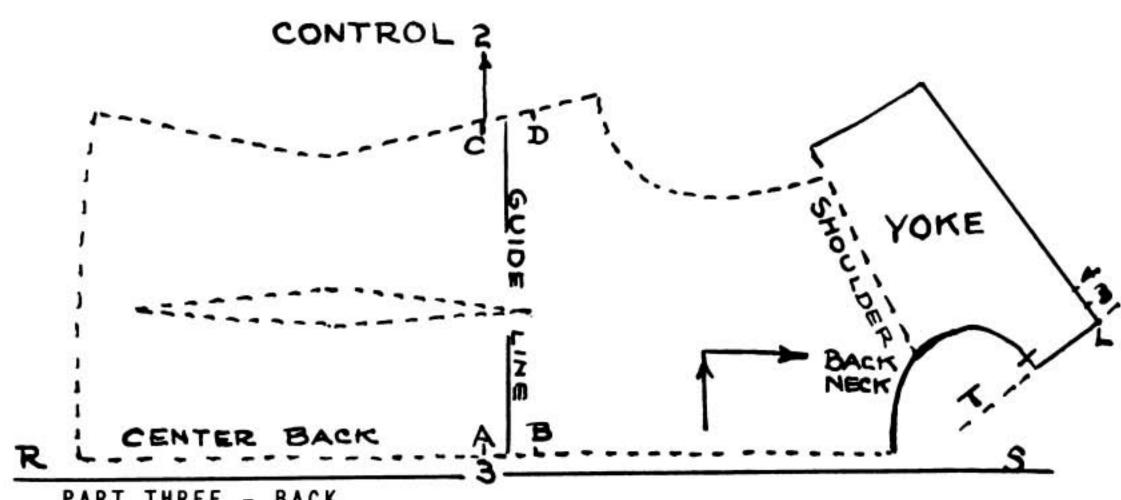
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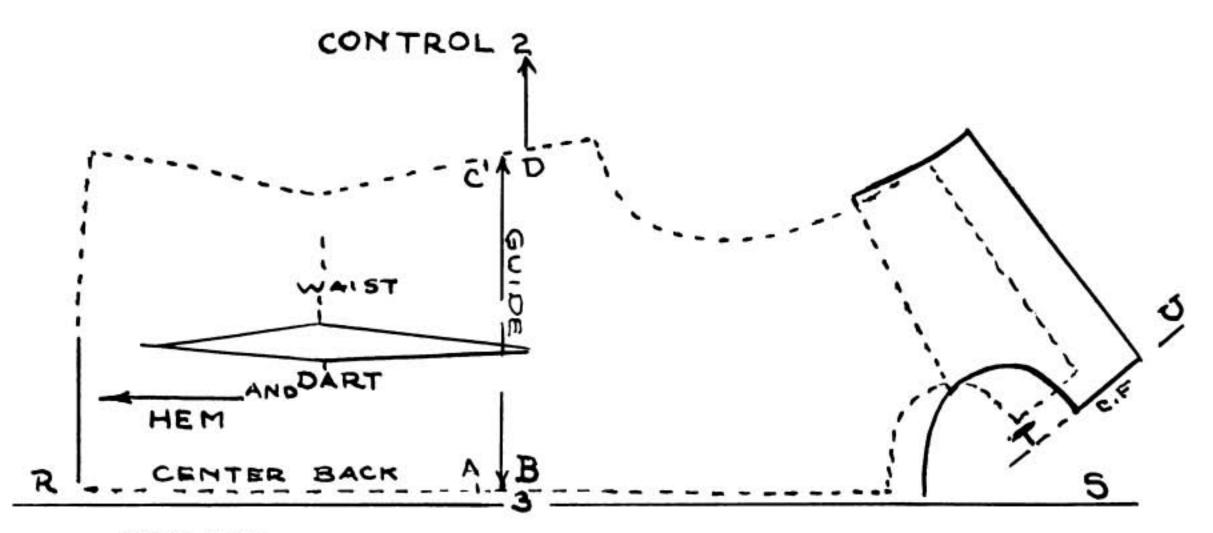
PART TWO - YOKE

Move the yoke part (center front) along line T-U 1/4-inch (double the shoulder raise). Draw the entire yoke line, and move the pattern along this line 1/16-inch for the front neck increase. Mark out the front neck and continue out to the amount of the cross chest grade. Mark out the arm curve, as indicated.



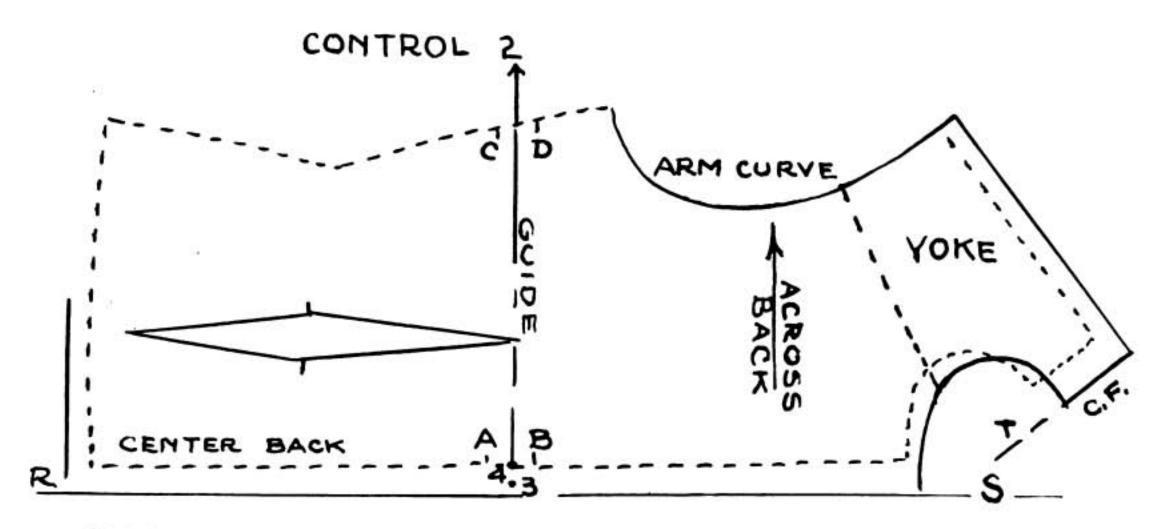
PART THREE - BACK

Move the back part of the pattern forward with center back point A on point 3 and point C on control 2. Mark out the back neck. Complete the neck grade to join into the front neck of the yoke.



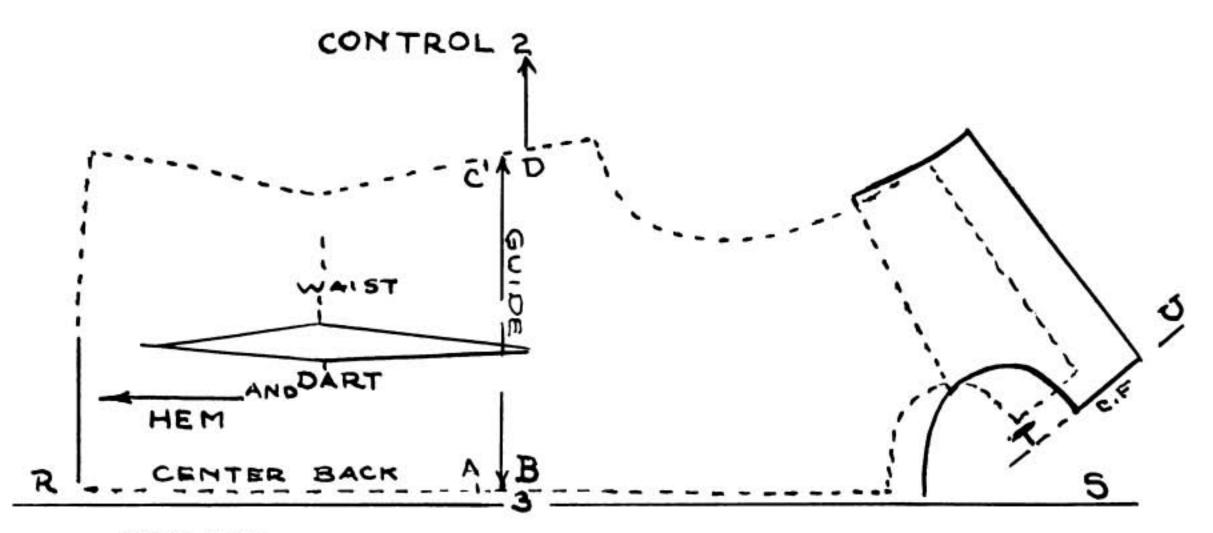
PART FOUR

With center back point B on point 3 and point D on control 2, mark out the hem and the entire dart. This drops the waistline, as desired.



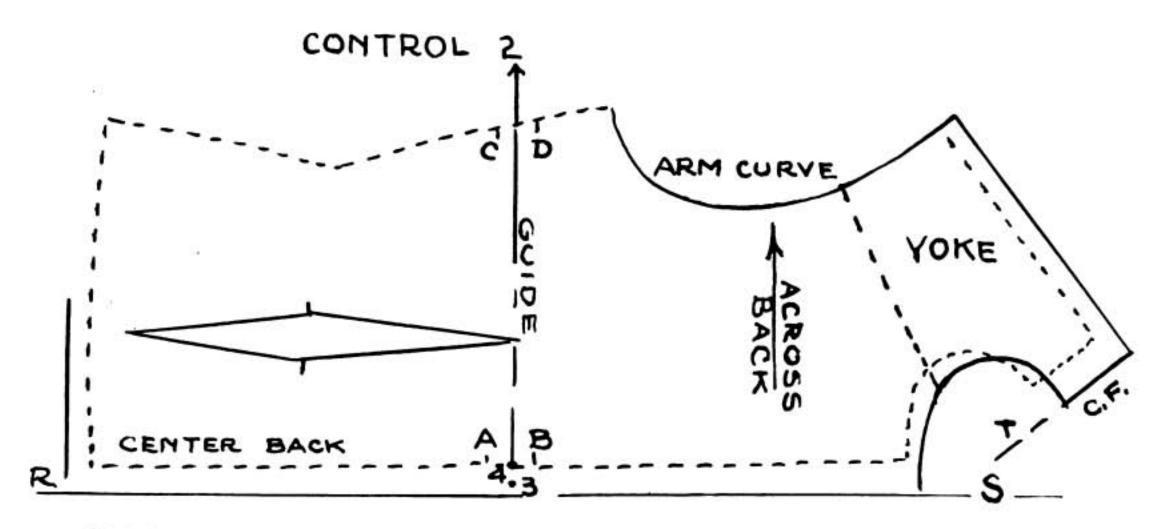
PART FIVE

With the center back guide on point 4, and coinciding with control 2, mark out the arm curve. This is the cross back grade, as desired. Note how it joins into the arm curve of the front yoke arm curve.



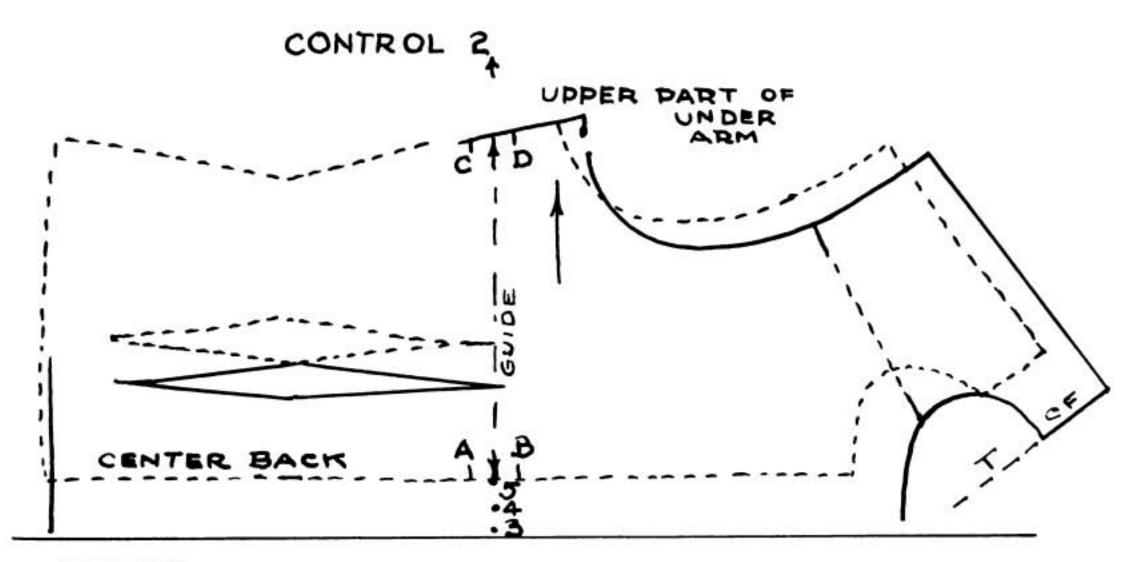
PART FOUR

With center back point B on point 3 and point D on control 2, mark out the hem and the entire dart. This drops the waistline, as desired.



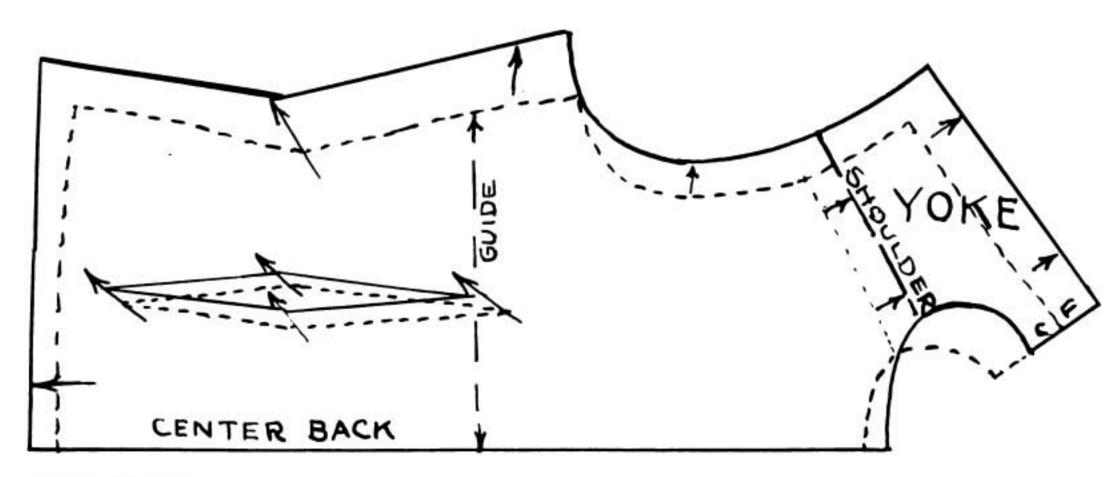
PART FIVE

With the center back guide on point 4, and coinciding with control 2, mark out the arm curve. This is the cross back grade, as desired. Note how it joins into the arm curve of the front yoke arm curve.



PART SIX

Move the pattern forward with the center back guide on point 5, and coinciding with control 2, for the total increase at the underarm. Mark out the upper part of the side, and the arm curve corner. Move the pattern to the left so that point B is on point 5 and point D is on control 2. Mark out the lower side waist, and the hem.



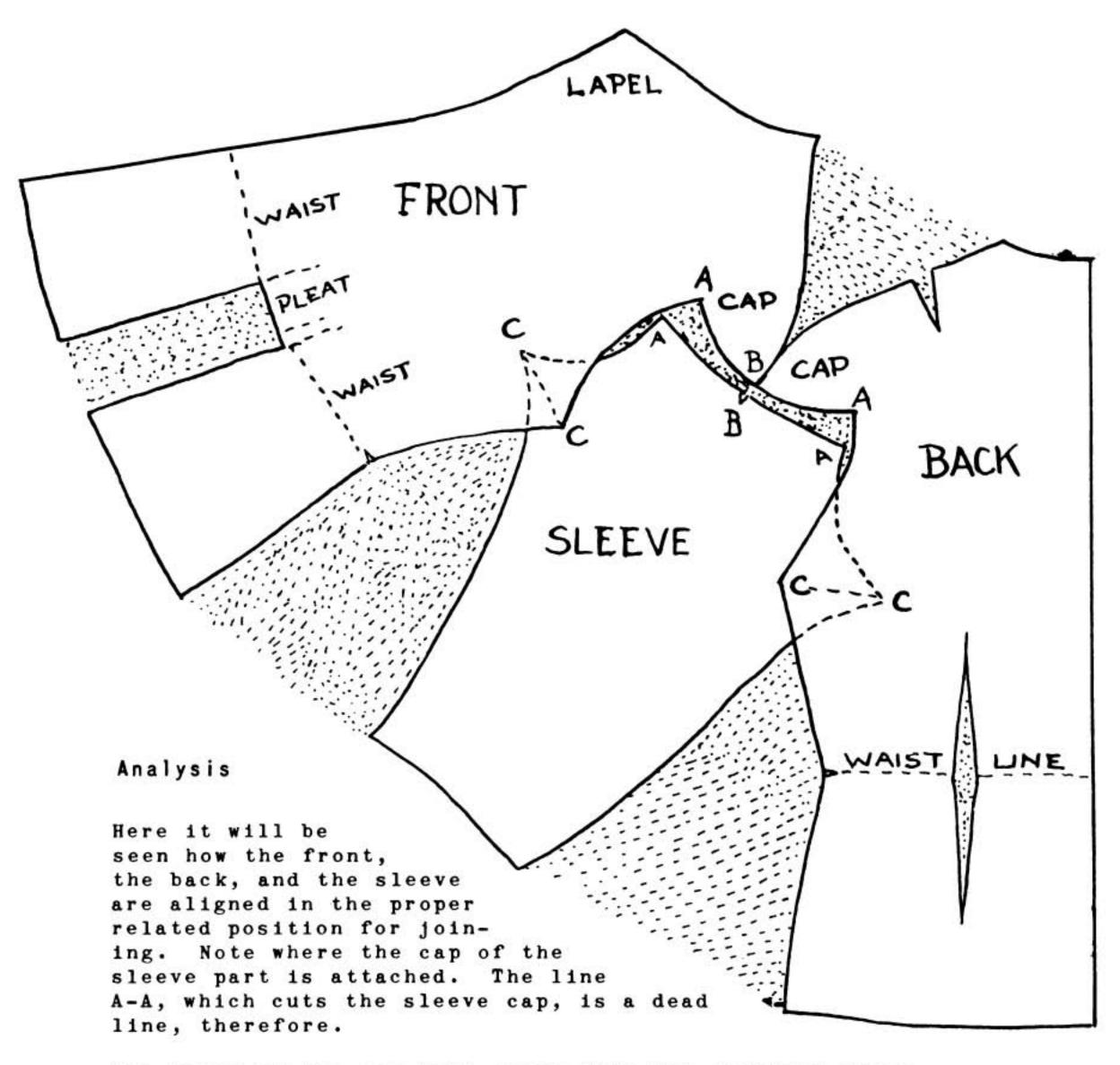
PART SEVEN

By placing the patterns one upon the other, so that the center backs coincide and so that the guides are equal, it will be noted how the various increases have been carried out. Compare the neck grade increases, and, by setting the graded lower part of the front so that it matches the yoke, check for the full grade.

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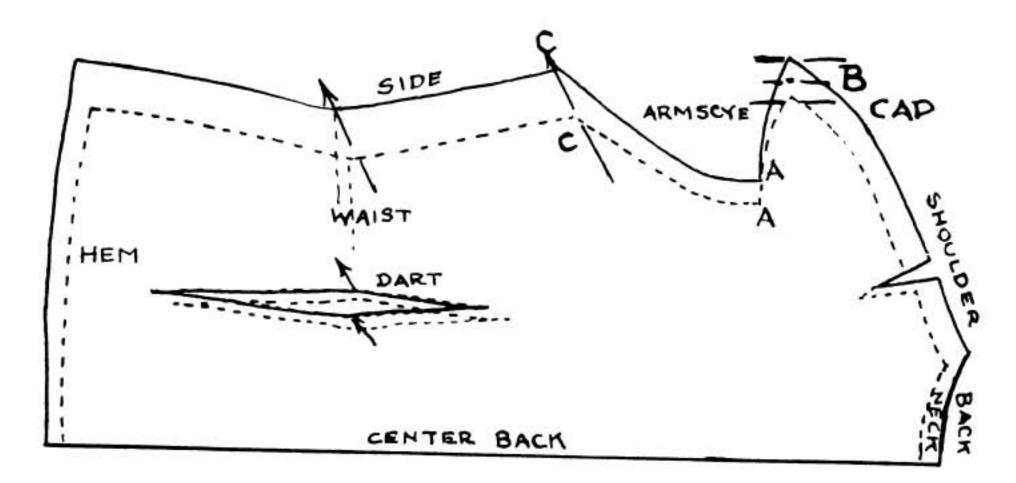
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Drop Shoulder, with Deep Armhole

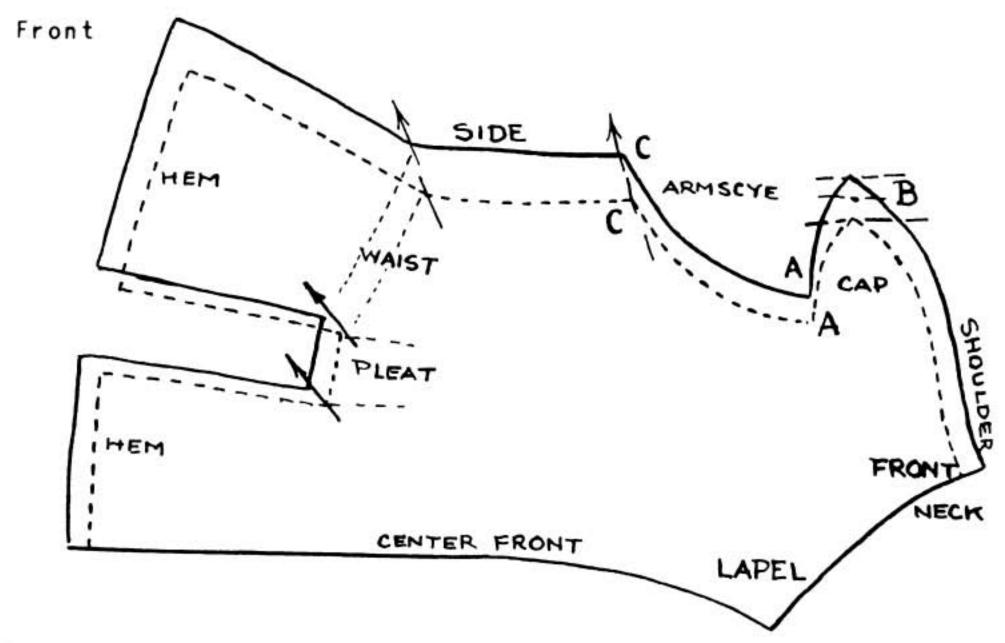


The raise of the cap will occur with the shoulder raise. Point B will have to move from point A (the body armscye) the 1/8-inch increase in width on either side for the front and the back to allow for the sleeve width (A-B-A).

The front lapel is treated so that it will continue without any change. The dropped armhole will also be treated in a special way in order to carry the style line drop.

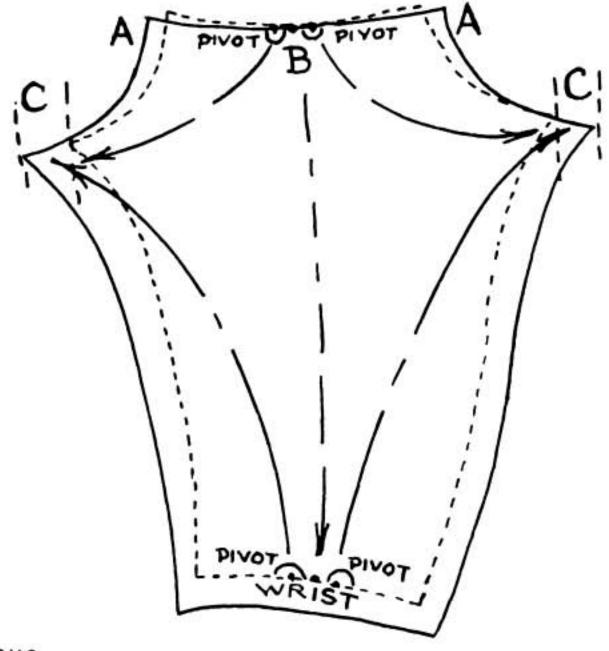


The back is graded in the normal, basic way as to the back neck, the shoulder, and the darts, until armscye point A is reached. Note, at point B, the end of the cap and the extra increase to allow for the sleeve increase in width. Note, also, how point C (at the side) drops an extra 1/8-inch to allow the bias-dropped armscye line to continue in the proper direction.



The movements of the front shoulder armscye and the cap are the same as were carried out in grading the back. The front neck V-shaped lapel is carried up to meet the increased shoulder raise. This automatically shortens the shoulder to coincide with the back shoulder grade.





Sleeve

The sleeve is graded in the normal way with one exception. Since the cap of the sleeve is attached to the body at the armscye, there will be no raise at point B -- the only increase is the 1/8-inch on either side of point B in the width.

At points C-C (the base of the sleeve) the increase is the normal amount allowed by the grade, plus the extra 1/8-inch drop of the armscye grade at the side front and at the side back. The grade procedure is the same as that of the regular method of increase, using the four pivot points designated.

Variations in the Neck Grade

Analysis

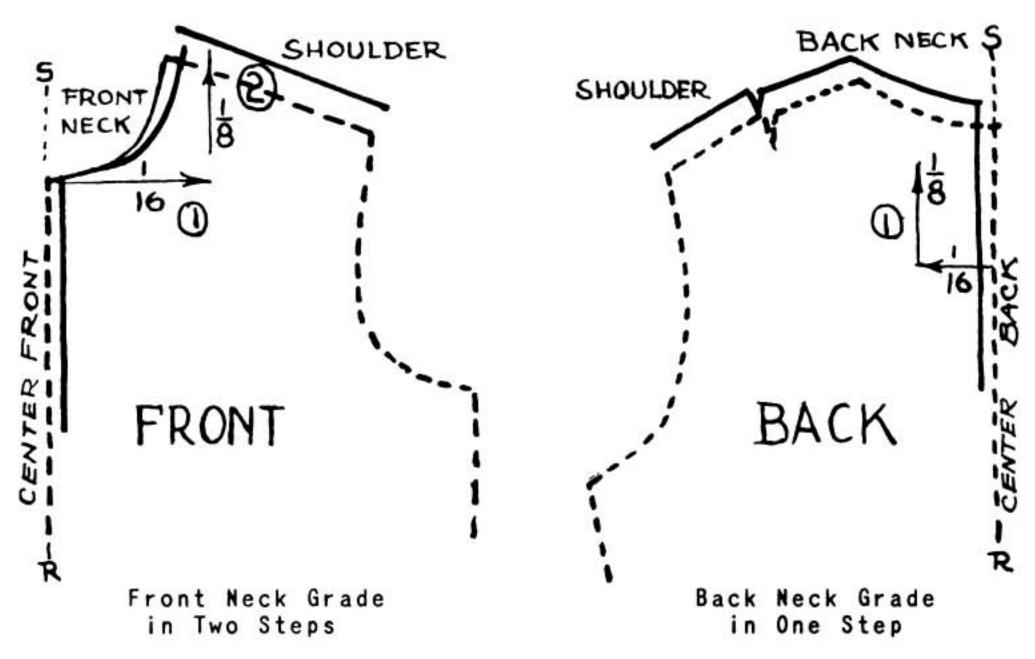
There are many variations employed by the trade in grading the front and back necks of garments. This part of the garment is the most important; the entire appearance of the finished garment depends entirely upon how this is done. Most of the garments have a tendency to drop off and back from the neck and shoulders of the wearer and this fault is all in how the neck part of the pattern has been graded.

In Problems One, Two and Four the correct and properly balanced back neck grade are illustrated.

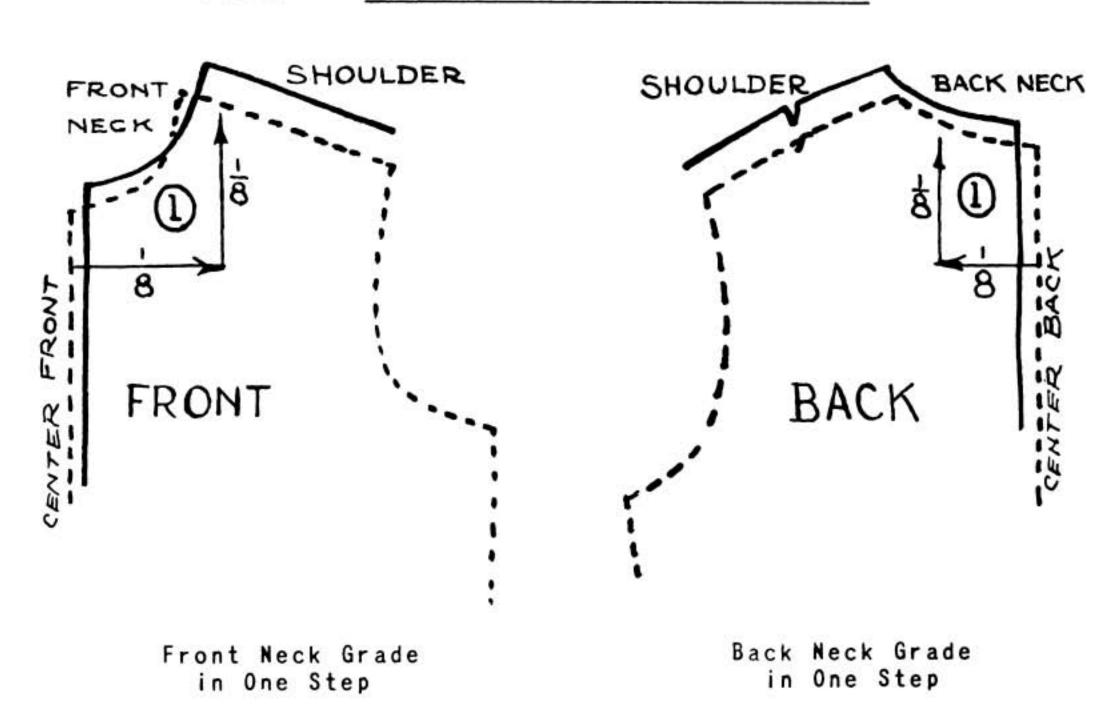
In Problem Three the back neck grade as diagrammed is the most prevalent, and causes (as the size grade increases) to form a distinct hollow at the center back. This causes that general pull at the back of the garment which makes the wearer drag the garment up in the neck continuously for more comfort.

Another fault is in elongating the back neck at the shoulder for the purpose of shortening the shoulder increase from size to size. This causes a gap to form at the side neck and does not shorten the shoulder.

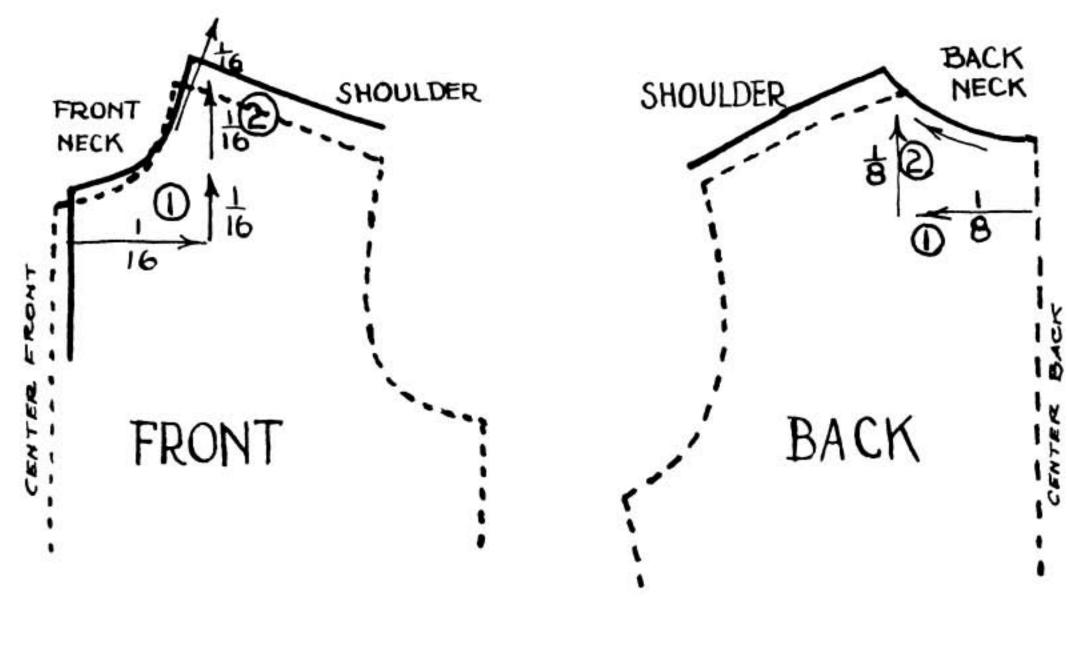
To shorten the shoulder, do not take it off in the neck grade; take it off where it is needed and realign the arm-curve from shoulder to the lower arm notch.



Prob. I - Total Neck Grade: One-Half Inch



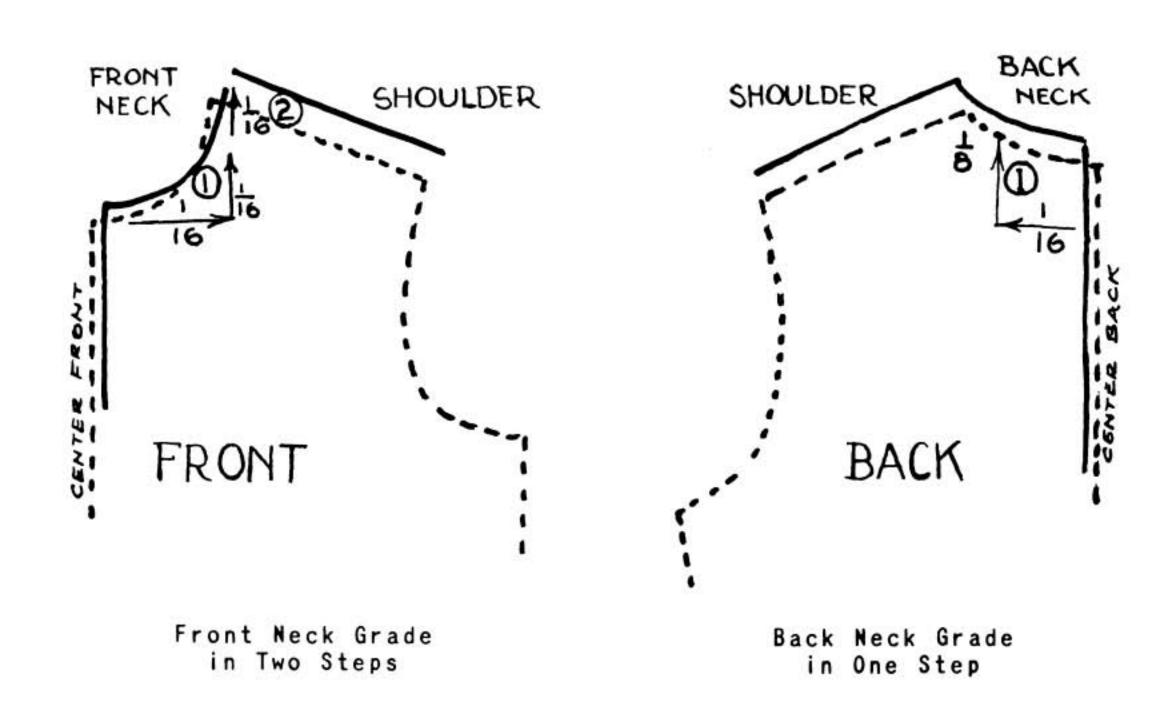
Prob. 2 - Total Neck Grade: One-Half Inch



Front Neck Grade in Two Steps

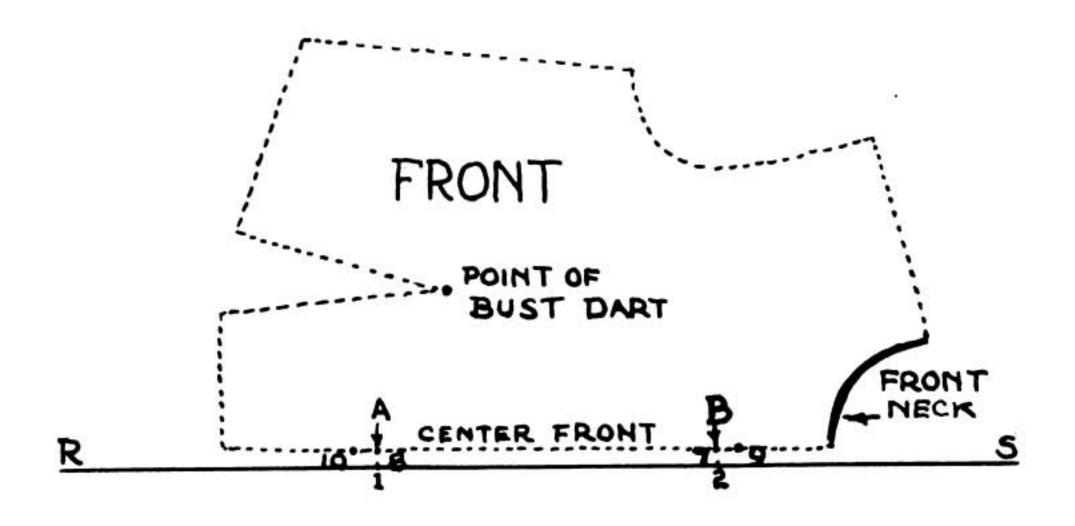
Back Neck Grade in Two Steps

Prob. 3 - Total Neck Grade: One-Half Inch



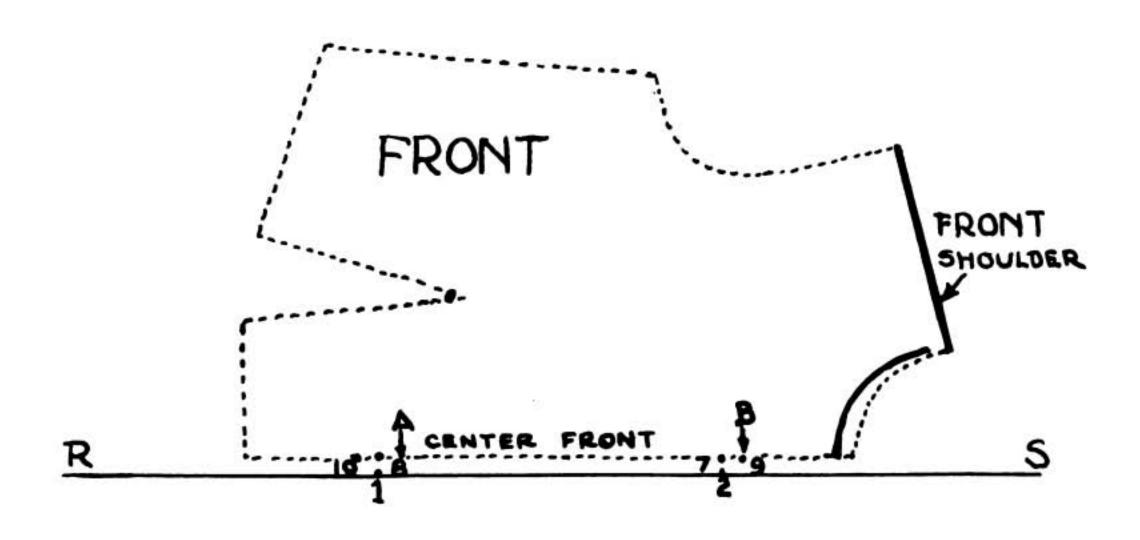
Prob. 4 - Total Neck Grade: Three-Eighths Inch

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Front Grade -- Two

Place center front of front pattern with point A of the pattern on point 8, and point B of the pattern on point 7. This is one-sixteenth inch from line R-S. Mark off neck and point of bust dart.



Front Grade -- Three

Place center front of front pattern with point B of the pattern upon point 9, and with the center front edge touching points 7, 8, and 10. This raises the shoulder one-eighth inch. Mark out front shoulder.

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XV. Children's Applied Measurements

Analysis

(1) Base of the neck is measured around the neck touching the cervical at the back and the collar-bone at the front.

Armscye is measured from a point at the armhole edge of the shoulder around and past the armpit and back to the shoulder.

- (2) Cross back width is measured across the back from armscye to armscye halfway between the cervical C and the bottom of the armscye.
- (3) Crown is the top of the head.

Cervical is the little bone at the base of the neck.

Waist is measured around the lower edge of the floating rib and hip joint.

Hip is the upper, bony part above the thigh.

Knee is the joint between hip and ankle.

- (4) Total crotch is measured from waist at the front, around through the crotch, to waist at back.
- (5) Verticle trunk is measured from a point on the shoulder down the front, through the crotch and back to the shoulder at the back.
- (6) $\frac{\text{Thigh}}{\text{close}}$ is measured around the upper part of the leg

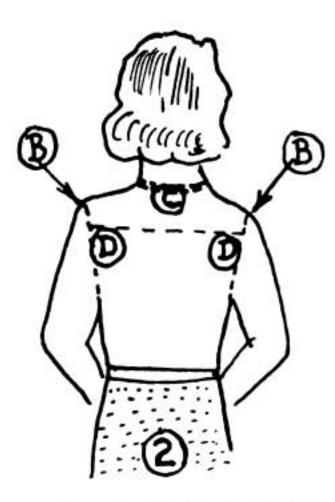
Outside sleeve is measured from the shoulder end, along the outside arm, over the elbow to the wrist bone.



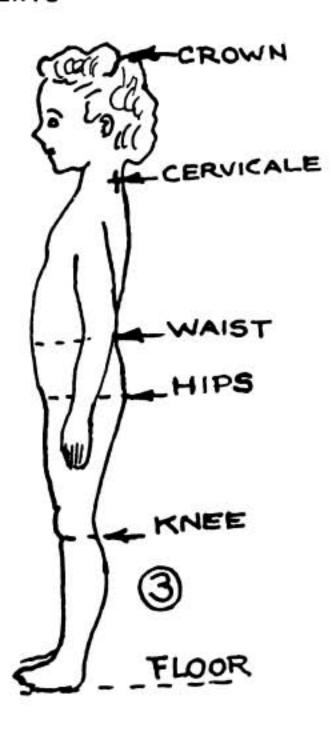
CHILDREN'S APPLIED MEASUREMENTS



A = Around Base of Neck B = Around Armscye



C = Back Base of Neck B-B = Armscye D-D = Cross Back



TOTAL CROTCH E-FE=Waist Crotch Waist



VERTICLE TRUNK
M-F-M = Shoulder
Crotch Shoulder



L-N=Outside Sleeve Arm Length H-F-H=Around the Thigh

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SIZE		HEIGHT IN INCHES		AROUND CHEST	AROUND WAIST	AROUND HIPS	BASE OF NECK	AROUND ARMSCYE	CERVICALE TO WAIST	WAIST TO HIPS	WAIST TO KNEE	TO FLOOR	_	OUTSIDE SLEEVE	In COAT LENGTH	Center DRESS LENGTH	Back SKIRT LENGTH	WAIST TO CROTCH	SLACK LENGTH	VERTICLE TRUNK	

CHART SIZES 7-14

SIZE	SIZE	t	ω	to	o	t	2	ţ	2	to	7
AROUND CHEST	56	-	;	-	;	-		1 1/2	!	1 1/2	: ;
AROUND WAIST	23	1/2	1	1/2	1	1/2	1	_	1	_	1
AROUND HIPS	27 1/2	-	1	-	1	1 1/2	1	2	1	2	1
BASE OF NECK	11 7/8	3/8	1	3/8	1	3/8	1	1/2	1	1/2	:
AROUND ARMSCYE	11 1/2	1/2	1	1/2	1	1/2	;	1√8	1	3/4	:
CERVICALE TO WAIST	11 1/8	3/8	1	3/8	1	3/8	1	2/8	1	5/8	ł
WAIST TO HIPS	9	₹/1	:	₹/-	;	₹/1	!	₹/1	1	3/8	1
WAIST TO KNEE	17 1/2	8/2		8//	;	8/2	1	_	1	1/8	1
ACROSS BACK	10 5/8	3/8	;	3/8	1	3/8	1	1/2	1	1/2	1
OUTSIDE SLEEVE	16 1/2	-	1	-	1	_	1	₹/	1	₹/	1
COAT LENGTH	26 1/2	2	:	1 1/2	1	1 1/2	1	8	;	2	1
DRESS LENGTH	26	2	1	1 1/2	;	1 1/2	1	m	1	2	1
WAIST TO CROTCH Including Belt	π/I I/π	1/2	;	1/5	ŀ	1/2	1	1/2	1	1 1/2	1
SLACK LENGTH Including Belt	31	1 1/2		1/12	1	1 1/2	1	1 1/2	1	1 1/2	
VERTICLE TRUNK	45 1/2	1 1/2	-:-	2		2	1	1 1/2	1	2 1/2	1

Courtesy of National Bureau of Standards

CHART, SIZES PETITE TEENS

SIZE	10	12	14
BUST	314	32½	34
WAIST	23	24	25₺
HIP AT 7"	32	33	341
HIP AT 9"	33	34	35½
LENGTH OF WAIST IN BACK	13 3/4	14	14 1/4
LENGTH OF WAIST IN FRONT	12½	12 3/4	13
ACROSS BACK	12 3/4	13 1/8	13₺

TEEN-AGE

SIZE	10	12	14	16
BUST	33	34	35	36±
WAIST	241	25₺	26₺	28
HIP	341	35₺	36₺	38
ACROSS BACK	12 3/4	13 1/8	13∔	13 7/8
LENGTH OF WAIST IN FRONT	12 3/4	13	13 1/4	13‡
LENGTH OF WAIST IN BACK	14 1/4	1 7 7	14 3/4	15
OUTSIDE SLEEVE	211	21 3/4	22 1/4	22 3/4

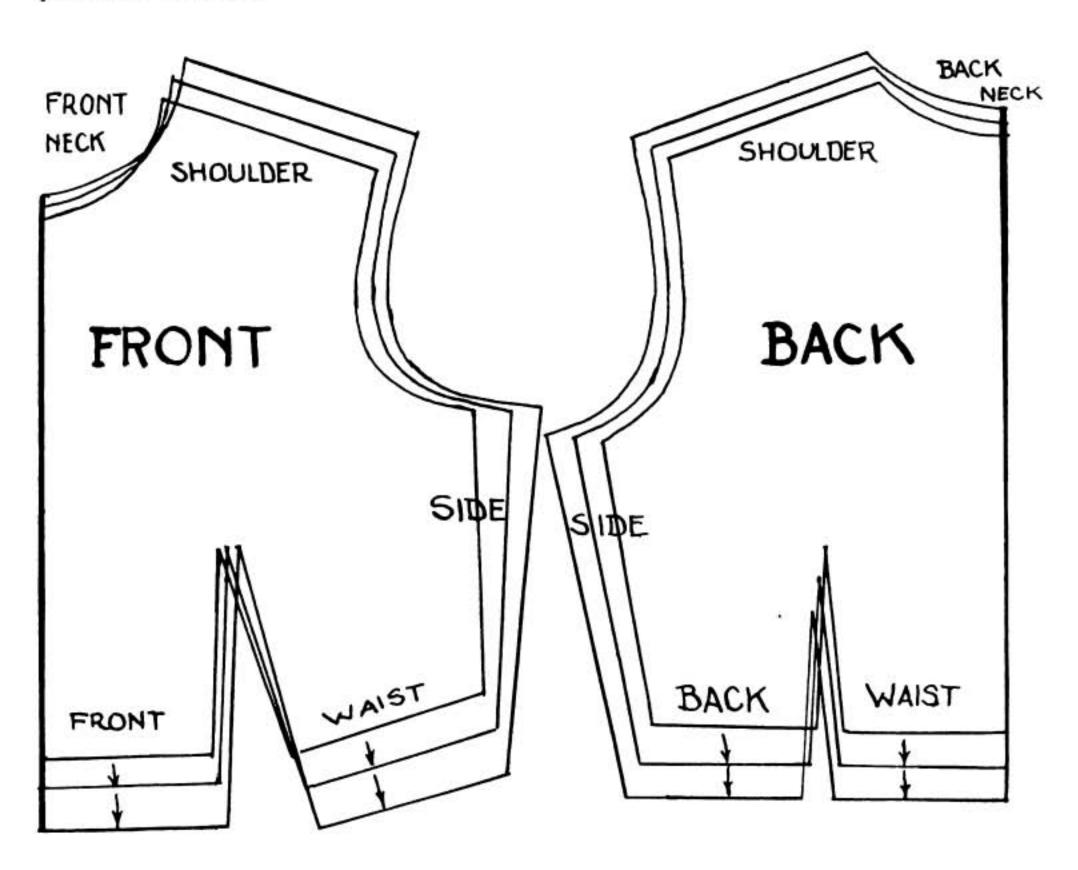
Courtesy of Wolf Form Co., N.Y.C.



Children's Grade Chart

In grading children's patterns, the same basic method diagrammed in detail is applied.

Because the differences between sizes are so great, the Chart of Measurements supplied by the Bureau of Stand-ards must be referred to continuously for the various pattern moves.



The vital points of change from size to size are: Around the Bust (Chest), Waist, Hip Line and the Neck to Waist Length, the Drop of the Hip Line and Hem Length.

The increase in length of the Base of the Neck is important. By careful observation of the Children's Grade Progression it will become obvious that the increased pattern sizes gradually assume the change of shape according to the child's growth and development.



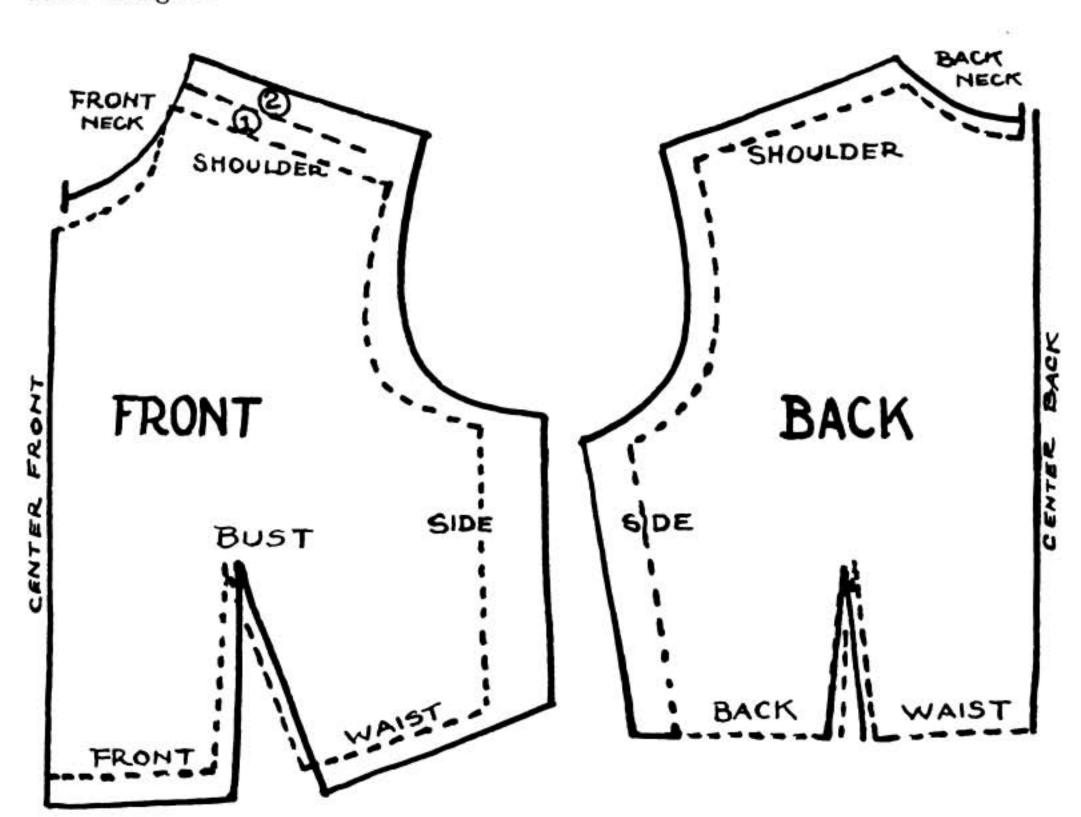
Analysis

In grading sizes from 40 up, half sizes and stouts, the procedure is as follows:

The back is graded with a one eighth inch shoulder raise and no waist drop.

The front, because of the extra heavy bust increase (which is the case in all heavy sizes) must receive extra allowance for length in the shoulder to waist length. Therefore, an extra increase is allowed at the shoulder raise and an extra increase is allowed for the waist drop, making a total increase of three-eighths of an inch.

As noted in the diagram grade, the side seams remain the same length.



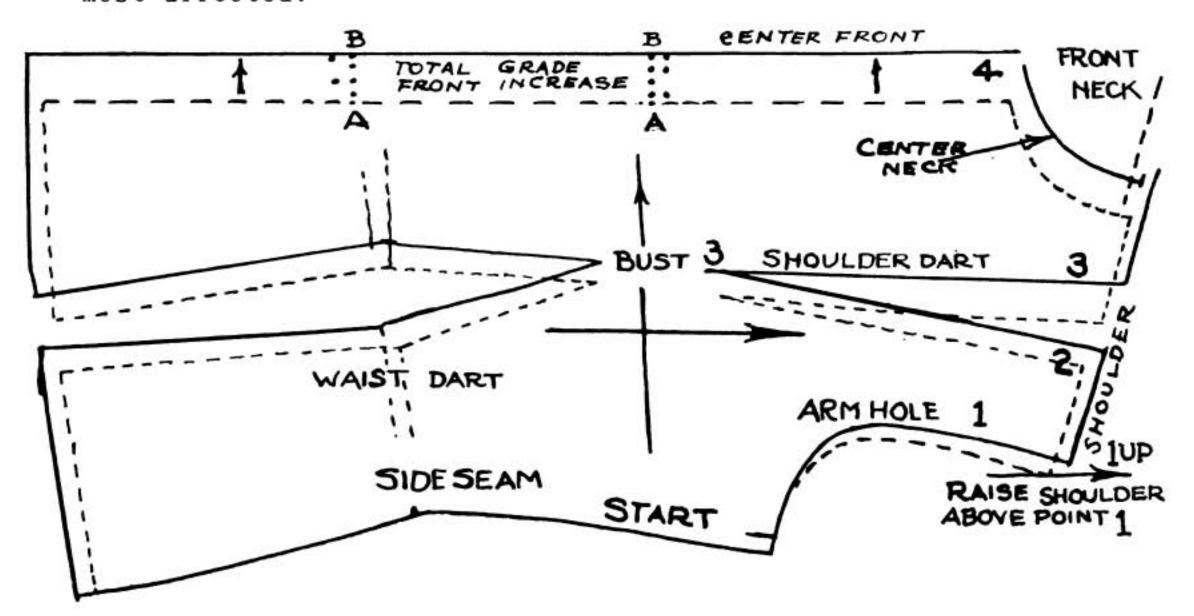
The Neck has only been increased the required one-quarter inch or one half inch total.

Due to the extra front shoulder raise, there is no reason for the allowance of an extra sleeve cap increase because of the normal ease there is there. In cases where the front arm hole becomes too long, the height of the cap may be raised an extra one-eighth inch.

XVII Coat Overgarment Grade

Analysis

Coats or top garments that are worn over other garments, are graded differently from the regular types, such as jackets and blouses. The reason for this variation is to allow for extra ease and increases at points that are most affected.



The points within the pattern as it relates to the body where the greater amount of ease and increase in length, are at the front neck and point of the shoulder and around the bust.

The grade variation of grading out from the side seam toward the front, as illustrated here, allows for the greater strap length (the distance between the Armpit, the Front Armhole and the Point of the Front Neck at the Shoulder.

This extra length eases the Outer Garment over the one worn underneath, without pull or that odd hicking that is so prevalent in most Outer Garments, causing the Front Edges to cross.

The grade increase of the front is pointed off on the Two Guides drawn square to the Center Front in divisions to allow for the various grade increases at the side, armhole and the front. The remaining space between is divided for the point of the bust. By grading in this manner the shoulder at the front neck gets an extra lift, which supplies the extra length at this point to prevent the fronts from lifting.

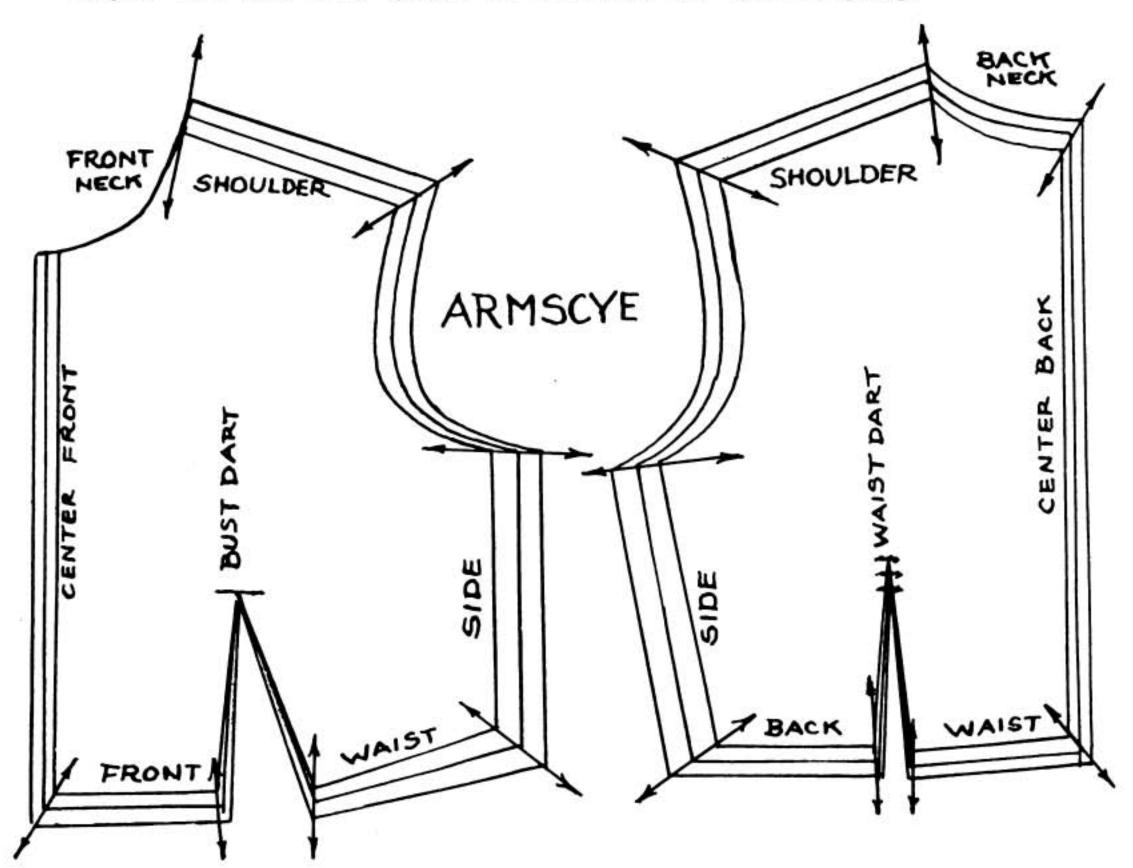
The size of the bust dart enlarges a trifle -- just enough to allow for enough room around that area. The dart below the bust remains the same size.

XVIII Angle Grade

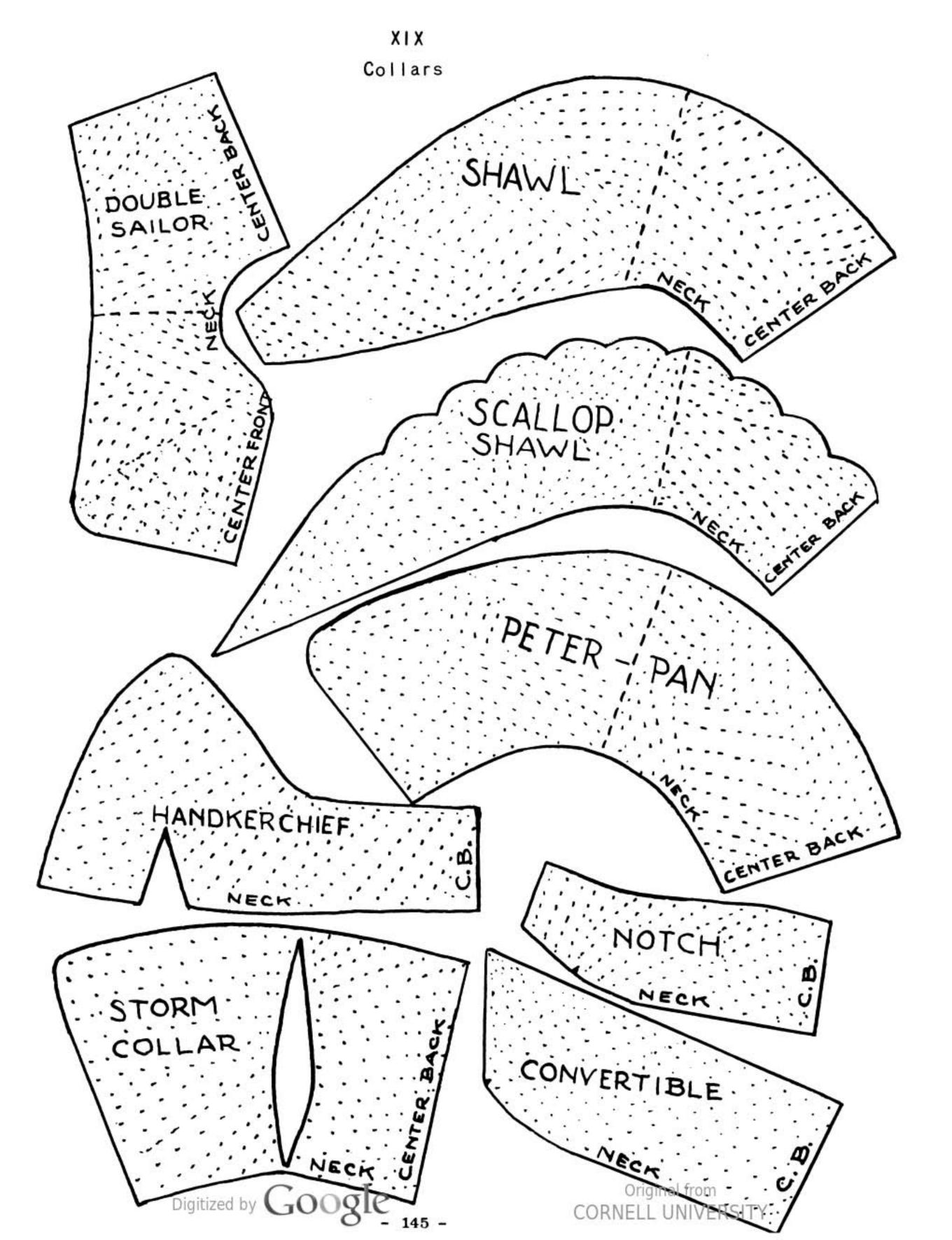
Analysis

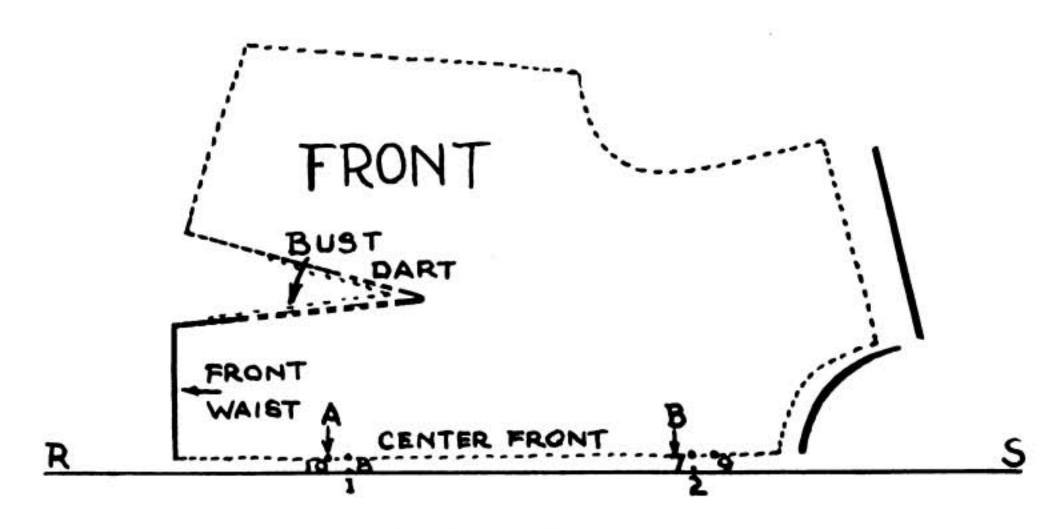
The angle grade is a process of charting the various sizes of a pattern, one upon the other with their relative parts pictured in such a way as to be able to see at a glance the various increases and decreases.

This method is used extensively in the men's line and the commercial pattern business. It is very accurate and may be used in the other fields if a record of the style and the size grade is desired for safekeeping.



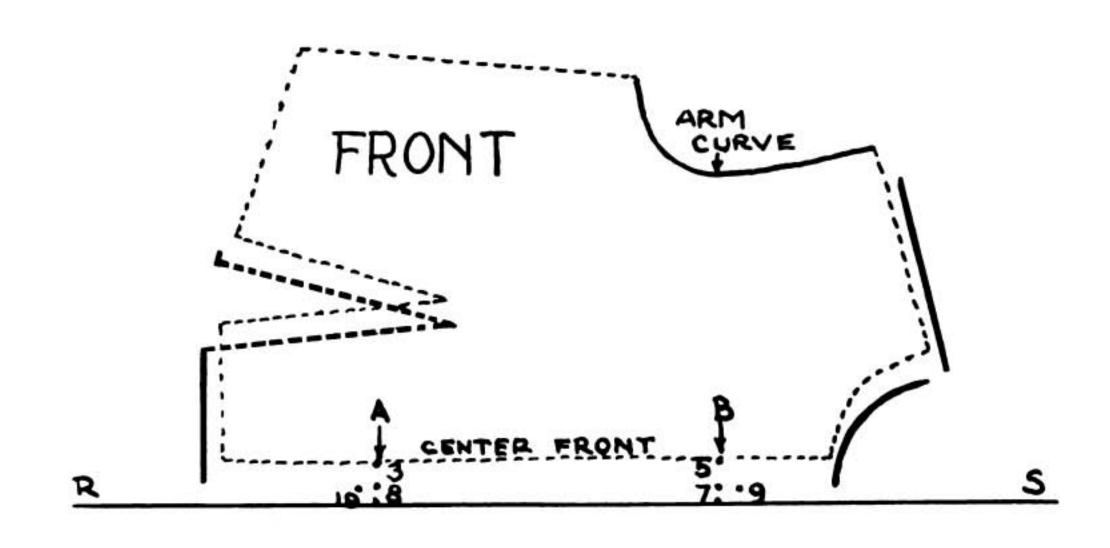
The original pattern is marked out, and a single jump grade is made of two or three size differences. Lines are drawn through the main points of the shoulders, neck, darts, arm curves and waistline, or such other points as may be necessary to complete the chart. These angle lines are then divided with the aid of a parallel divider. The points pointed off on the angle lines are then joined to form the picture of the intermediate sizes.





Front Grade -- Four

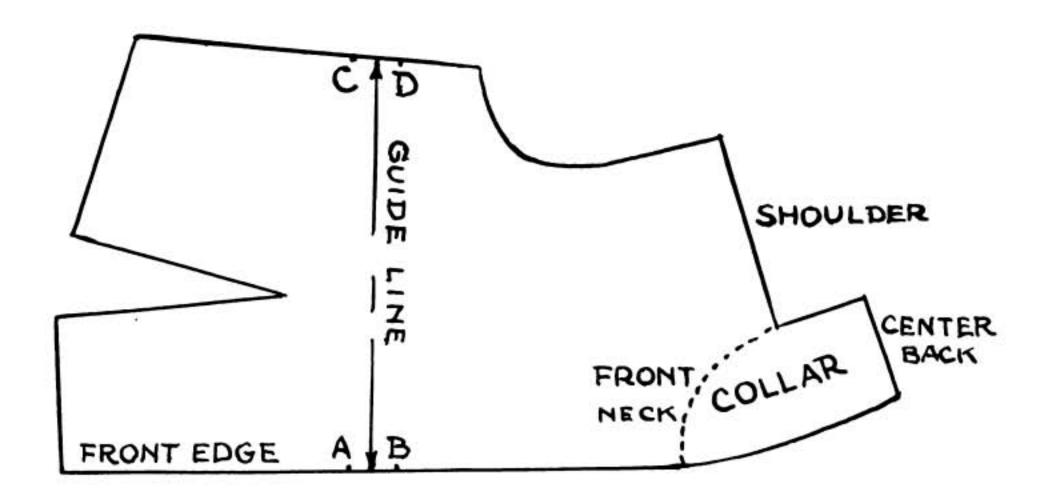
Place center front of front pattern with point A of the pattern upon point 10 and the front edge of the pattern upon points 8, 7, and 9. This drops the front waist oneeighth inch. Draw the front waist line and complete the front bust dart at the waist.



Front Grade -- Five

Place center front of front pattern with point A of the pattern upon point 3, and point B upon point 5. This moves the pattern forward one-quarter inch, increase across the front chest. Mark out the front arm curve. Digitized by \(\(\tau\)(

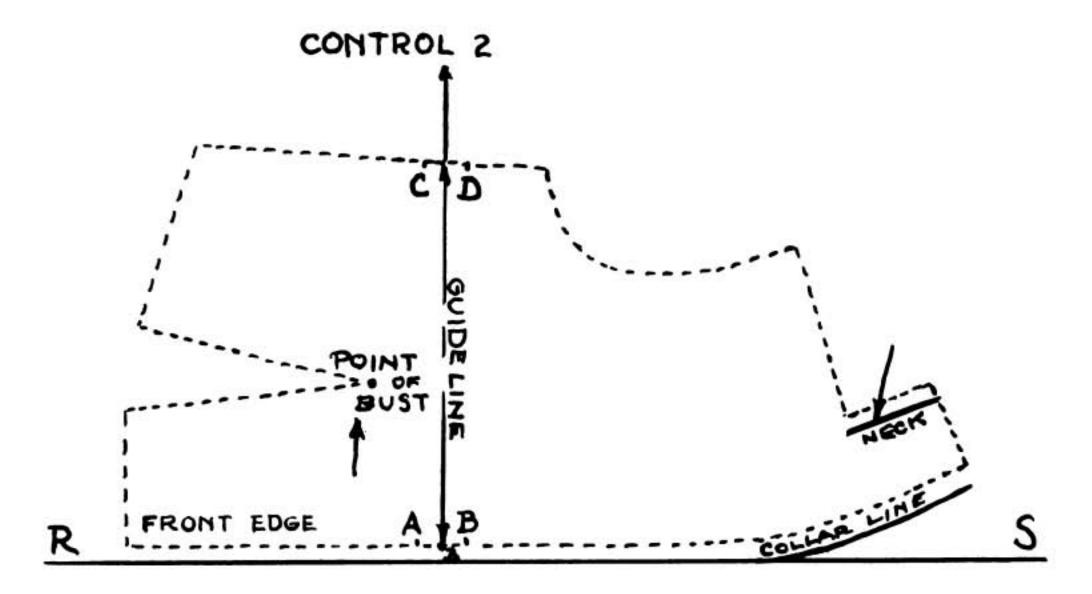
- 17 - CORNELL UNIVERSITY



Analysis

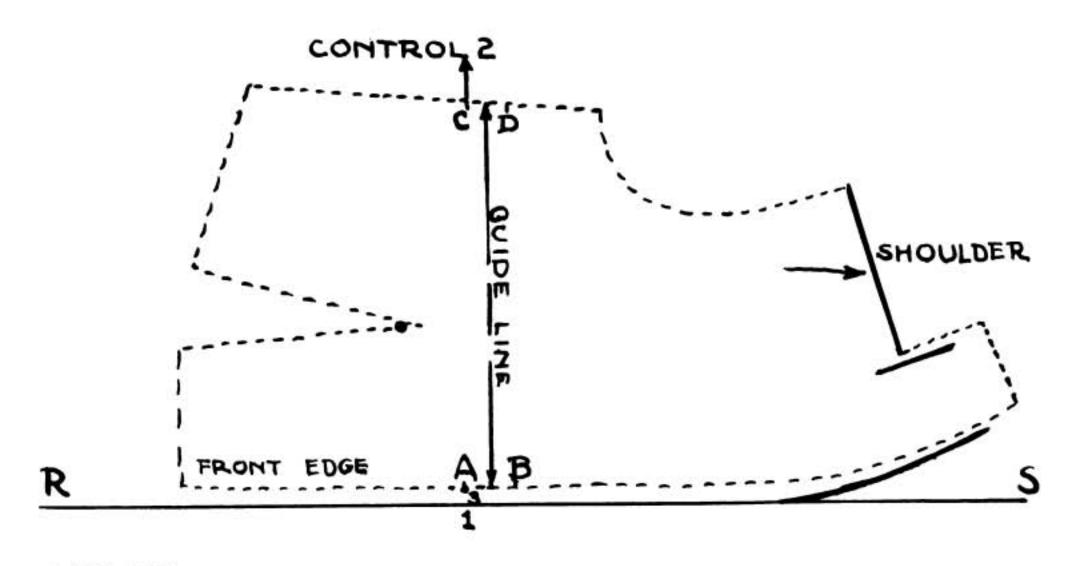
To grade a front pattern with collar attached according to analysis is no different than grading an ordinary, simple front. The attached collar is handled as an integral part of the pattern.

The guide line is drawn across the front and perpendicular to the front edge and reaching to the underarm. Points A and B and C and D are one-eighth inch on either side of the guide line, as indicated. C and A are for the rise, and B and D are for the drop.



PART ONE

Continue the guide line off the pattern and onto the paper as control 2. Measure from 1 to 3 one-eighth inch; from 1 to 4 three-eighths inch; and from 4 to 5 also three-eighths inch. Place front edge of pattern on line R-S with guide line on point 1 and control 2. Mark out collar and neck line and point of dart. Then move pattern to point 3.

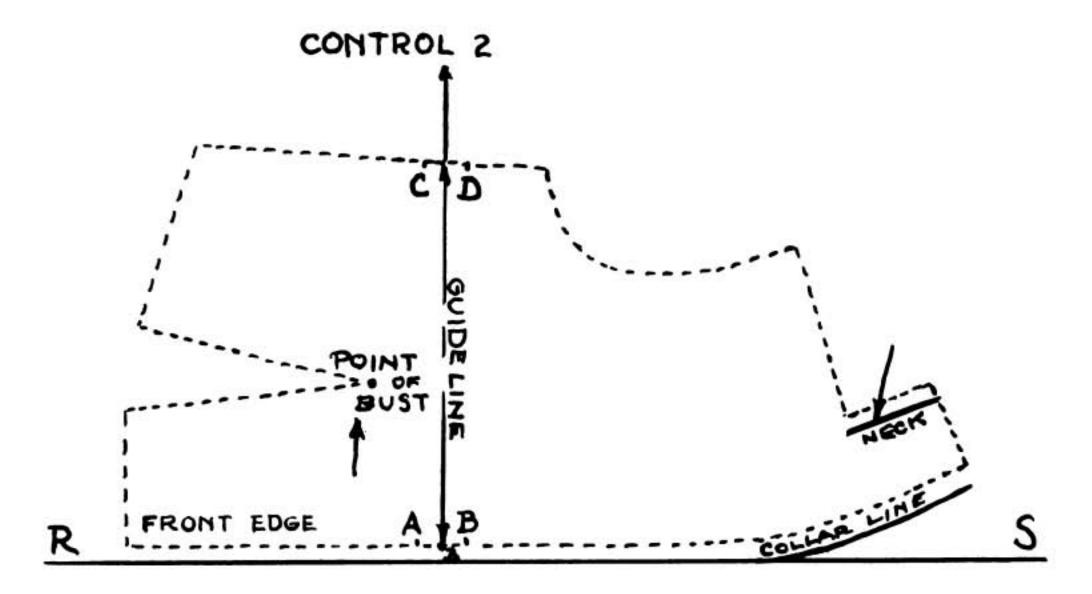


PART TWO

Place point A on point 3 and point C of pattern on control point 2. Mark shoulder.

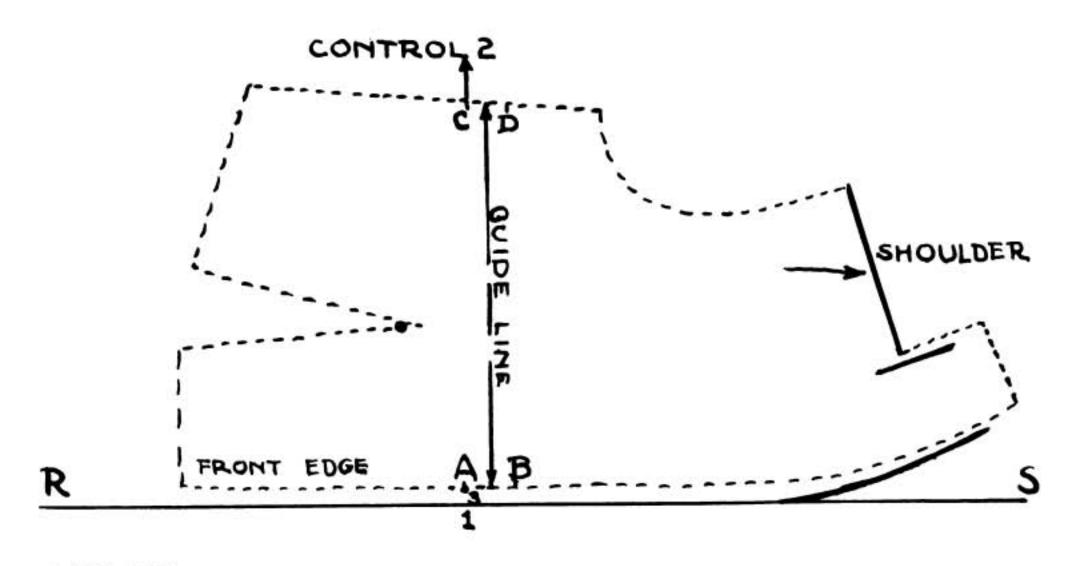
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PART ONE

Continue the guide line off the pattern and onto the paper as control 2. Measure from 1 to 3 one-eighth inch; from 1 to 4 three-eighths inch; and from 4 to 5 also three-eighths inch. Place front edge of pattern on line R-S with guide line on point 1 and control 2. Mark out collar and neck line and point of dart. Then move pattern to point 3.

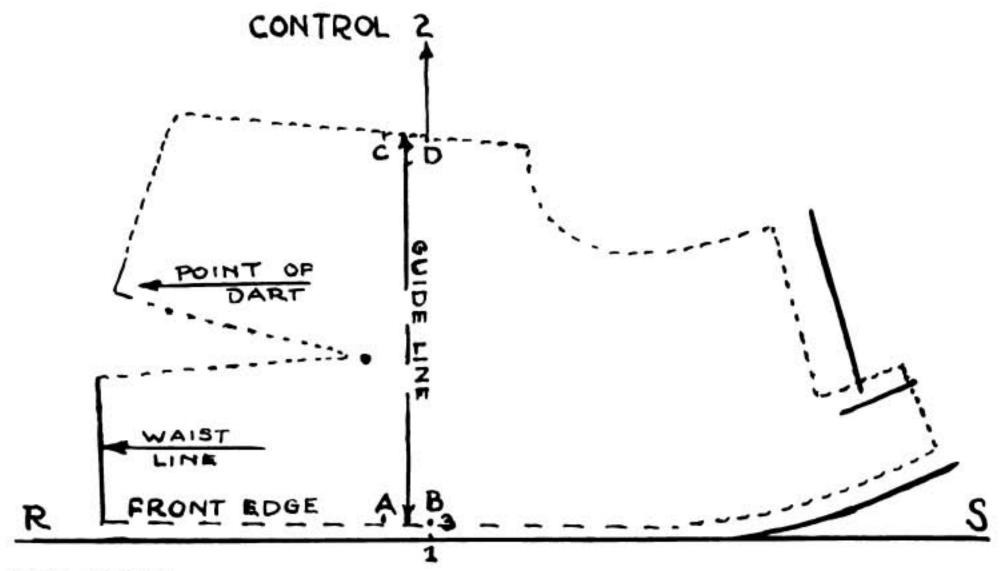


PART TWO

Place point A on point 3 and point C of pattern on control point 2. Mark shoulder.

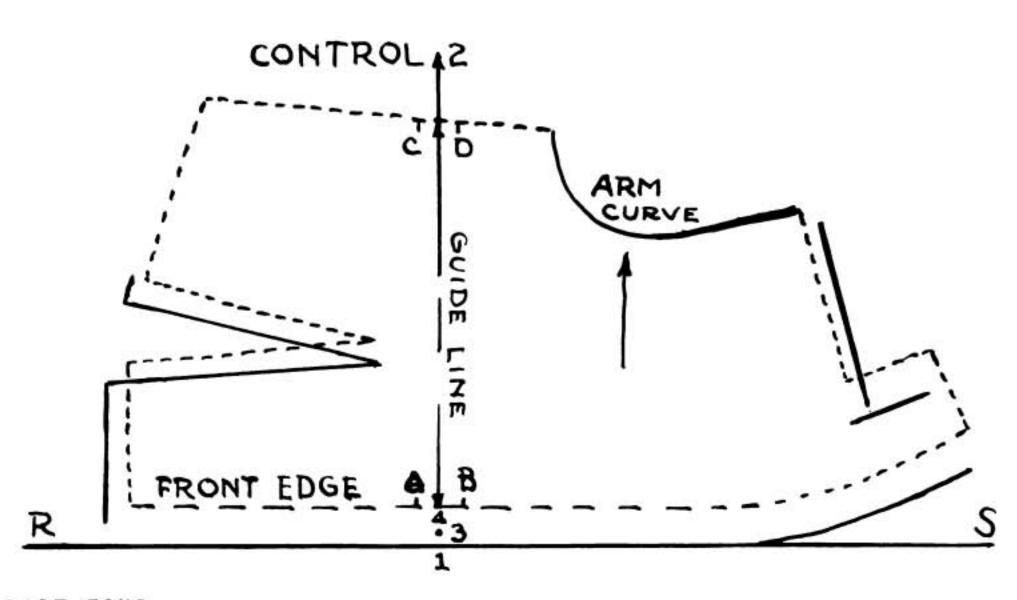
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PART THREE

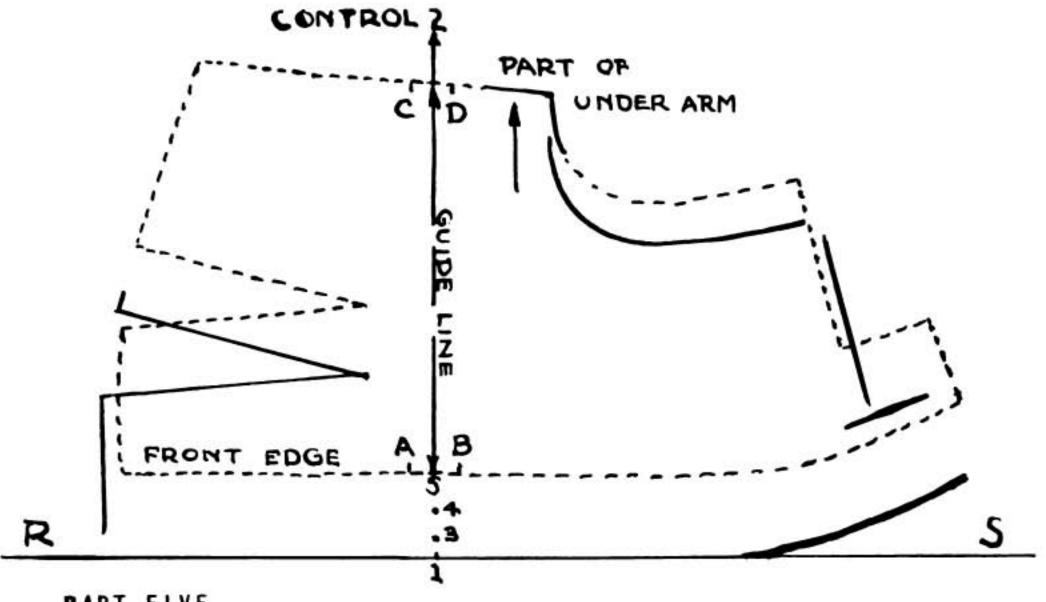
Move pattern to left so that point B of pattern is on point 3 and point D of pattern is on control 2. Mark out waistline and both points of bust dart.



PART FOUR

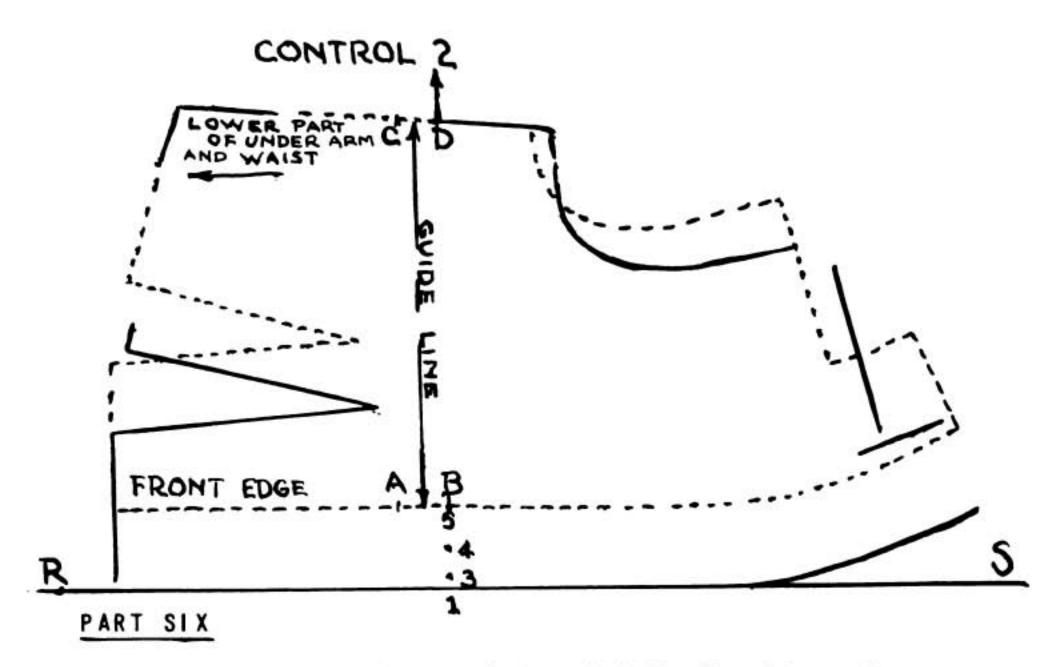
Join points of dart at waist to point of bust. Move pattern forward so that guide line is on point 4 and on control 2. Mark out arm curve.



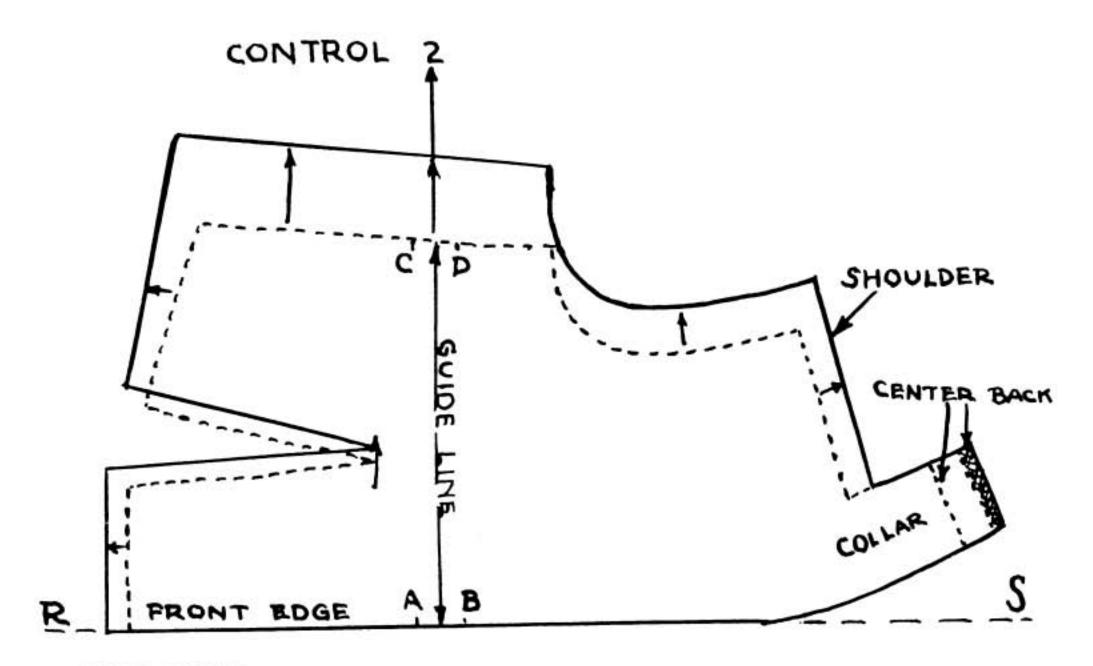


PART FIVE

Move pattern forward so that guide line is on point 5, and is on control 2. Mark upper part of underarm.



Move pattern to left so that point B of pattern is on point 5 and point D of pattern is on control 2. Mark out lower part of underarm and part of waist.



PART SEVEN

Close up all openings by using the pattern as a guide.

The collar at the center back must be raised the amount of grade given to the back neck of the pattern, as indicated by the shaded area in the diagram above.

Therefore, when both the original and graded patterns are placed one upon the other, the proportionate increases will be noted clearly. It will be noted that the total grade increases at the underarm line and the collar will also show the proper increase to fit the graded back neck line.

Collars

Analysis

The grading of collars from size to size presents its own particular problems. Taking this into consideration, it is advisable to analyze the collar -- its style, its shape and its neck line. It must be understood that even though the neck line is increased the proper amount to match the neck grade, the method used for increasing the collar neck line is divided into three categories:

- Straight -- no style detail;
- (2) Straight -- with style detail;
- (3) Shaped -- with and without style detail.

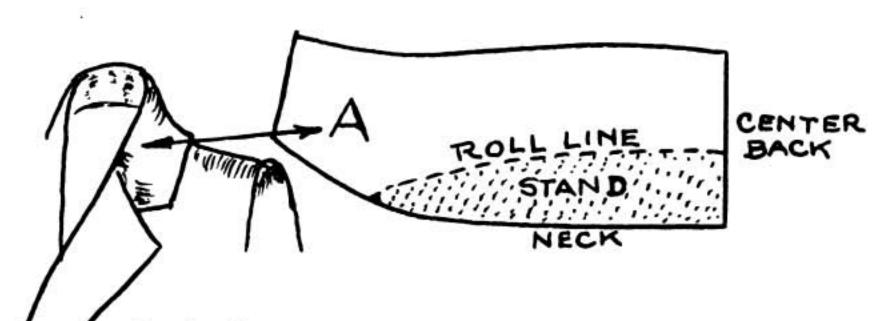
As can be seen from the body neck grades, the back neck has increased only 1/16 inch, size per size, and the front neck only 3/16 inch, size per size. This amounts to a total neck increase of 1/4 inch per pattern grade, or a full neck increase of ½ inch all around, size per size.

It will be noticed, therefore, that all style and shaped grades of the collars are also broken up into three cate-gories:

- (1) Back neck -- increase;
- (2) Shoulder line -- raise;
- (3) Front neck -- increase.

In grading collars by use of this method, the style detail is gradually increased; the shape of the collar is retained. Where the grade is in a straight line and there is no shape or detail that will be affected, the total grade in one move totals the full increase.

The various style collars used are basic and the followthrough will apply to all trade practices. The grade increase for collars is the same for all sizes whether a
one-inch grade, a one-and-one-half inch grade, or a twoinch grade, and is also dependent upon the base of the
neck increases (which will be detailed in specified charts).

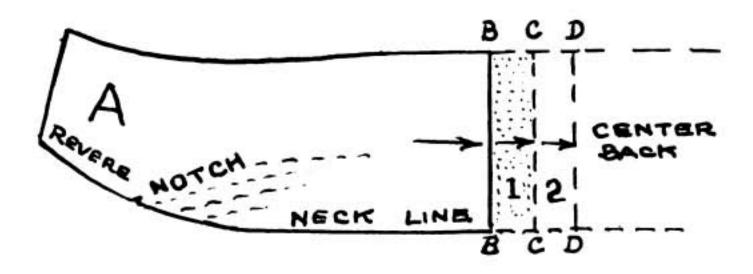


Analysis

As the notch collar is part of the tailored type of garment, it is basically mannish in shape.

The sketch shows in its relation to the collar pattern, the detail that is sewn into the revere (lapel) -- marked A.

In grading patterns, the revers receive no grade and, therefore, do not change. Because of this, the grade is toward the center back.

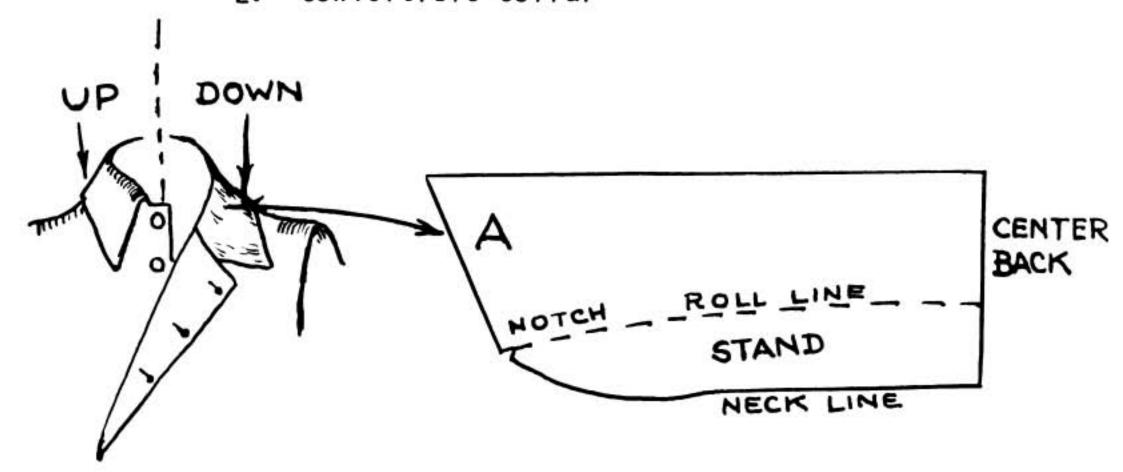


Mark out the original notch collar, as indicated, to the center back along line B-B. Adding 1/4 inch from B-B to C-C will result in a single grade increase; from C-C to D-D is another 1/4 inch for an additional grade increase.

As is shown, this collar is very simple to grade because it is straight and requires no style line change. The increase is in length and not in width.

Where a shoulder notch is indicated in the neck line of the collar, this notch moves the amount of the back neck increase.

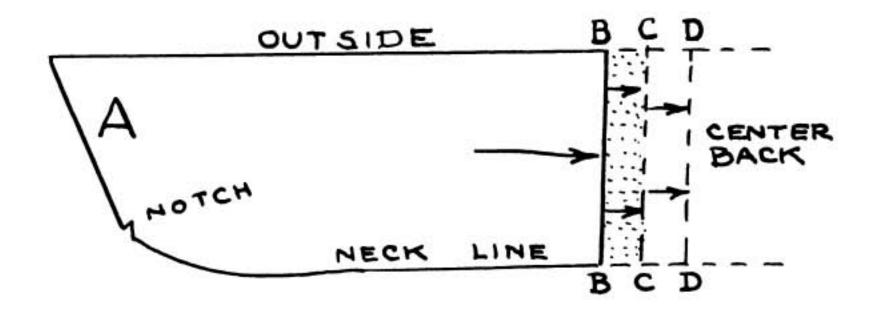
2. Convertible Collar



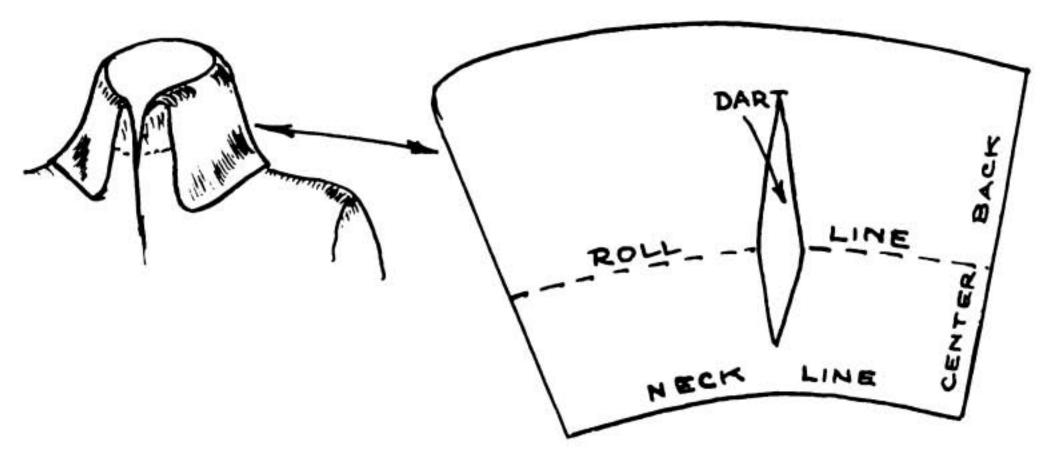
Analysis

The convertible collar is exactly what its name implies. When buttoned up to the neck it assumes the shape of a shirt-waist collar; when opened at the throat it rolls down flat around the neck, lying smoothly over the shoulders and presenting the appearance of a collar and revere -- a notch collar effect.

As can be seen from the pattern of this collar, the grade will be in length, without change of the front, or notch, effect.

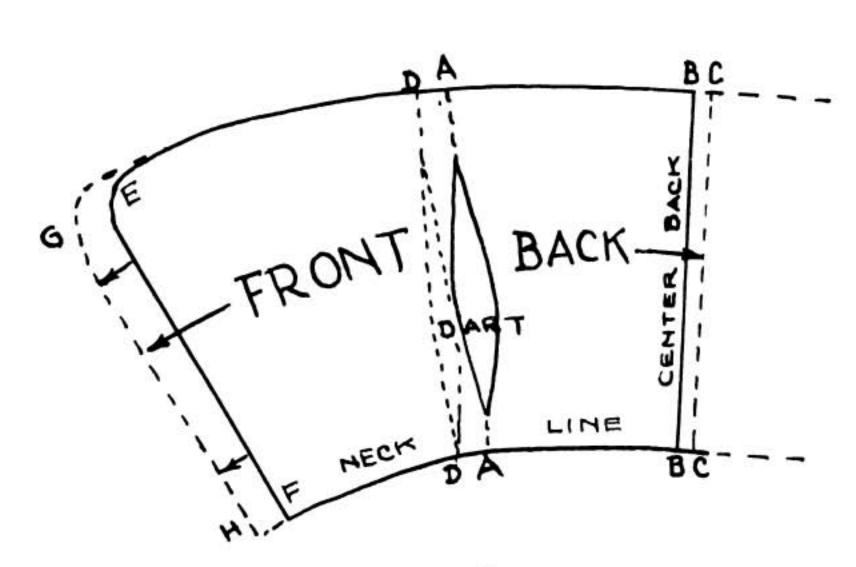


Mark out the collar. Extend the outside and neck lines. There is no increase in width. Measure 1/4 inch from the center back line (B-B) to C-C (top and neck) for a single neck increase, and 1/4 inch from the new center back (C-C) to D-D for the second grade increase. As can be seen, this collar grade also increases in length only according to the grade neck increase in the size graded body.



Analysis

The collar, as pictured in relation to the collar pattern, shows the dart, the neck line and the center back. By splitting through the dart, allow for the shoulder increase here; add the amount of the back neck grade outward to the center back; then increase the front edge by the amount of the front neck increase.

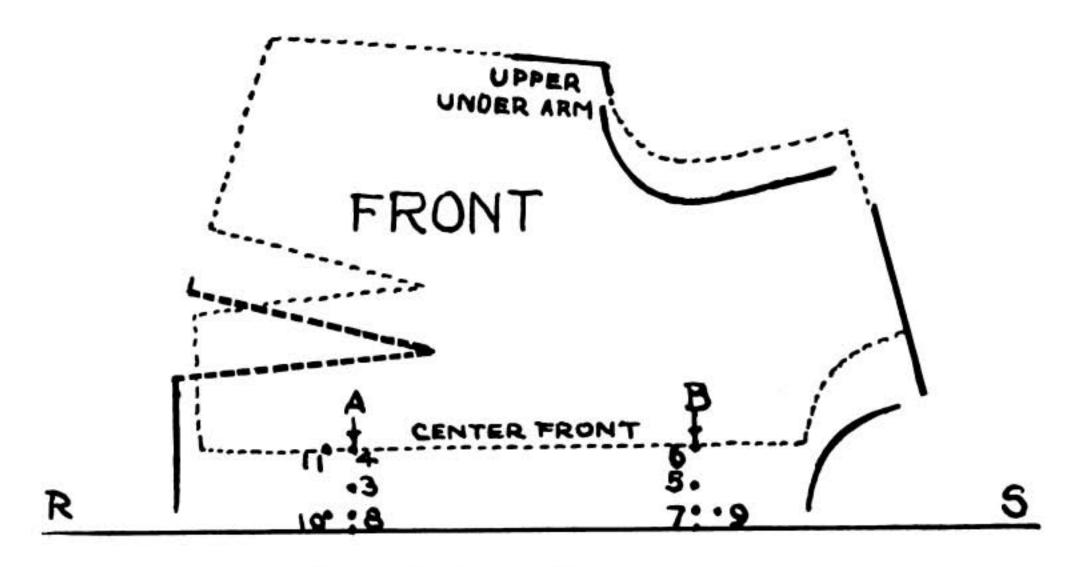


B-C is the back neck grade and A-D is the shoulder grade which pushes out the dart. Continue E-G and F-H outward to complete the total collar increase in relation to the neck grade.

The dart moves the distance from the center back equal to the back neck grade increase.

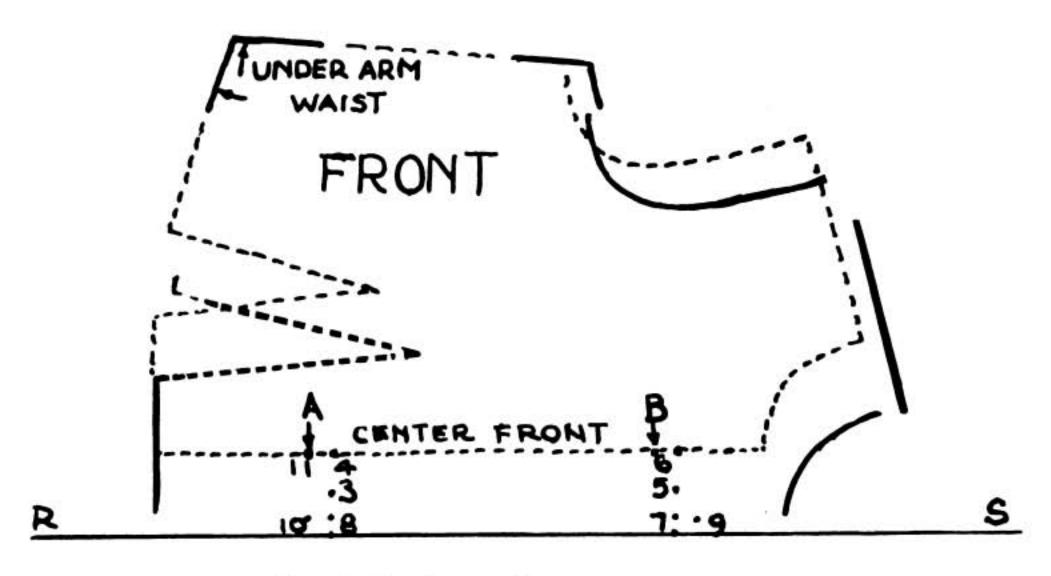
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Front Grade -- Six

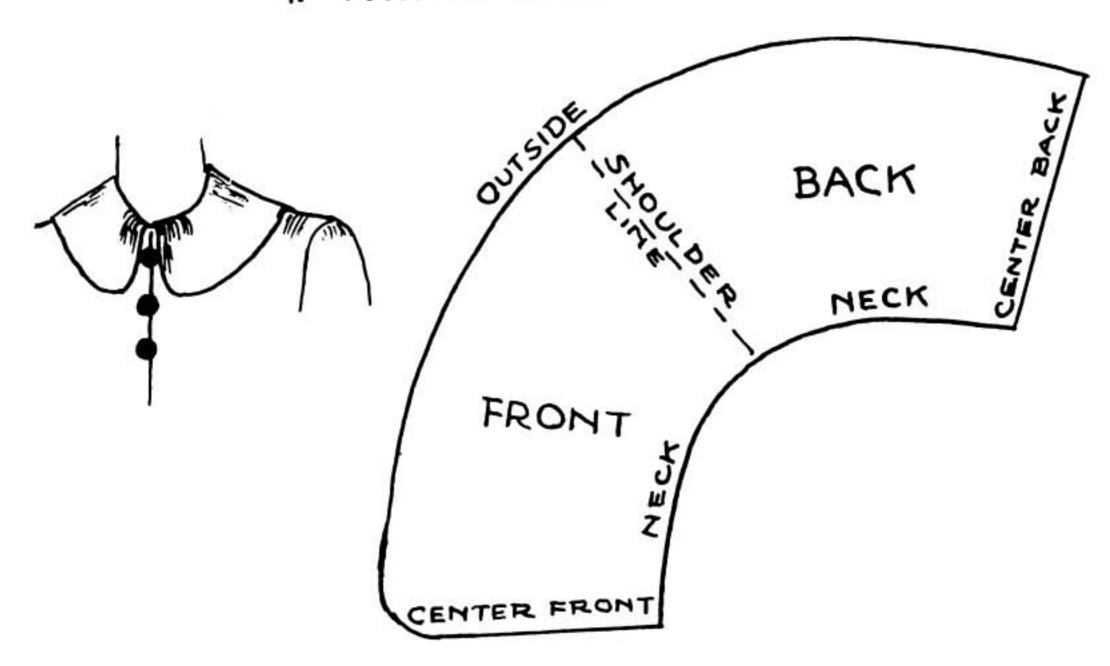
Place center front of front pattern with point A of the pattern upon point 4, and point B of the pattern upon point 6. Mark out the top part of the underarm line. This moves the pattern out to extend the width of the pattern to one-half inch.



Front Grade -- Seven

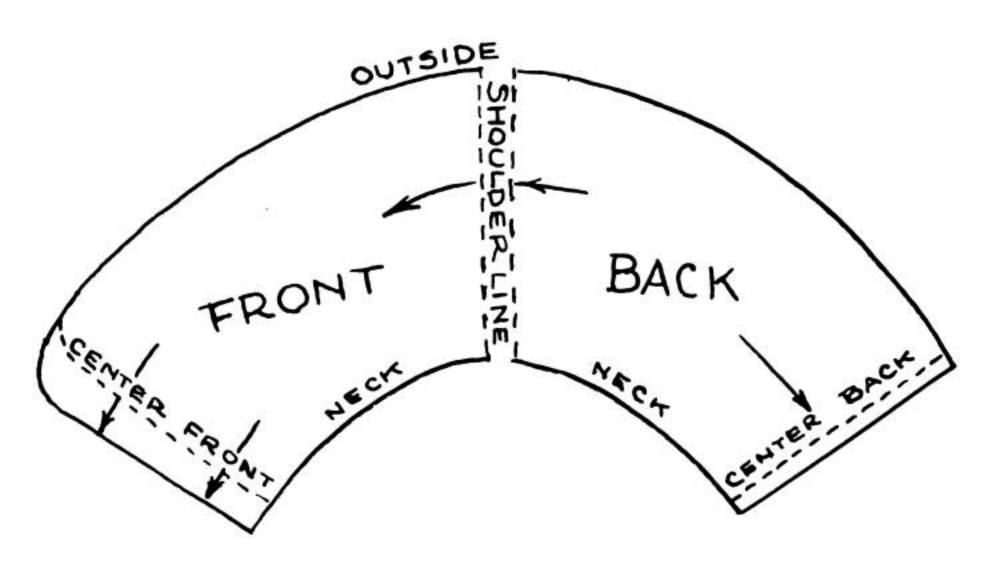
Place center front of front pattern with point A of the pattern upon point 11, and the front edge of the pattern touching point 6. Mark out the lower part of the under-Digitized by GOOGIC 18 -Original from

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Analysis

The Peter Pan collar is very youthful. It is very popular on children's and youthful style garments. To grade this collar it must be moved for the various increases at back, shoulder and front in a line directed by the neck curves.

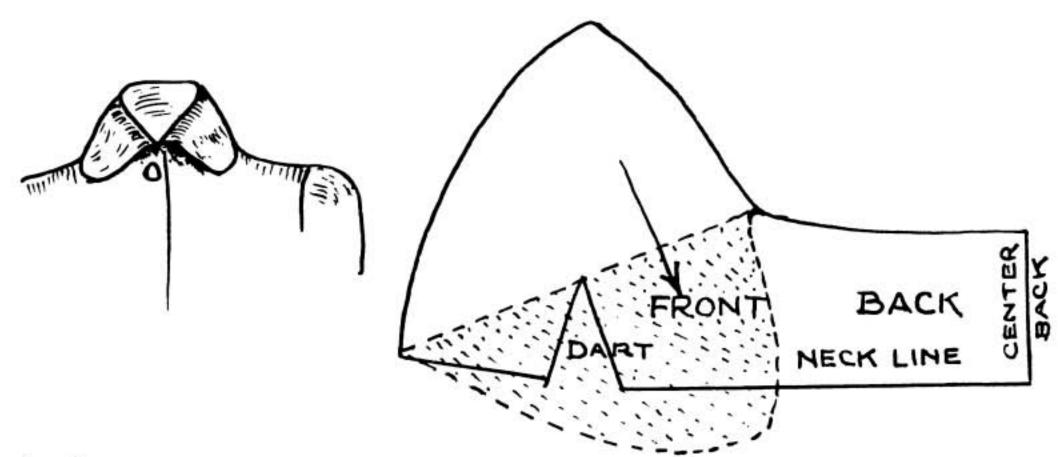


Here the spaces and breaks indicate where the increases are carried out by following from the shoulder line which is fixed, on either side, towards the center back and the center front. This retains the collar shape and follows the body contour so that the collar will fit correctly.

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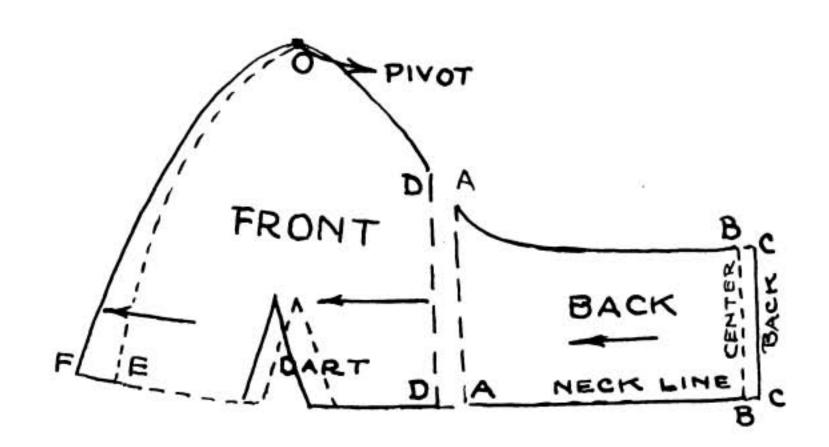
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5. Handkerchief Collar



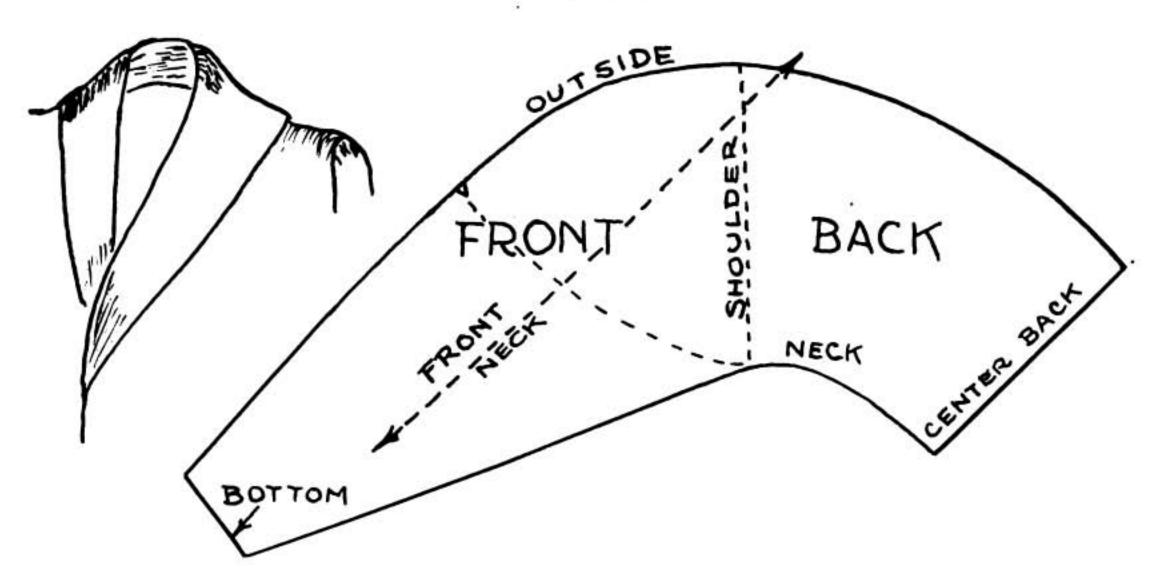
Analysis

This collar is a very popular type and is fundamental in that it carries a style detail at the end where it becomes the face. In addition to grading the collar to fit the neck line increase, the detail at the front must be treated in such a way as to increase proportionately without detracting from the style intent.



Mark out the center back of the collar along line C-B. Move the collar, in the direction of the arrow lines, the amount of the back neck increase to point A (the shoulder line). Mark line A-A to allow for the shoulder increase to line D-D. Mark out D-O and D-E for the neck dart move. Allow for the front neck base increase (E-F). Draw line O-F by pivoting from point O.

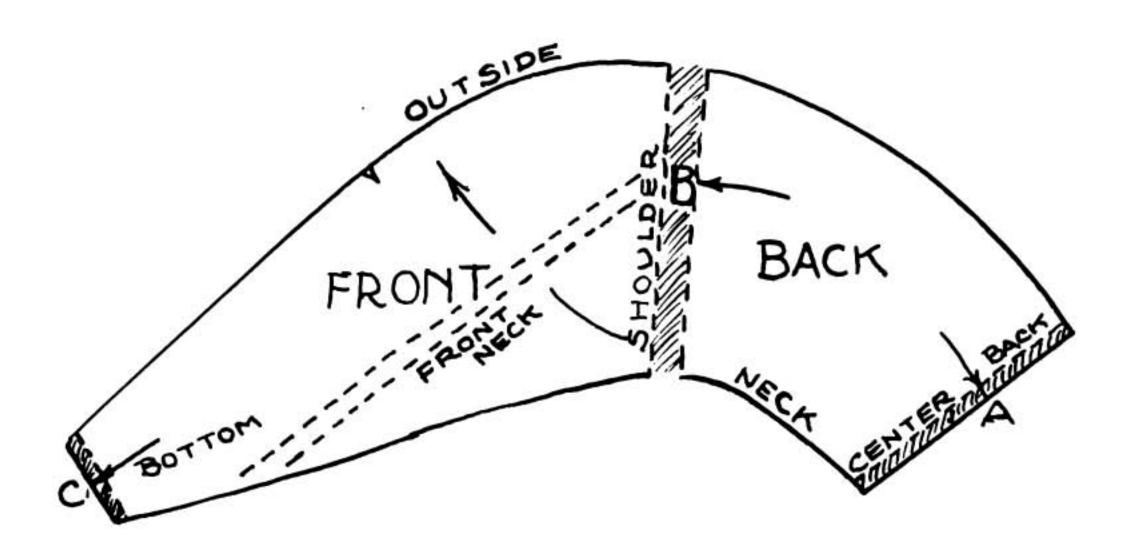
6. Shawl Collar



Analysis

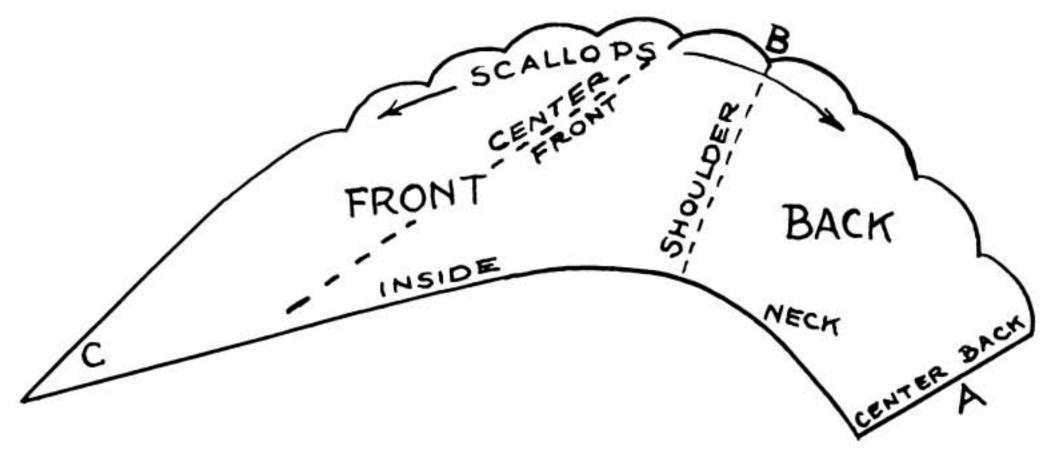
The grade of the shawl collar is as simple as that of the Peter Pan collar, except for the fact that the bottom drops an extra amount. The center back moves 1/16-inch; the shoulder, 1/8-inch; the front neck, 1/16-inch; the bottom, 1/16-inch.

The dotted lines show the line and points of grade.

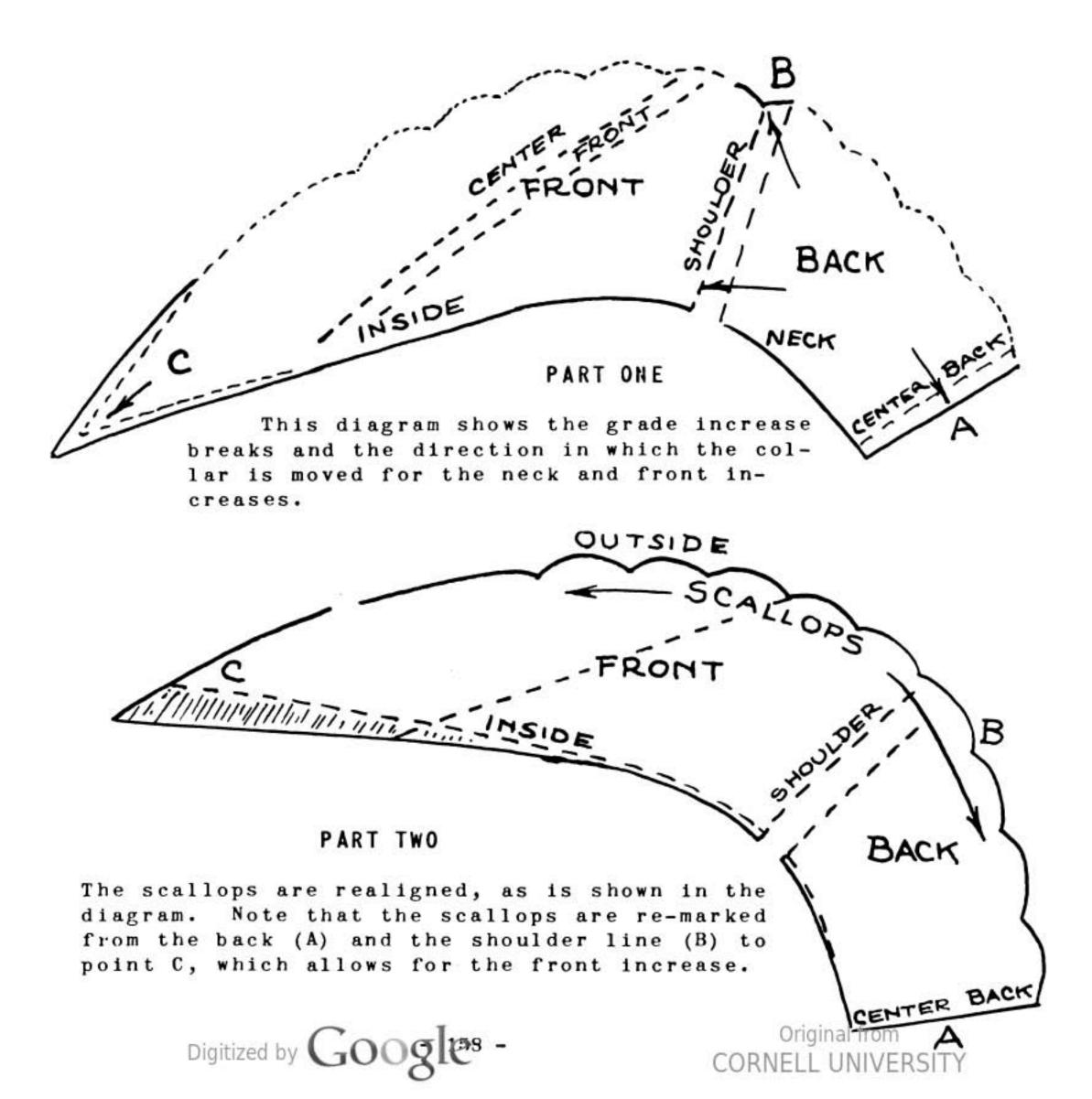


At shoulder point B, move the collar in a line perpendicular to the center back, the amount of the back neck increase. Move apart the increase of the neck at the shoulder. The neck moves are toward the outside, in the direction of the arrow, and drops 1/16-inch in the length (toward C at the bottom).

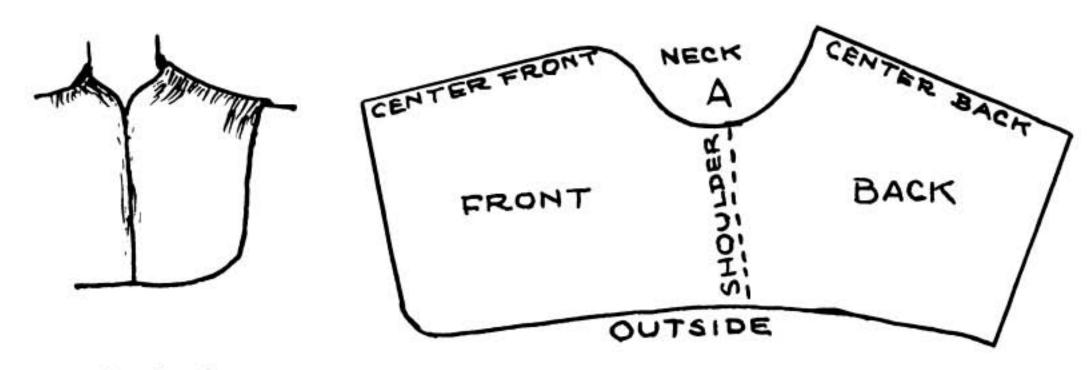
7. Scalloped Shawl Collar



The scalloped shawl collar grade is carried out in the same manner as the simple shawl collar.

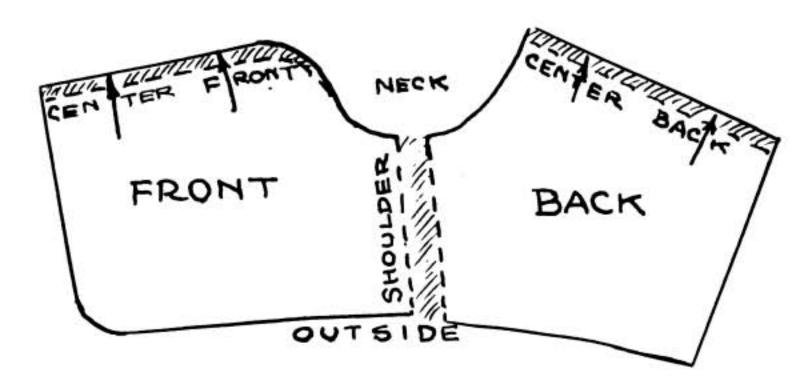


8. Double Sailor Collar



Analysis

The double sailor collar, as can be seen, is basically the round Peter Pan collar. Regardless of its shape, the grading procedure is the same as that for the regular Peter Pan collar. Note the center back, the shoulder, and the center front (which rotates around the base of the neck).



Starting with the shoulder increase at the neck, as indicated, continue the increase for the center back (at right angles). Then continue the increase for the center front, also at right angles, as indicated. In this way the full increase is allowed in order that the collar will rest easily and evenly in the natural grade procedure.

Skirts

Analysis

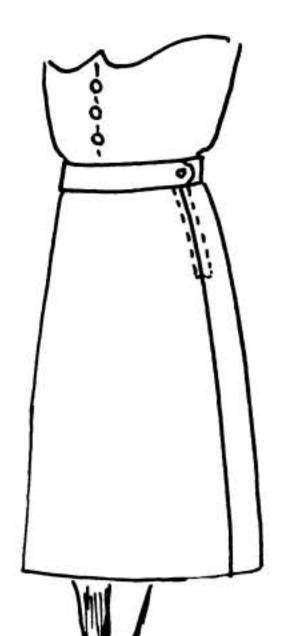
When grading skirts from size to size, there are two factors which are very important; they must be controlled. The first allows for the proper increase or decrease around the waist and hips in direct proportion to the upper body grade; the second controls the normal change around the hemline, without allowing it to spread unnecessarily past its proper size to size allowance in sweep.

The hip line, in all grades, rises and drops 1/8 inch with each change in grade, size per size. The hemline, or bottom of the skirt, drops in accordance with the style trend or the rules of the manufacturer by the usual difference from size to size (1/2 inch). The pattern is graded perpendicular to the center front or center back for width, and parallel to the center back and front when dropping the hip and hemlines, size per size. All skirt line grades are increased line for line of the total pattern increase in waist, hips, length and sweep.

Since the skirt covers an area without any shape breaks, it is very important to watch the pattern movement when grading in order that details, such as pockets, pleats, drapes and flares, are not affected but are kept in proper proportion and in relation to the size to size grade changes.

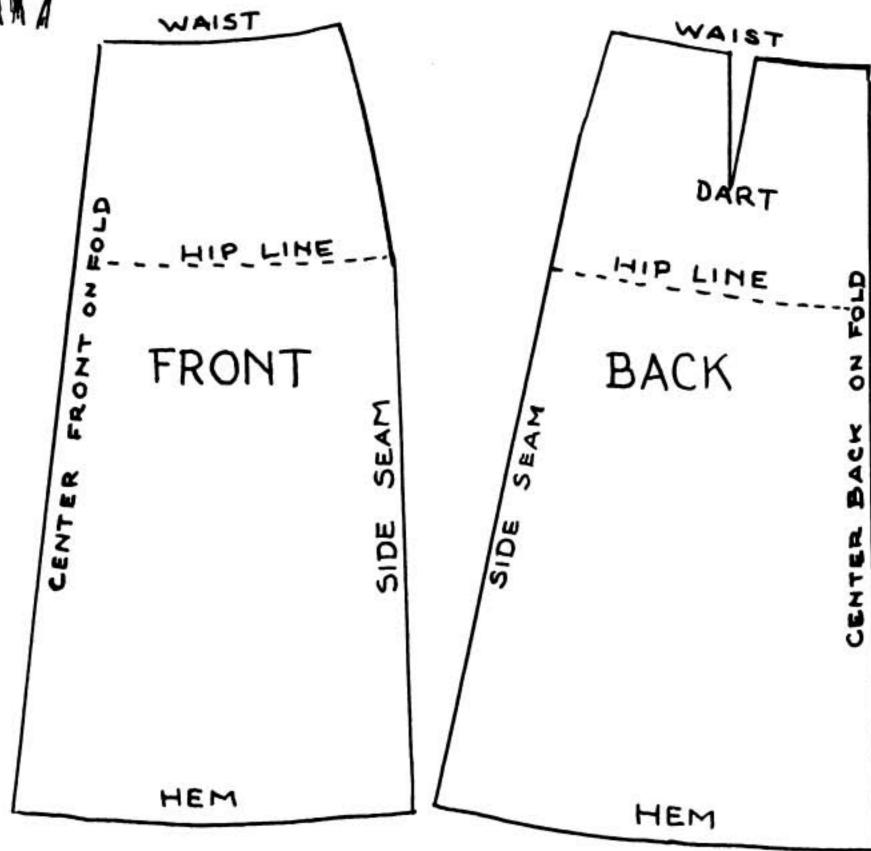
Grading skirts is a very simple procedure in which (because it is so simple) many errors are easily made. Misfits or irregular style line changes may occur due to lack of logical understanding and poor grading.

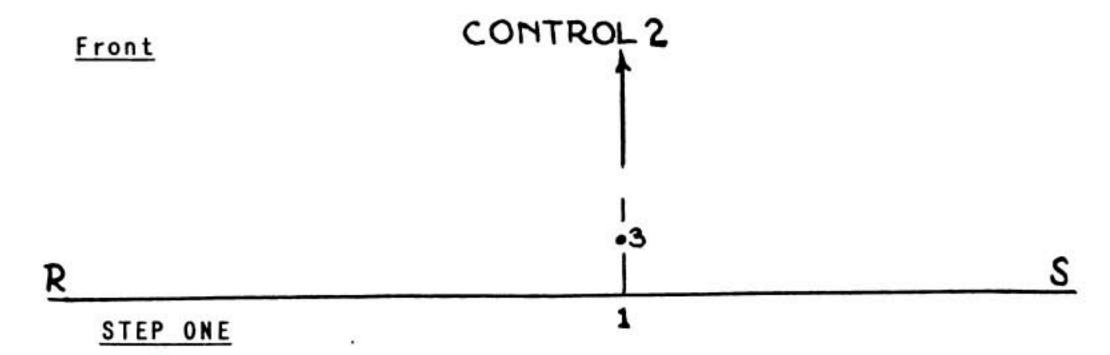
Where skirts are a part of the entire garment, such as dress or suit, the darts and style lines should move in proper proportions. All lines must have pleasing and harmonious appearance.



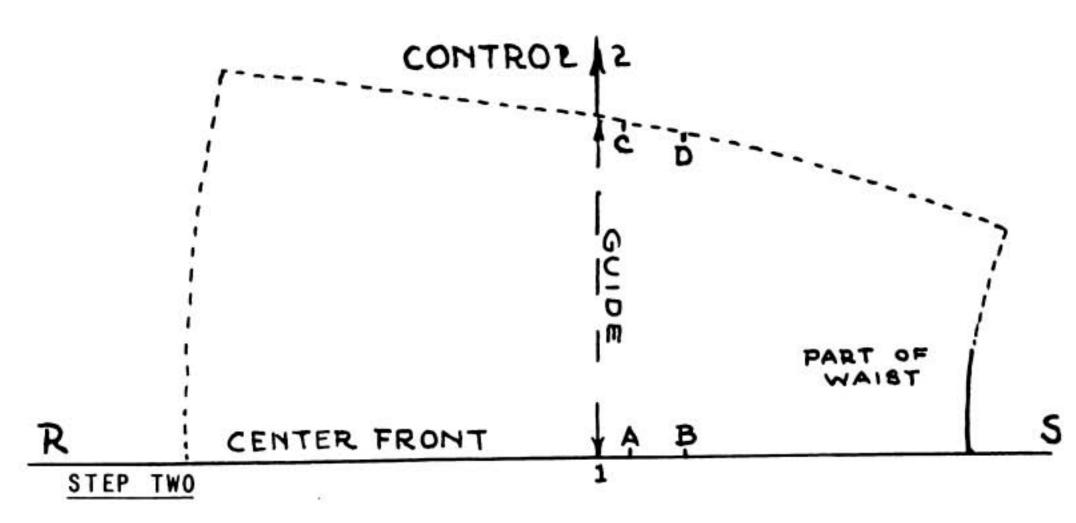
Analysis

The two-piece, or four gore, is the simplest skirt to be graded. Note the pattern diagrams and their relation to each other in regard to the body formation at the waist, the hips, and in the general alignment. The grade is at right angles to the center front and center back.

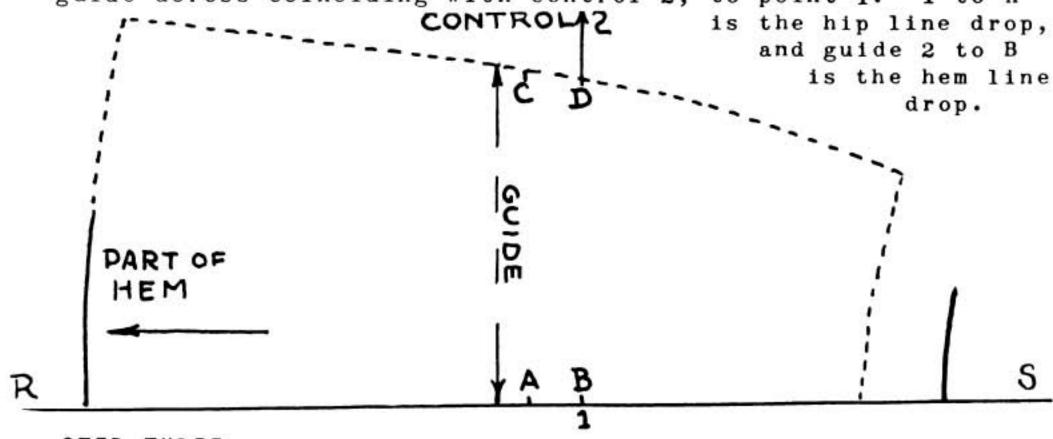




Draw line R-S. Perpendicular to any point, construct control 2. From point 1 to point 3, measure the total skirt increase of the front part.

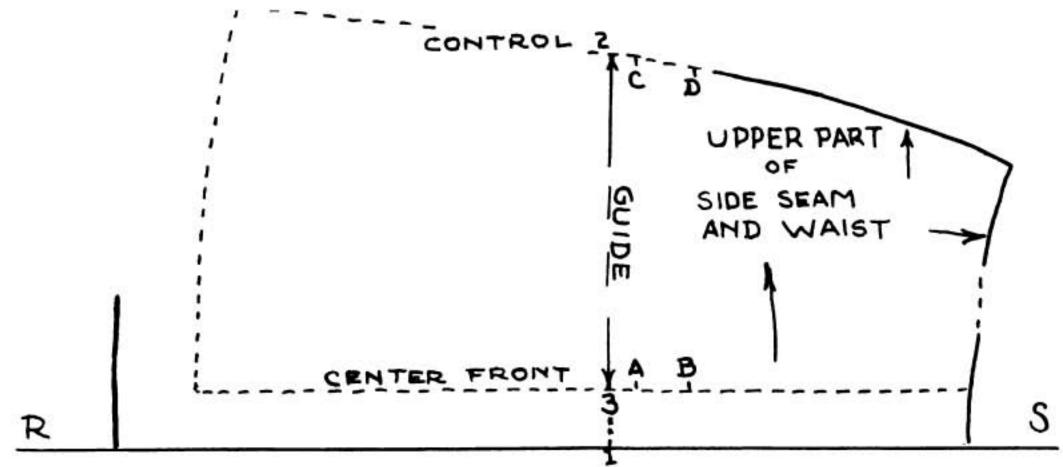


Place the center front of the skirt on line R-S. Draw a guide across coinciding with control 2, to point 1. 1 to A



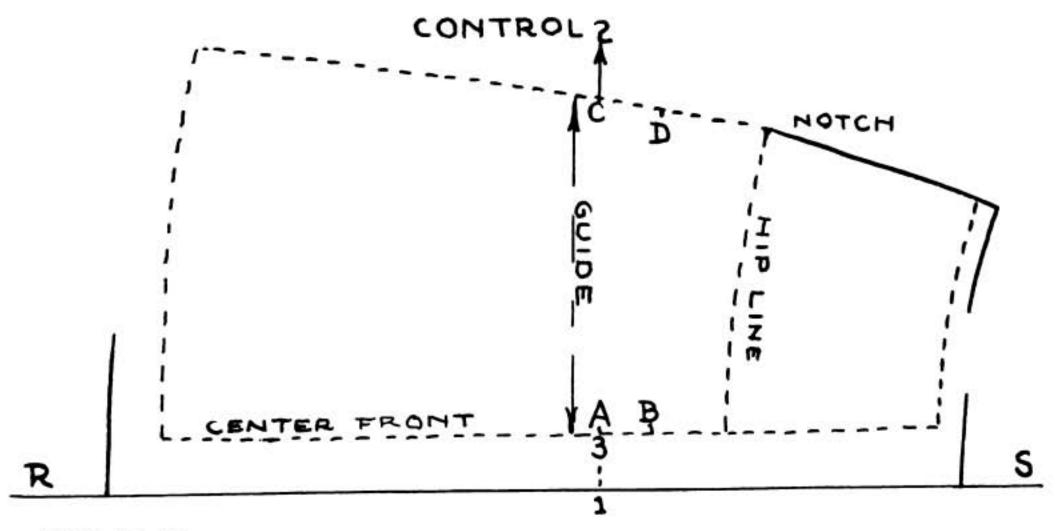
STEP THREE

Before moving the pattern mark part of the waist. Next, place point B on point 1 and mark out part of the hem drop.



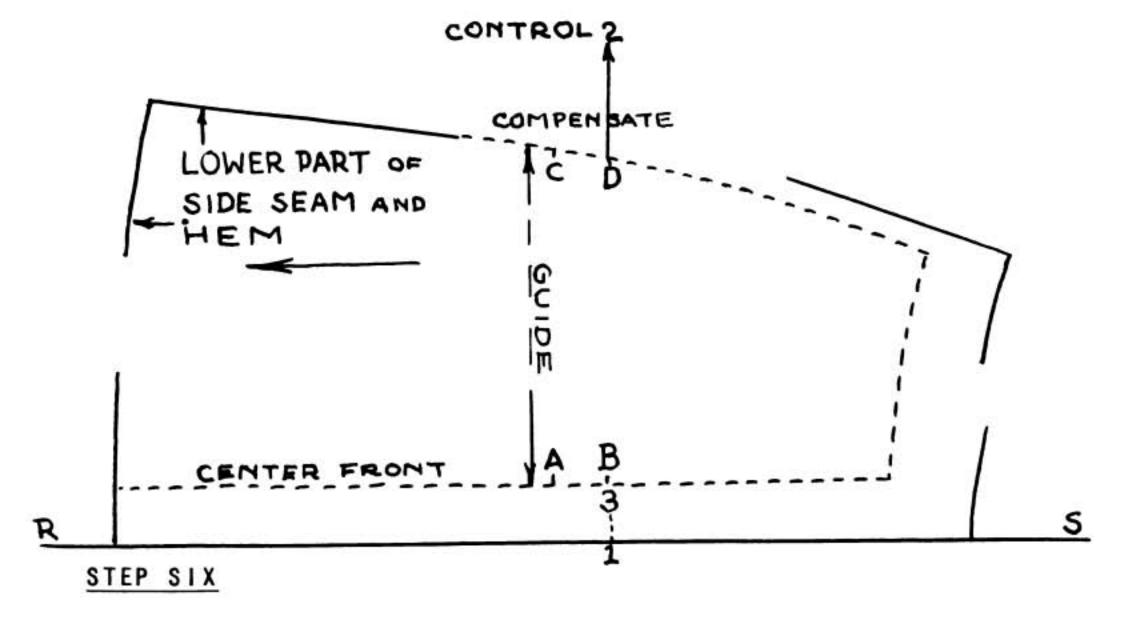
STEP FOUR

Move the skirt pattern forward with the guide at the center front on point B and the side seam guide on control 2. Mark out the upper part of the side seam and the waist.

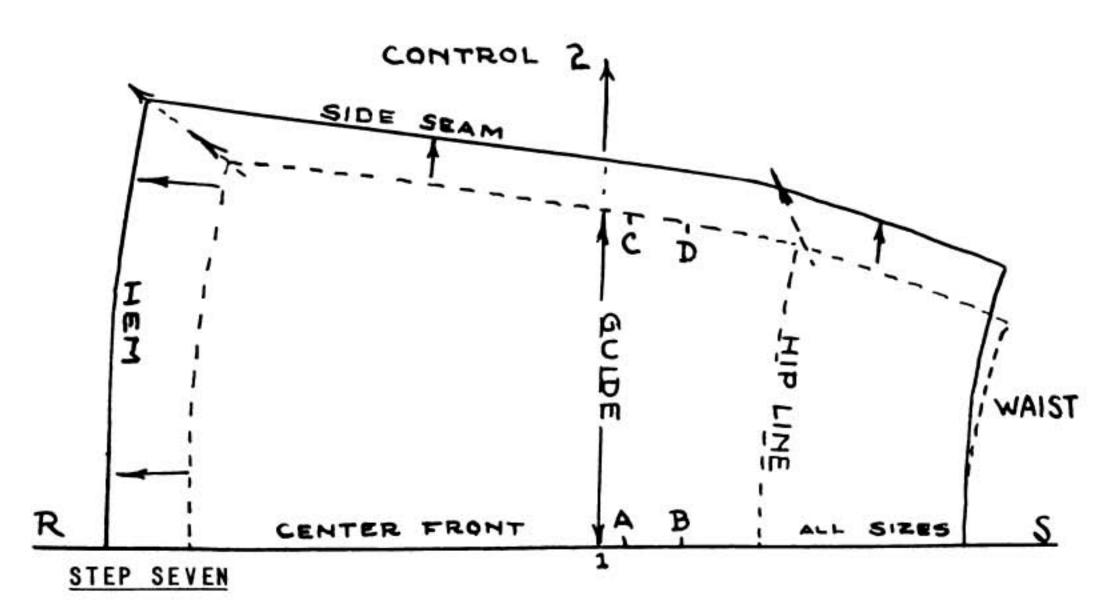


STEP FIVE

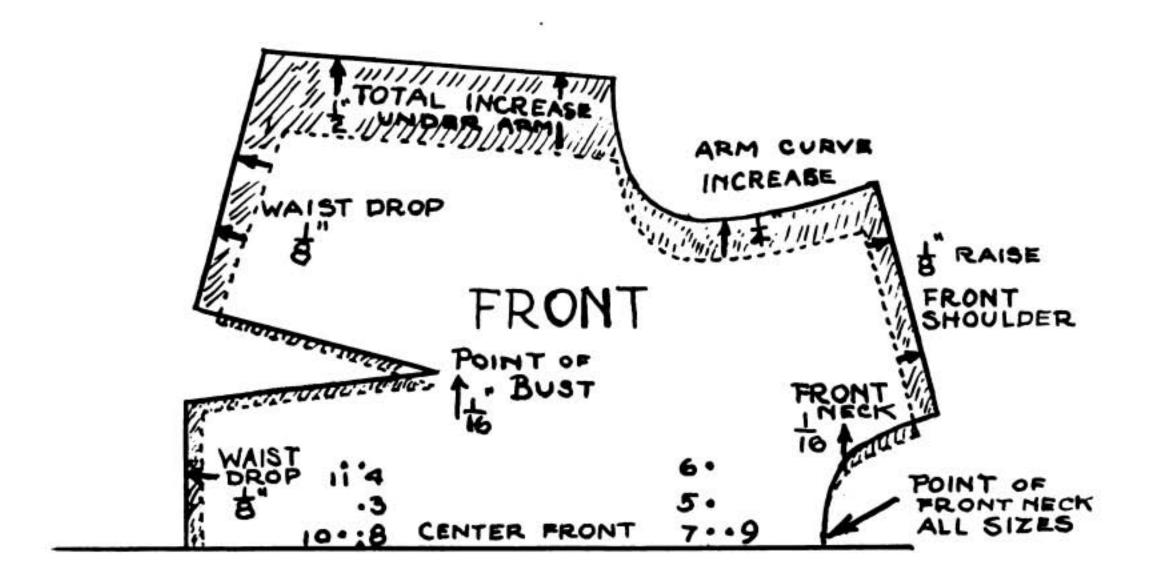
With point A on the center front on point 3 and point C of the side seam on control 2, mark the hip line notch (which has moved down 1/8 inch).



Move the pattern so that point B (center front) is on point 3 and point D (side seam) is on control 2. Mark out the lower part of the side seam and the hem, dropping the skirt length at the side to coincide with a like drop at the center front hem.



The grade diagram clearly shows the increases of the front skirt pattern as they appear in direct relation to the grade. Note that all relative lines, such as the waist, the hips, and the hem, have increased the exact amount of the total front grade.

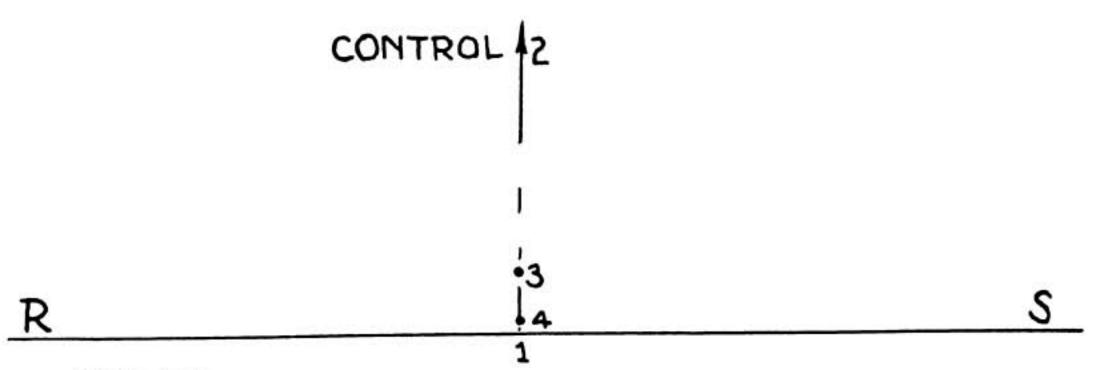


Front Grade -- Eight

Use the pattern to close up all openings and gaps after the grade has been completed. The above completed grade shows how the pattern outline grows in proportion. Shoulder raise, waist drop make the increase in height.

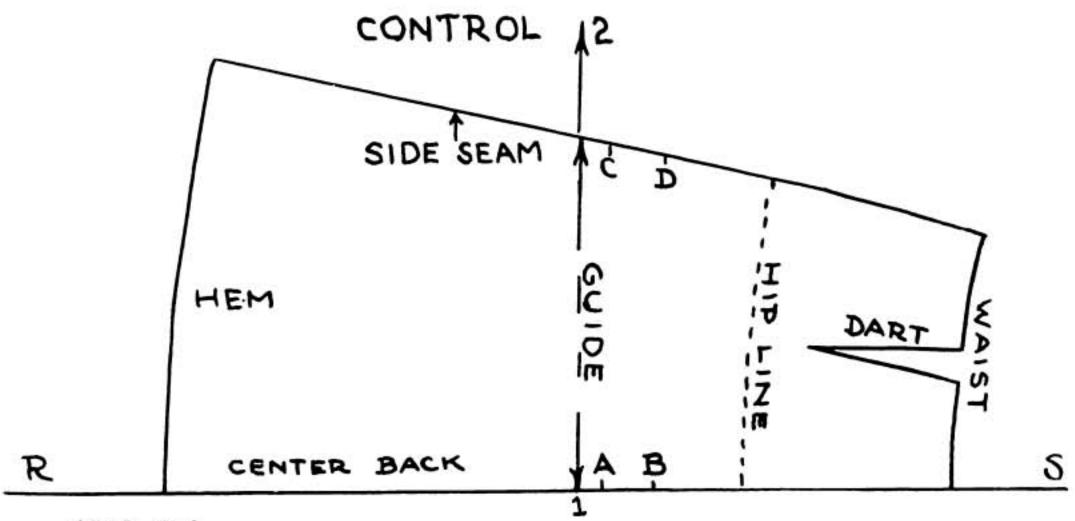
The increase across the chest and at the underarm shows the increase in width and around. Also, this shows how the front neck and bust dart move forward on a line perpendicular to the front edge on the same level.

To show the method of grading the simple front and back patterns clearly, the amounts pointed off in using the normal two-inch grade have been full scale. By doing this in quarter scale patterns, the things that occur while moving patterns in grading, show up more distinctly. Very few people who grade patterns really understand what does occur. Following through succeeding pattern problems will show you many things that happen within the pattern outlines.



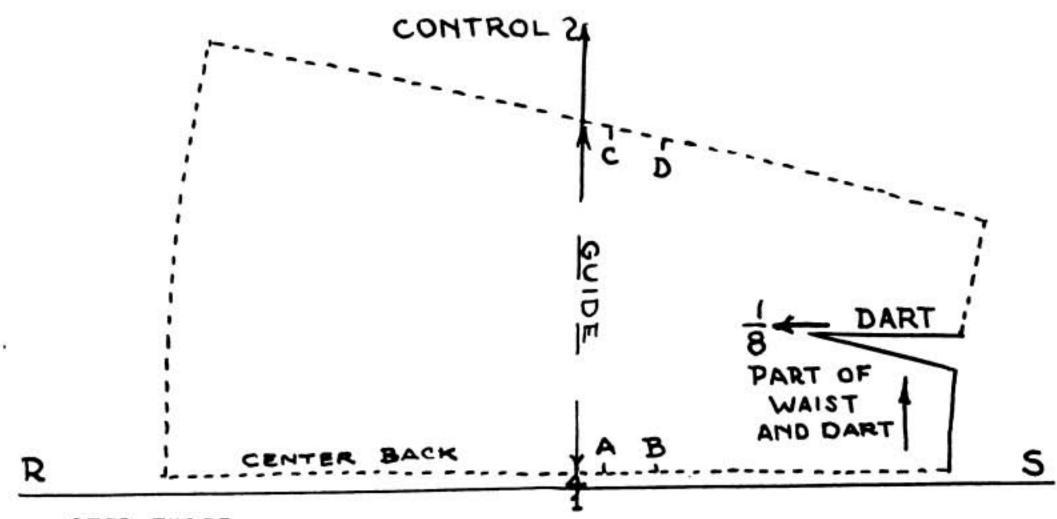
STEP ONE

Draw line R-S and, at point 1, erect Guide Control 2, perpendicular to it. Point 1 to point 4 is 1/16-inch; point 1 to point 3 is the amount of the total back grade.



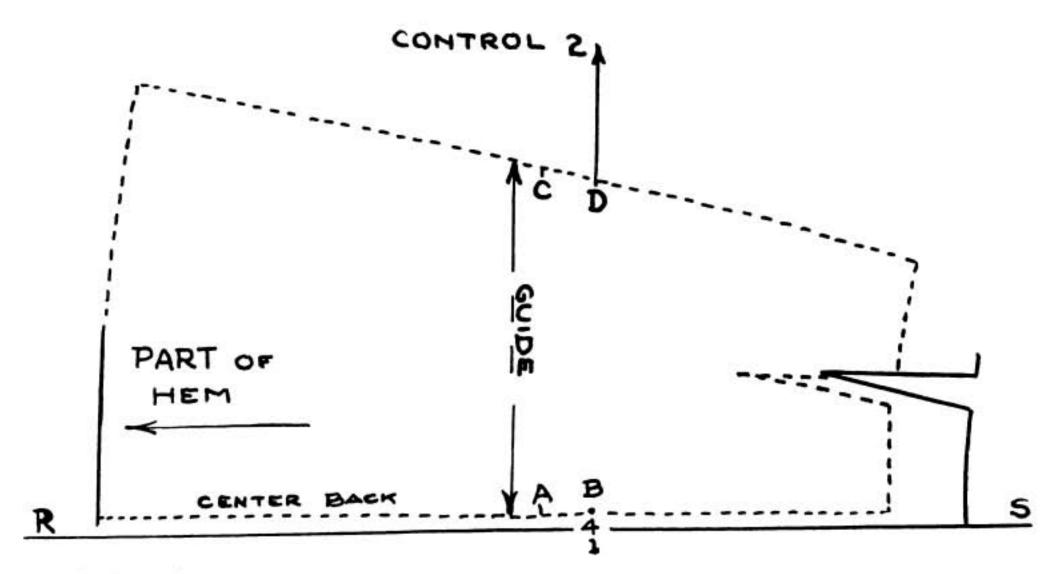
STEP TWO

Place the back skirt pattern center back on line R-S and continue the guide line through the skirt from point 1 to the side seam so that it coincides with Control 2. Guide to point A and Guide to point C is the 1/8-inch hip drop; Guide to point B and Guide to point D is the 1/2-inch hem drop.



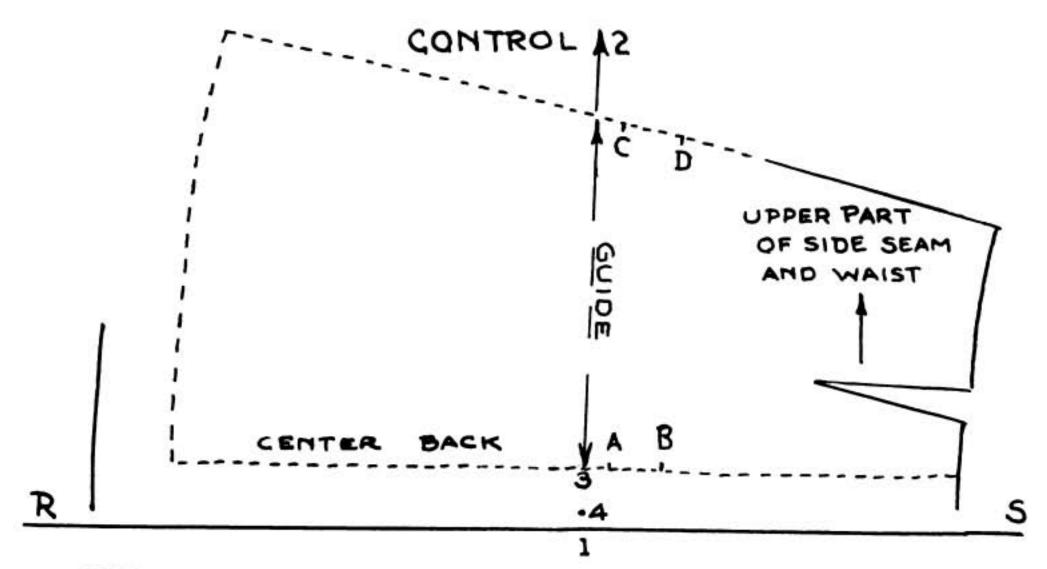
STEP THREE

With the guide of the skirt center back on point 4 and coinciding with Control 2, mark out part of the waist and the dart. Drop the point of the dart 1/8-inch, as indicated.



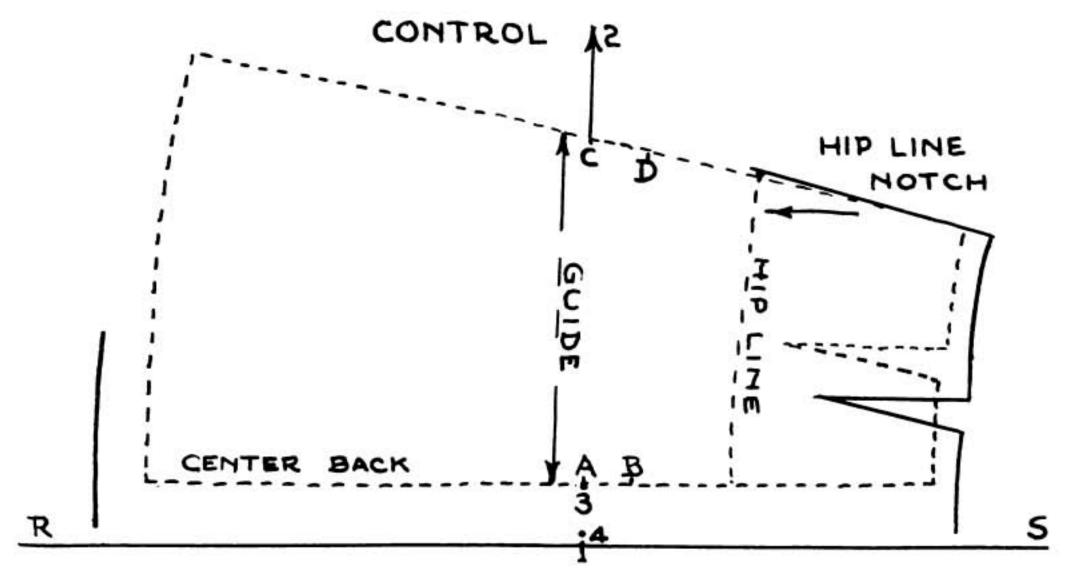
STEP FOUR

Move the skirt pattern to the left with point B (center back) on point 4 and point D (side seam) on Control 2. Mark out part of the hem, as indicated.



STEP FIVE

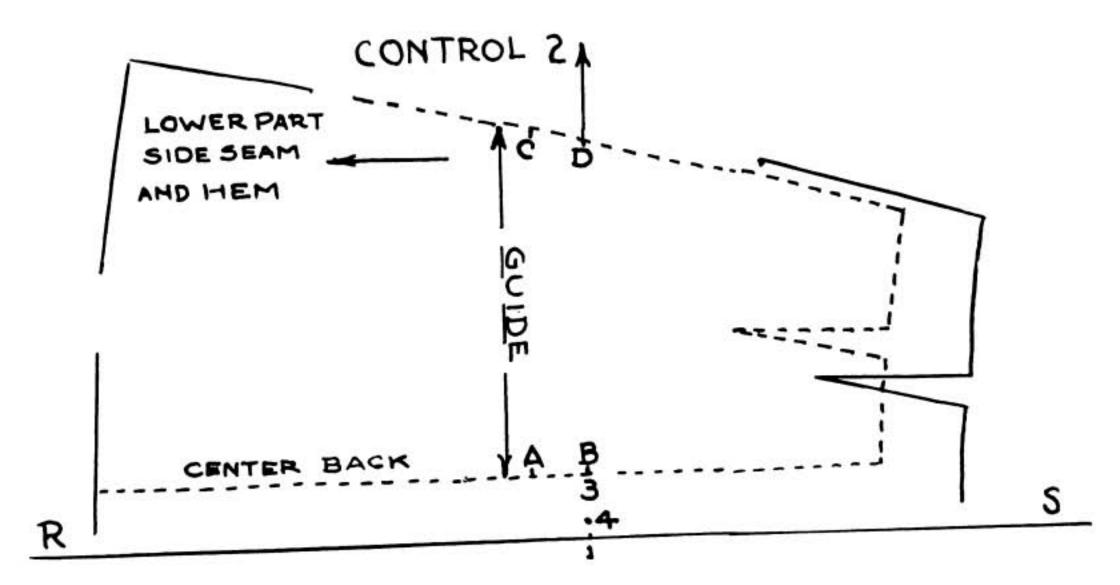
Move the skirt pattern forward the center back guide on point 3 and coinciding with control 2. Mark out the upper part of the side seam and the waist, as shown above.



STEP SIX

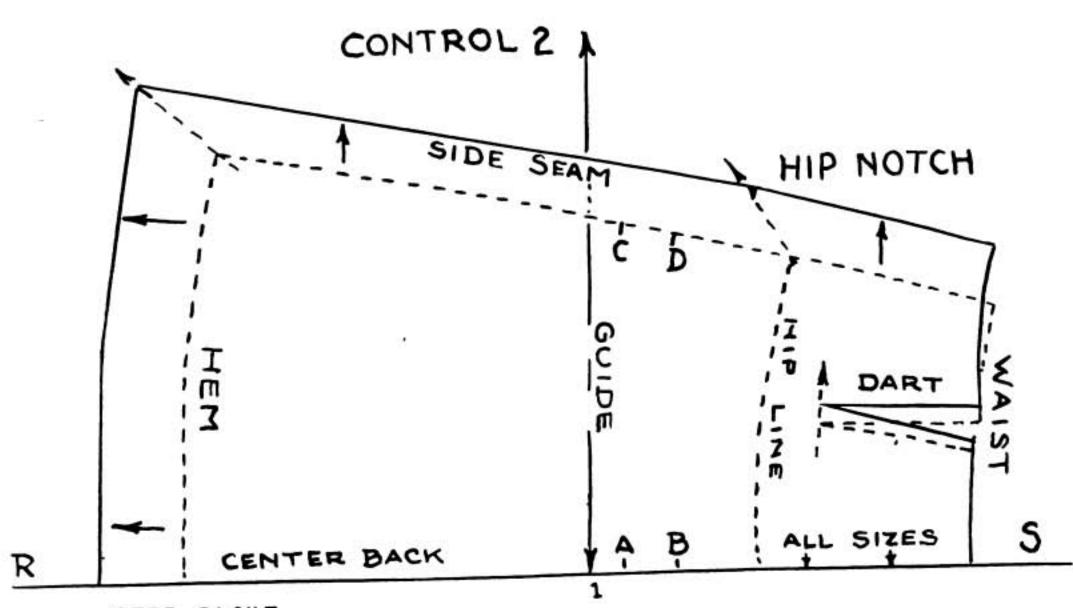
Move the skirt pattern to the left with point A (center back) and point 3 and point C (side seam) on Control 2. Mark out the hip line to the notch, as indicated (a 1/8-inch drop per grade).





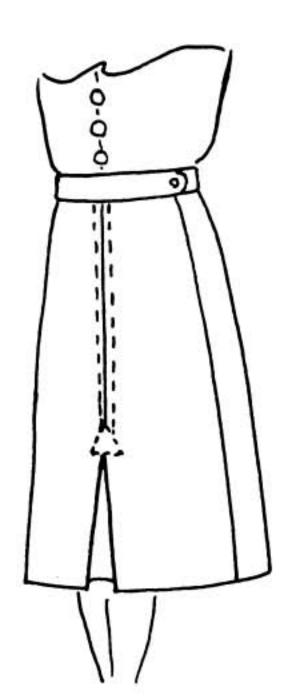
STEP SEVEN

Move the skirt pattern to the left with point B (center back) on point 3 and point D (side seam) on Control 2. Mark out the lower part of the side seam and the hem to drop the hem line the comparable 1/2-inch. Join to the hip notch.



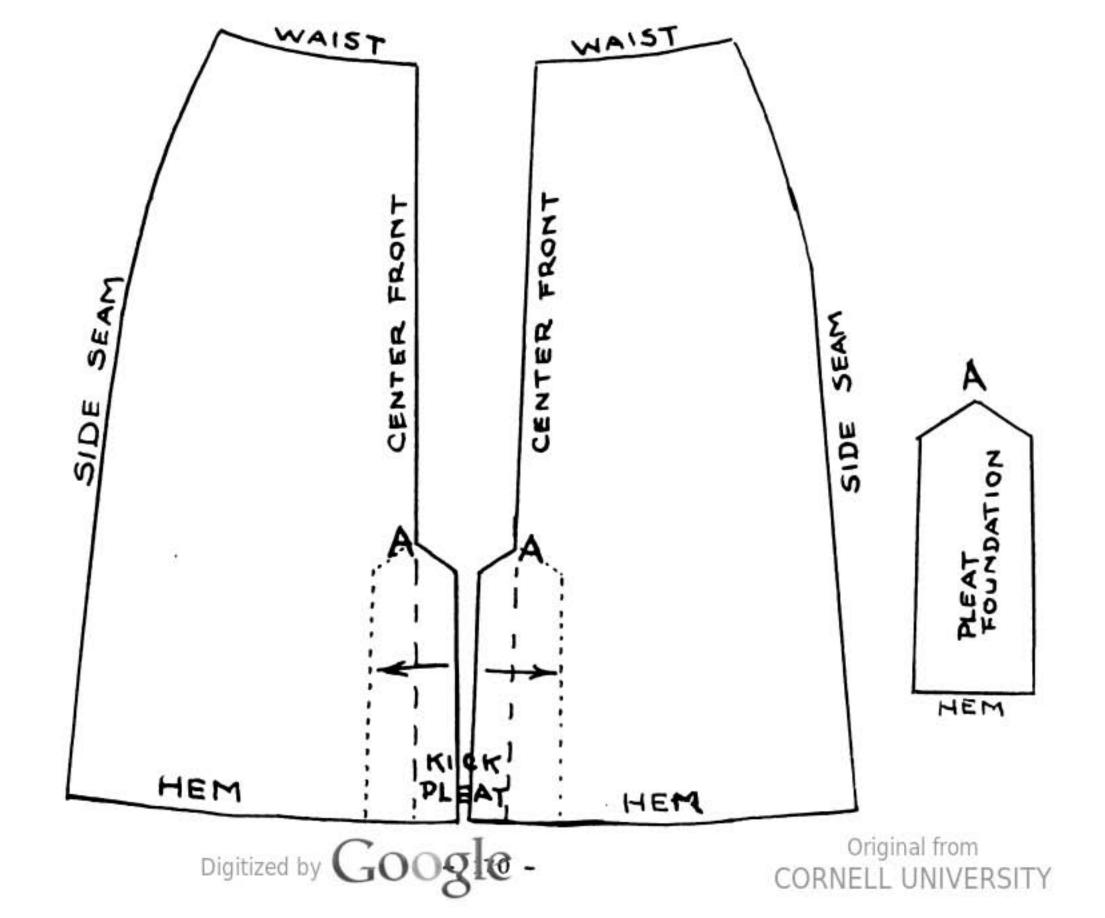
STEP EIGHT

This grade diagram shows how the normal back pattern compares with the grade, and how the various basic lines--waist, hip, and hem -- compare with the grade increases at these points.

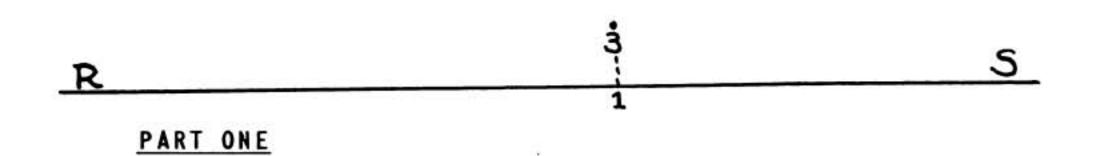


Analysis

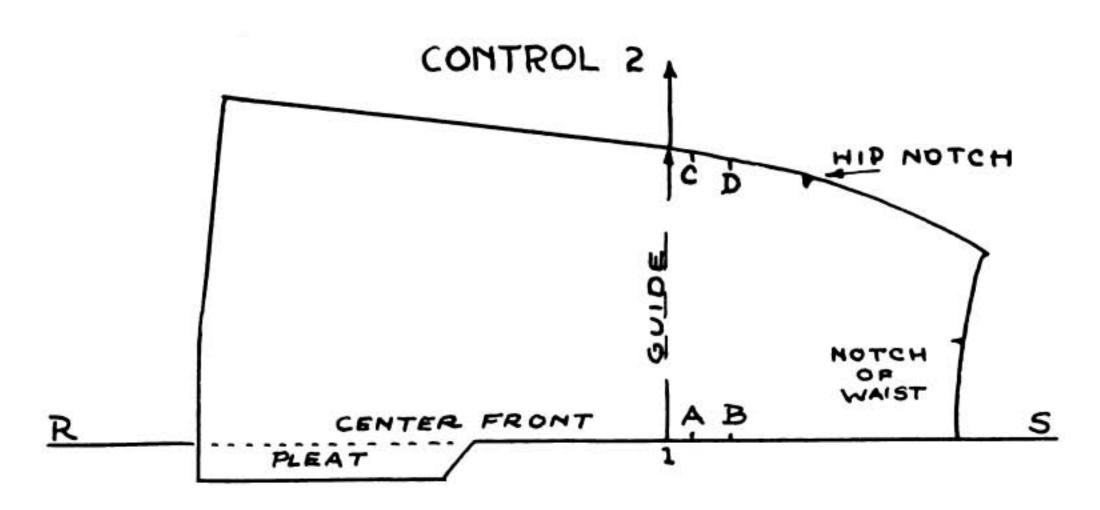
The kick-pleat is a detail principally used on skirts which are straight and have a very small hem sweep. The kick-pleat allows for extra ease in walking and adds more flexibility. Kick-pleats can be placed in front or in back, at the sides, and may be used singly or in groups.





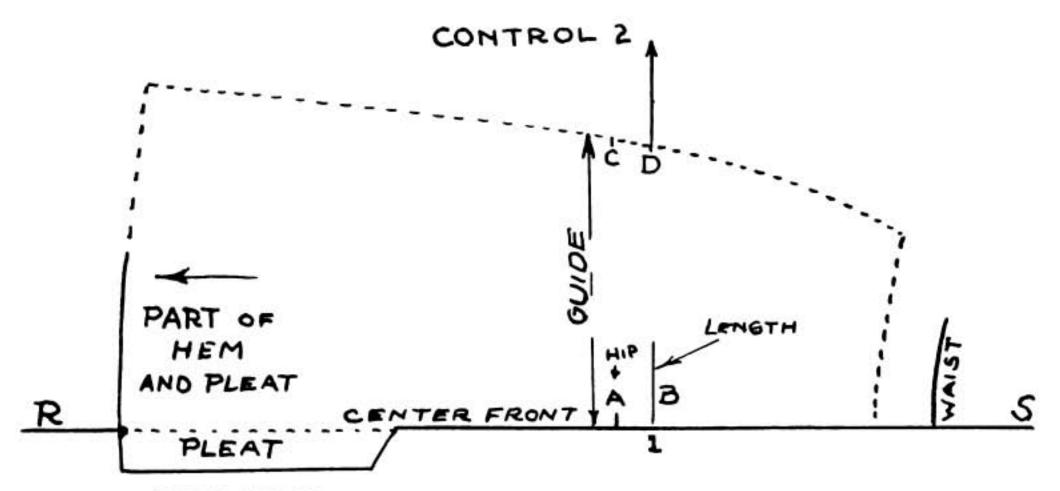


Mark line R-S and erect the Guide Control. From point 1 to point 3 is the total front skirt grade.



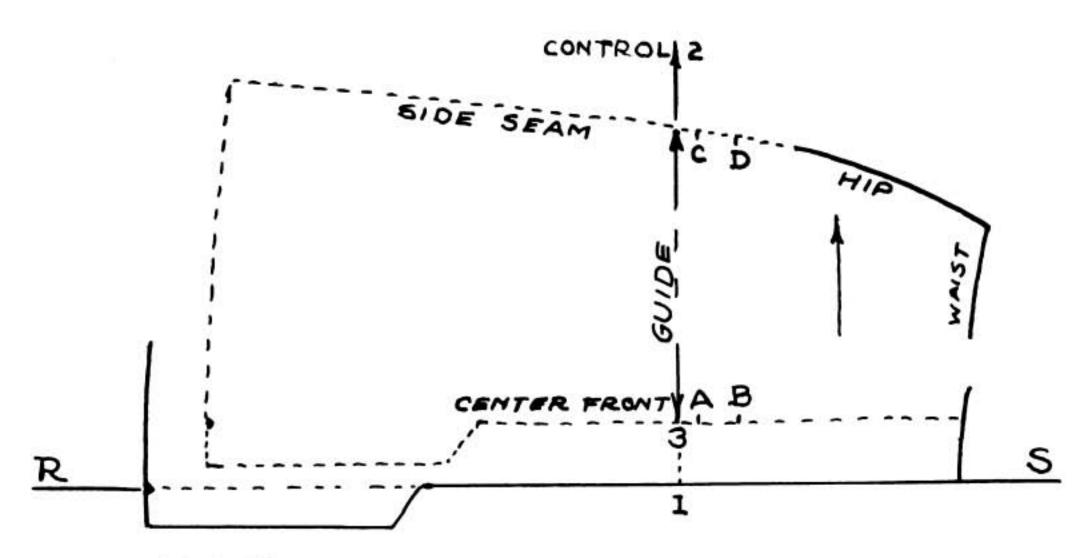
PART TWO

Place the center front of the skirt pattern on line R-S, as indicated. Draw a guide line across the skirt to coincide with control 2. This line is drawn from point 1. From the Guide to point A and from the Guide to Point C is 1/8-inch (for hip drop); from the Guide to points B and D is 1/2-inch (for the hem drop). Mark out the waist to the notch.



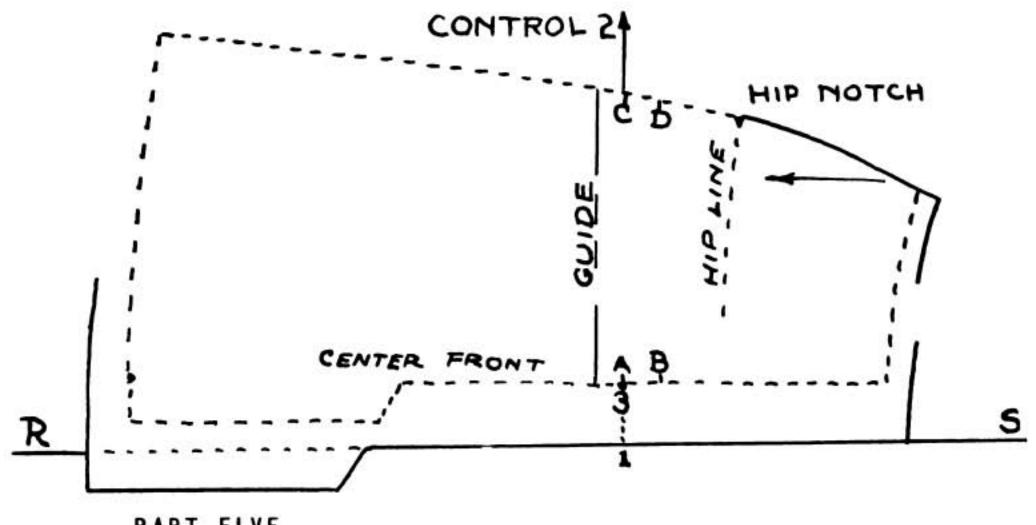
PART THREE

Move the pattern to the left with point B (center front) on point 1 and point D (side seam) on control 2. Mark out part of the hem and the entire kick-pleat, as indicated. This drops the hem and the kick-pleat at the center front.



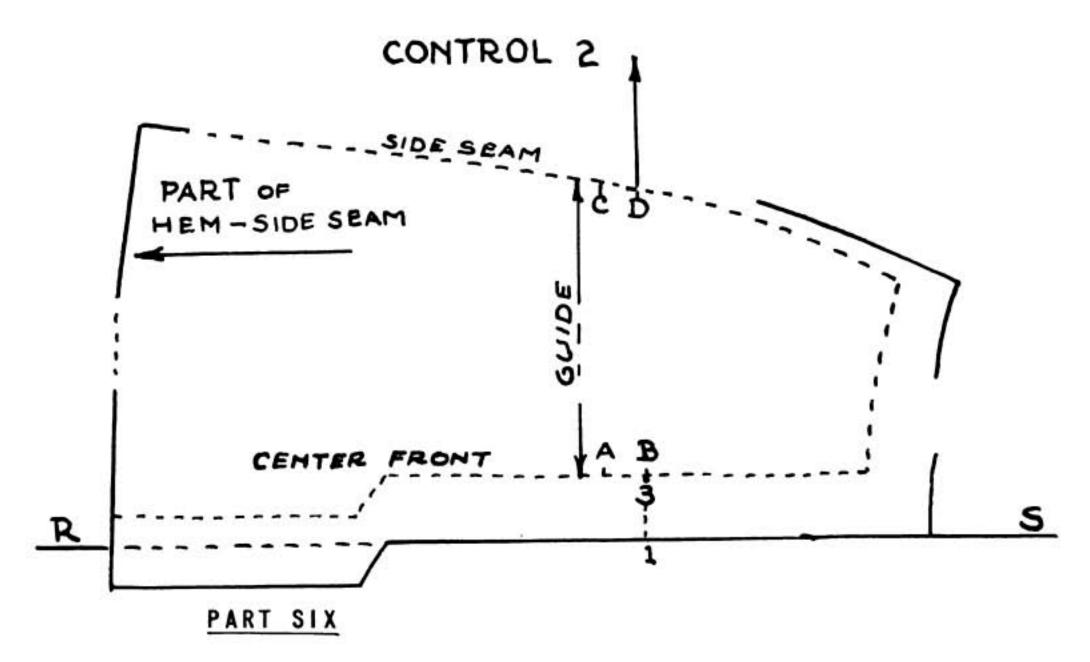
PART FOUR

Move the skirt pattern forward with the guide at the center front on point 3 and coinciding with control 2. Mark out the upper part of the side seam and the waist.



PART FIVE

Move the pattern to the left with point A (center front) on point 3 and point C (side seam) on control 2. Mark out the hip notch and join it to the waist for a 1/8-inch drop.

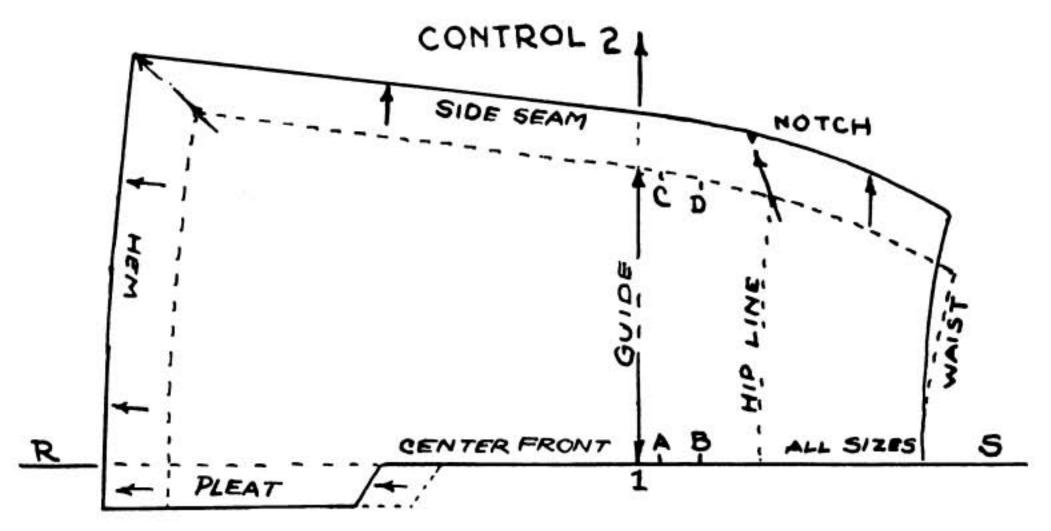


Move the pattern to the left with point B (center front) on point 3 and point D (side seam) on control 2. Mark part of the hem and the side seam. Join the hem to the hip notch to complete the grade (1/2-inch lenger).

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PART SEVEN

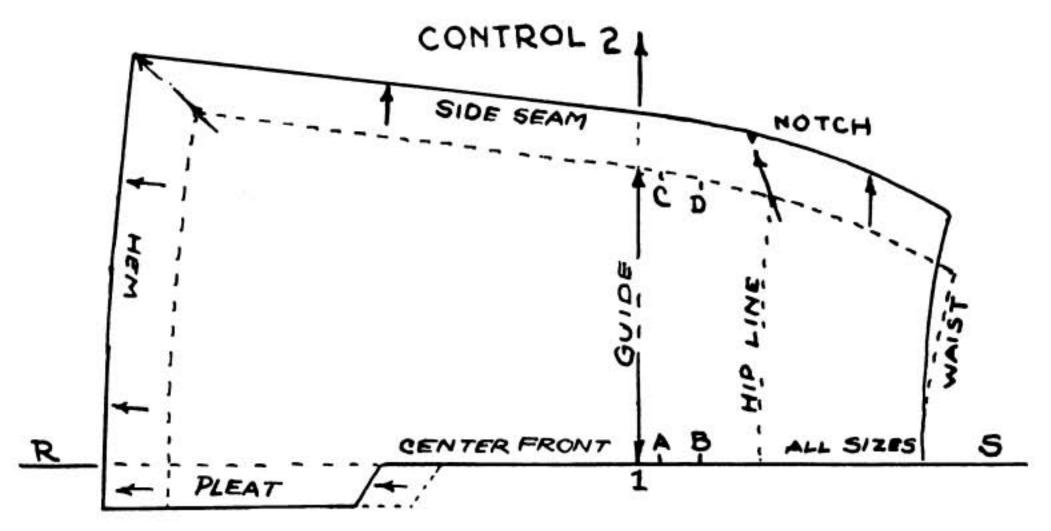
Set the front skirt pattern with the kick-pleat back on line R-S. Note how the grade compares with the original pattern in relation to all the basic points, and how the kick-pleat is kept intact as it drops. The hemline does not increase in length or in width.

Pleat Foundation



The pleat foundation, as can be seen above, does not receive any grade increase. This pleat and foundation is an added detail and, therefore, is never changed. Only in specific instances -- where the hem drop becomes excessive, for example -- is the length of the kick-pleat ever increased.





PART SEVEN

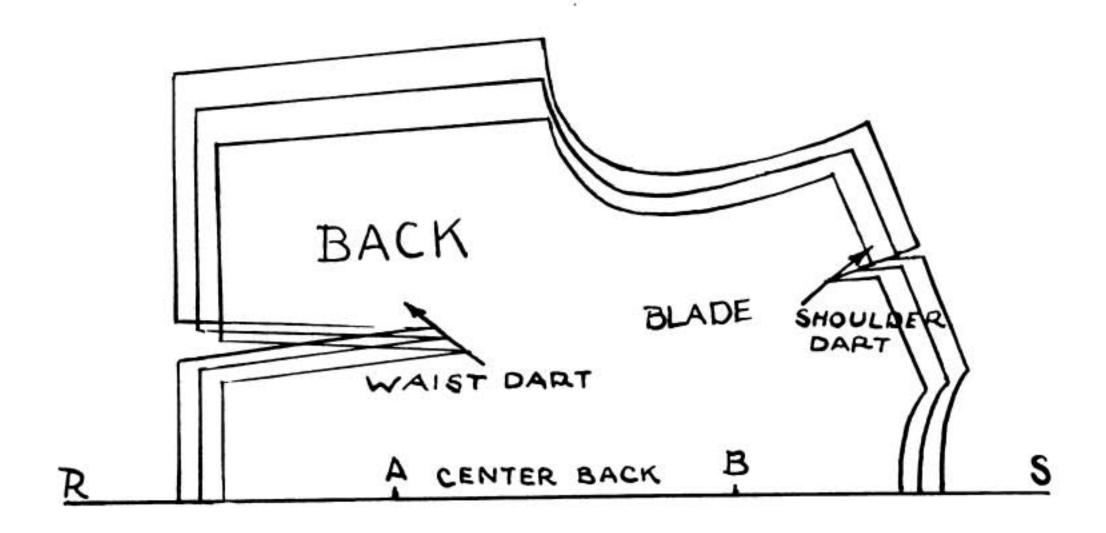
Set the front skirt pattern with the kick-pleat back on line R-S. Note how the grade compares with the original pattern in relation to all the basic points, and how the kick-pleat is kept intact as it drops. The hemline does not increase in length or in width.

Pleat Foundation

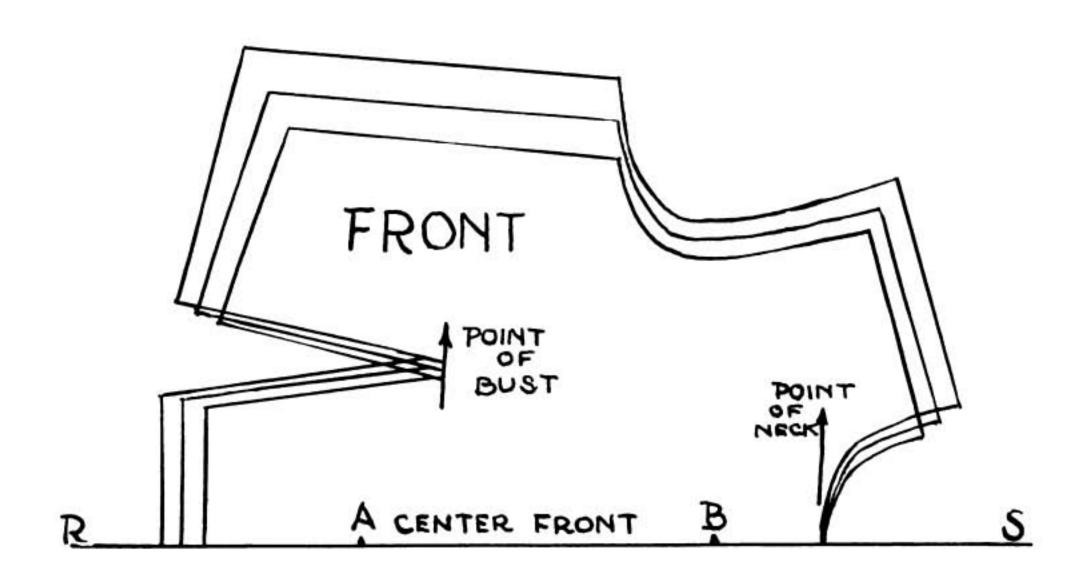


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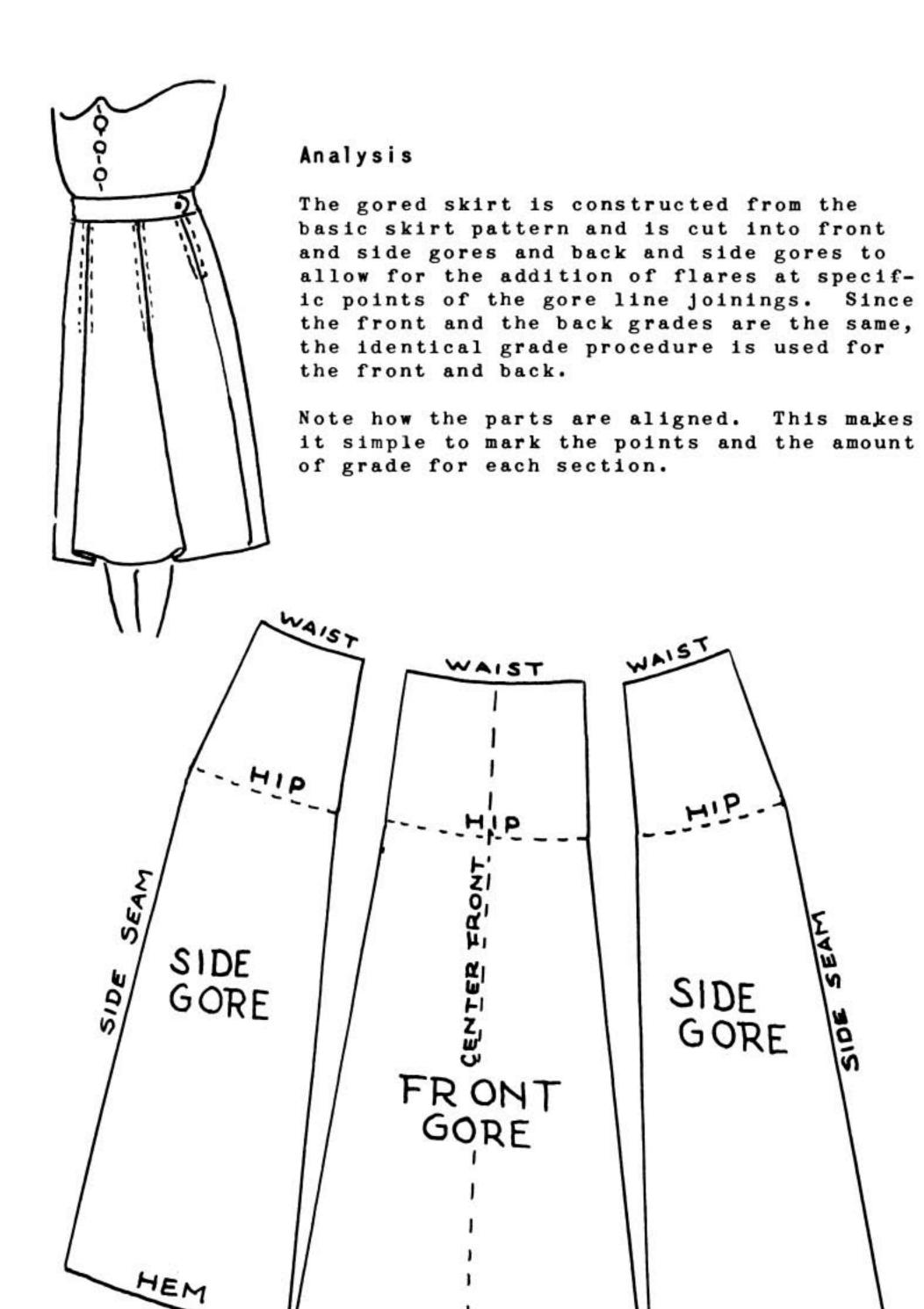




Here you see the back grade indicated by the graduated outlines of the back, size per size. Note how the waist and shoulder darts point away from each other, enlarging ease around the blade.



How the front grade increase looks when all graded patterns are placed even on the center front with all points of the front neck together as indicated. The points of the bust are also on a straight line.

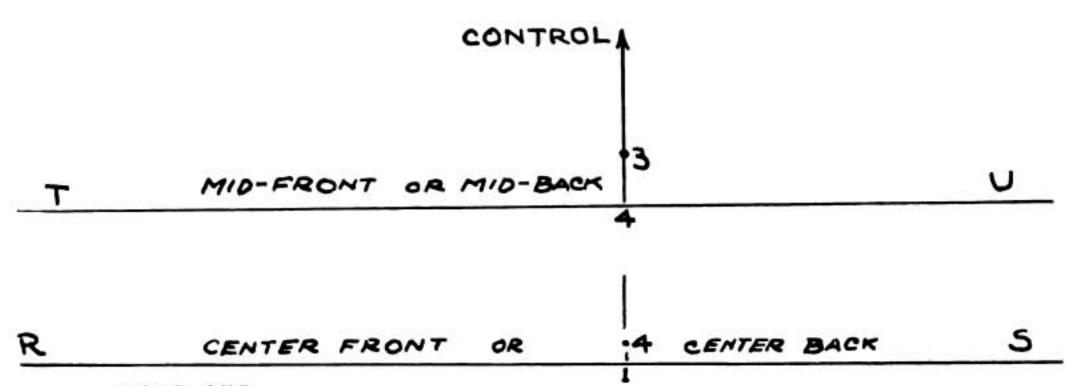


HEM

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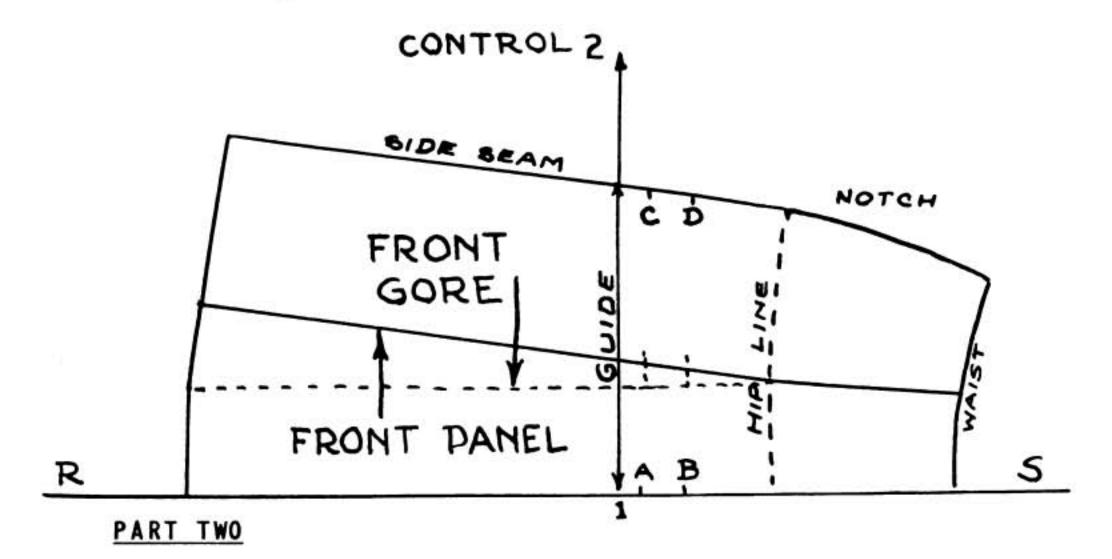
HEM



PART ONE

The two grade lines (R-S and T-U) are set up to take the entire front skirt. Line R-S is used for the center front panel and shows the grade increases from point 1 to point 4 as 1/16-inch. Line T-U is used for the second part, or gore, and shows the balance of the grade increase on control 2 (point 4 to point 3).

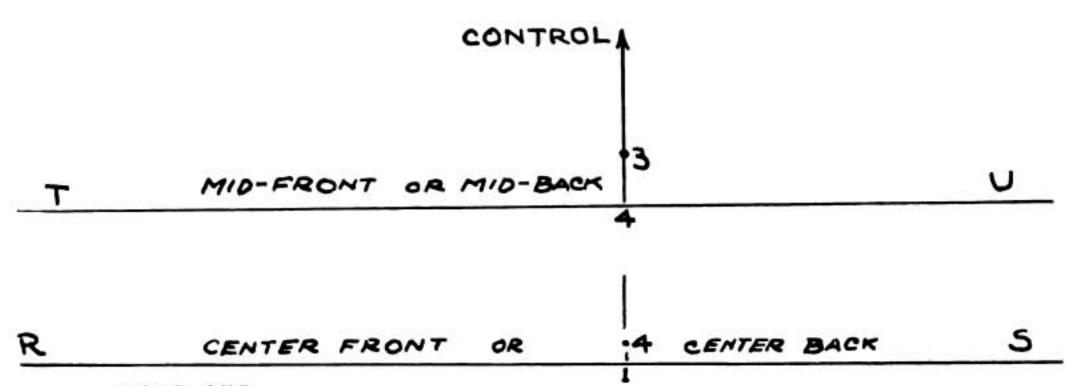
Front Panel, Front Gore



Place the front skirt together in its original position so that the flare addition over-laps, as indicated. Draw a guide line across both sections from point 1 so that it coincides with control 2. From point 1 to point A and from the guide to point C is 1/8-inch (for the hip drop); from point 1 to point B and from the guide to point D is 1/2-inch (for the hem drop).

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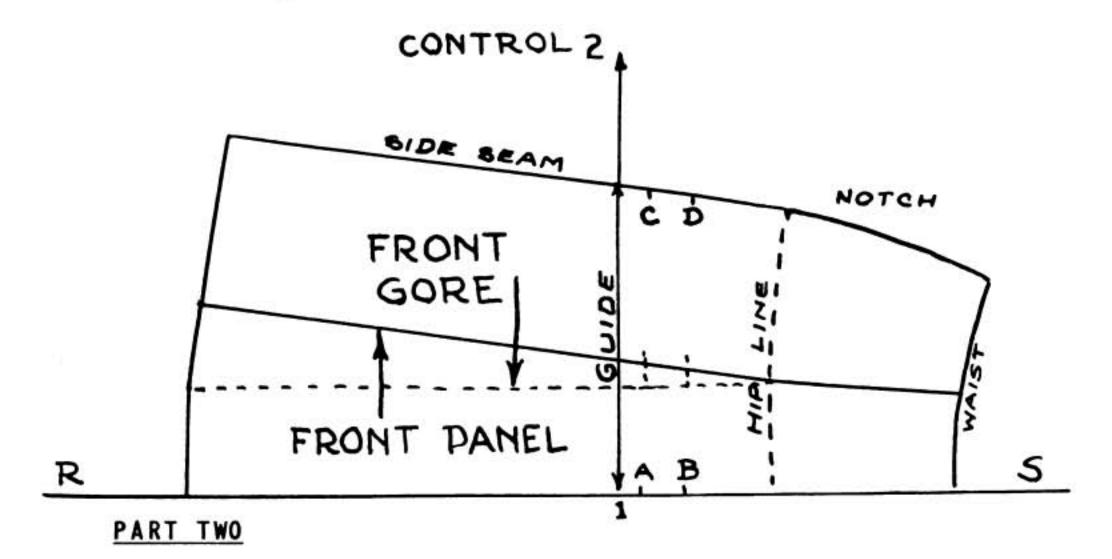
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PART ONE

The two grade lines (R-S and T-U) are set up to take the entire front skirt. Line R-S is used for the center front panel and shows the grade increases from point 1 to point 4 as 1/16-inch. Line T-U is used for the second part, or gore, and shows the balance of the grade increase on control 2 (point 4 to point 3).

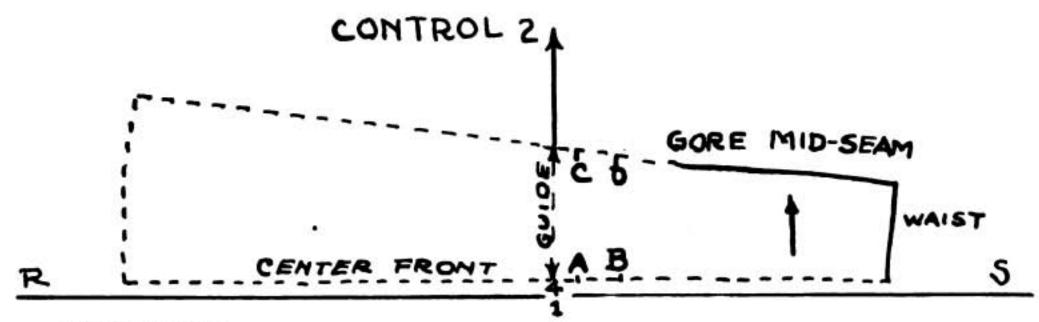
Front Panel, Front Gore



Place the front skirt together in its original position so that the flare addition over-laps, as indicated. Draw a guide line across both sections from point 1 so that it coincides with control 2. From point 1 to point A and from the guide to point C is 1/8-inch (for the hip drop); from point 1 to point B and from the guide to point D is 1/2-inch (for the hem drop).

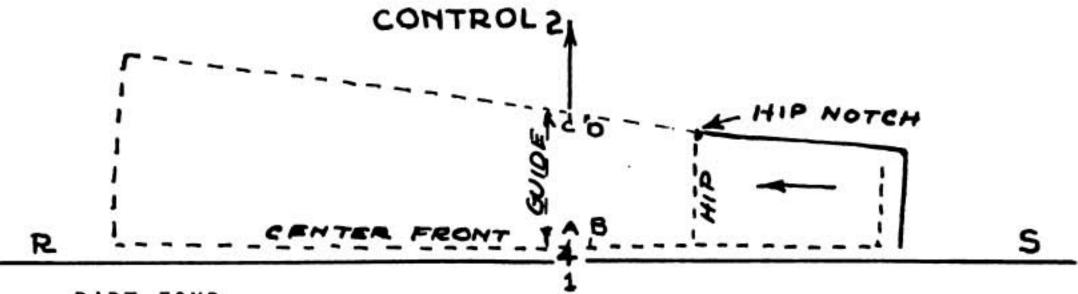
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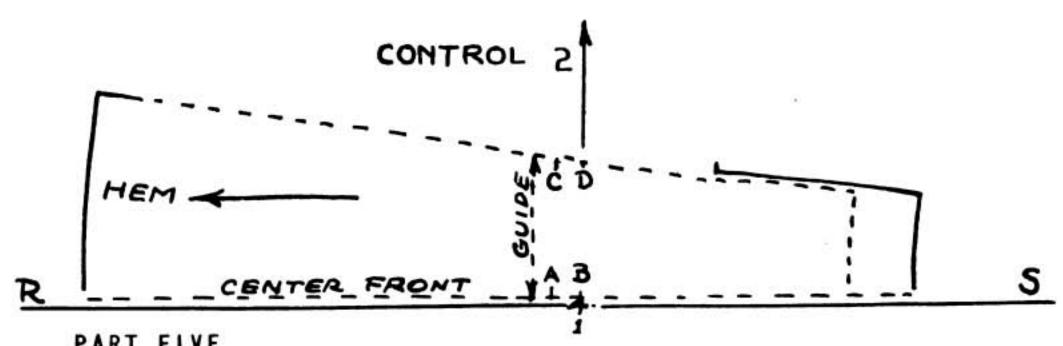
PART THREE

Place the center front panel so that the guide coincides with Control 2 at a point 1/16-inch forward. Mark out the waist to the gore mid-seam.



PART FOUR

Move the panel to the left with point A of the center front on point 4 and with point C on the guide control. Continue the gore mid-seam to the hip notch.

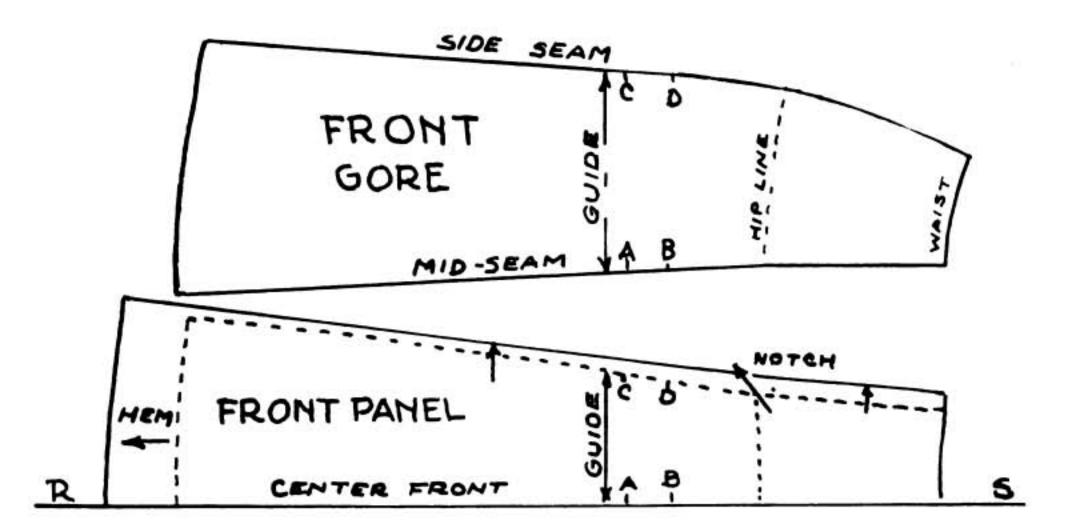


PART FIVE

Move the panel to the left with point B of the center front on point 4 and with point D on control 2. out the hem and the point of the mid-seam. Join it to the hip notch to complete the panel grade.

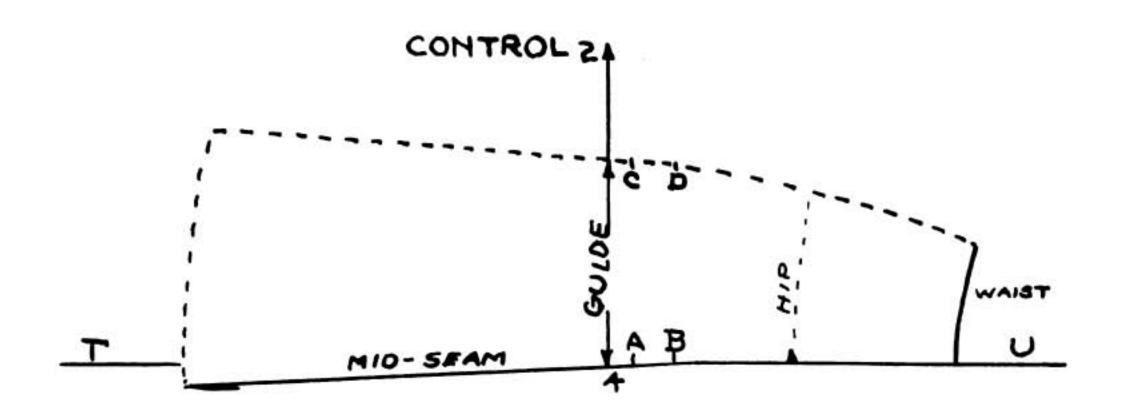
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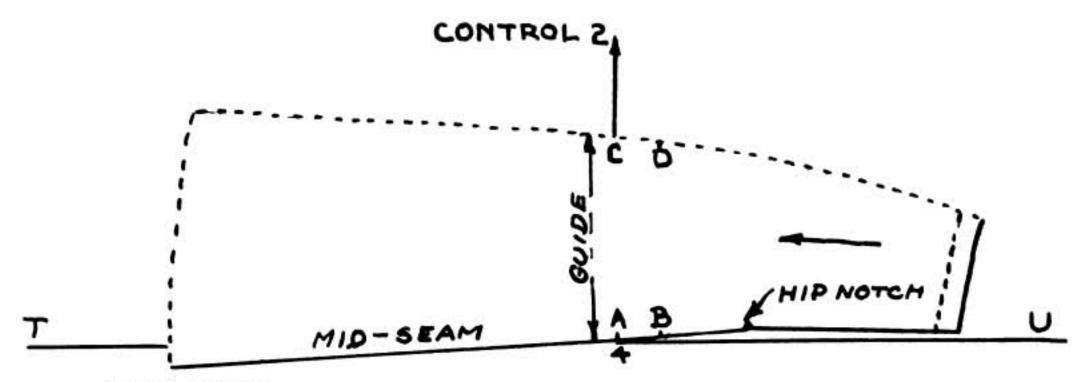
PART SIX

The graded front panel and the gore pattern are shown here to indicate the manner in which the grade increase is to be made in the gore pattern.



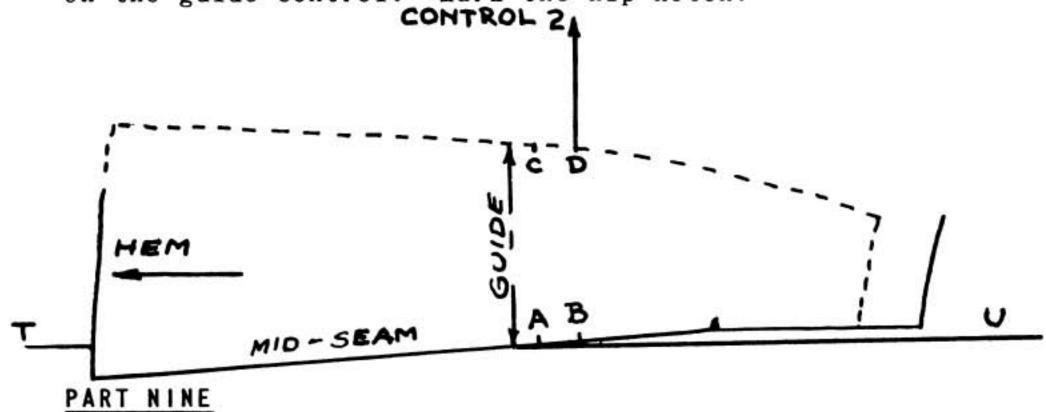
PART SEVEN

Place the gore pattern midseam so that the guide is on point 4 of line T-U and coinciding with control 2. Mark out half of the waist and the midseam line to the hip notch.

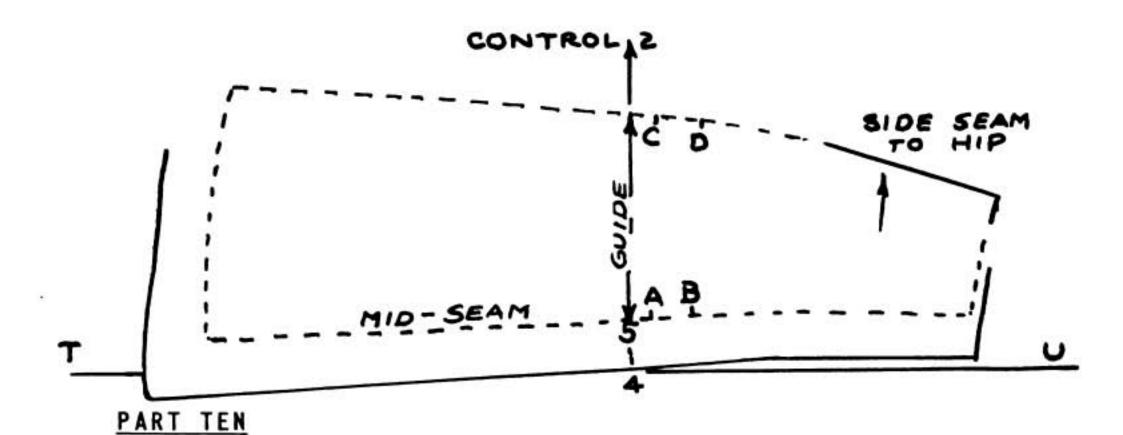


PART EIGHT

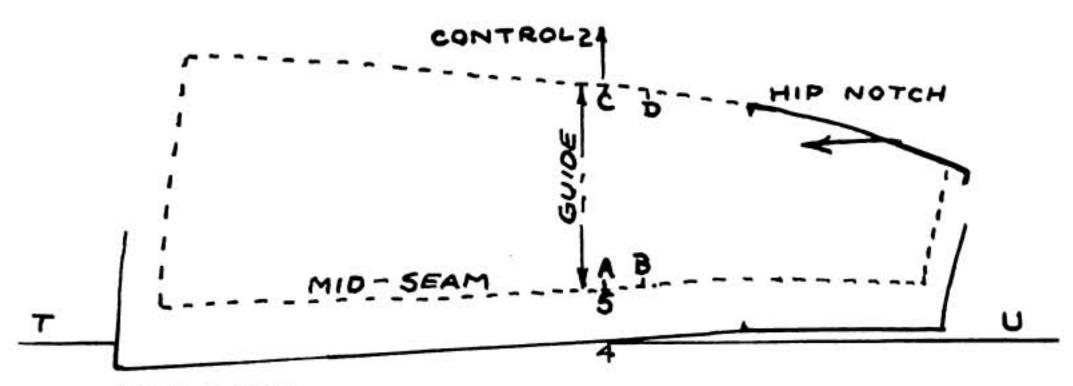
Move the pattern of the gore to the left 1/8-inch with point A on point 4 and with point C (at the side seam) on the guide control. Mark the hip notch.



Move the pattern of the gore to the left 1/2-inch with point B on point 4 and with point D (at side seam) on control 2. Mark part of the hem.

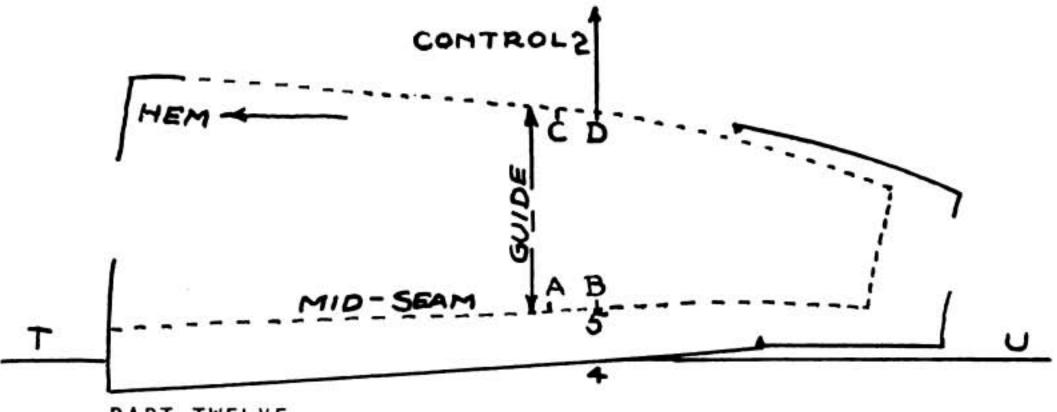


Move the pattern forward the balance of the grade at the side, with the guide on point 5 and coinciding with control 2. Mark the waist and the side seam to the hip.



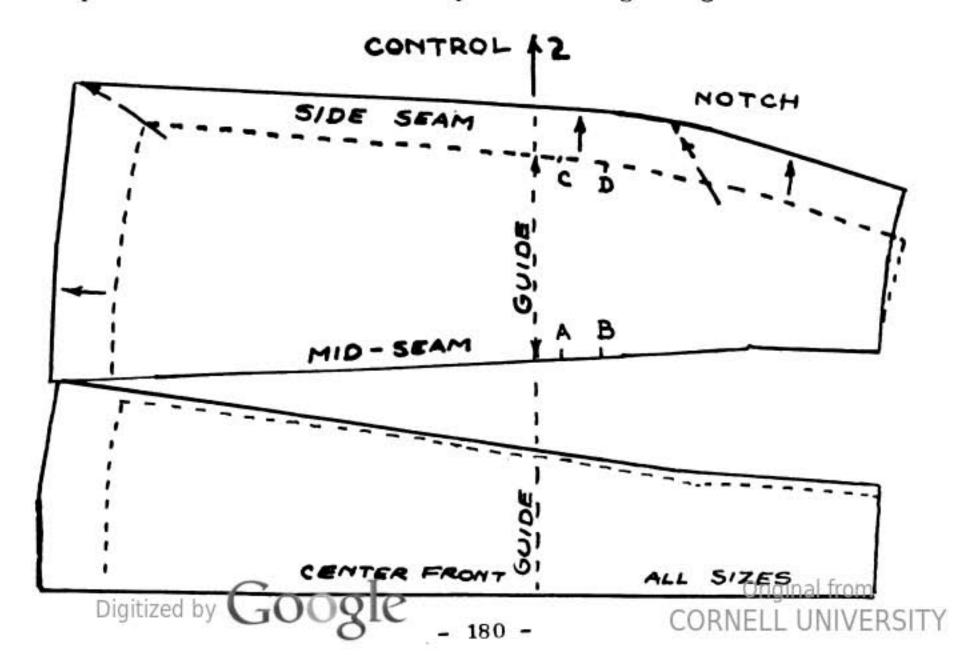
PART ELEVEN

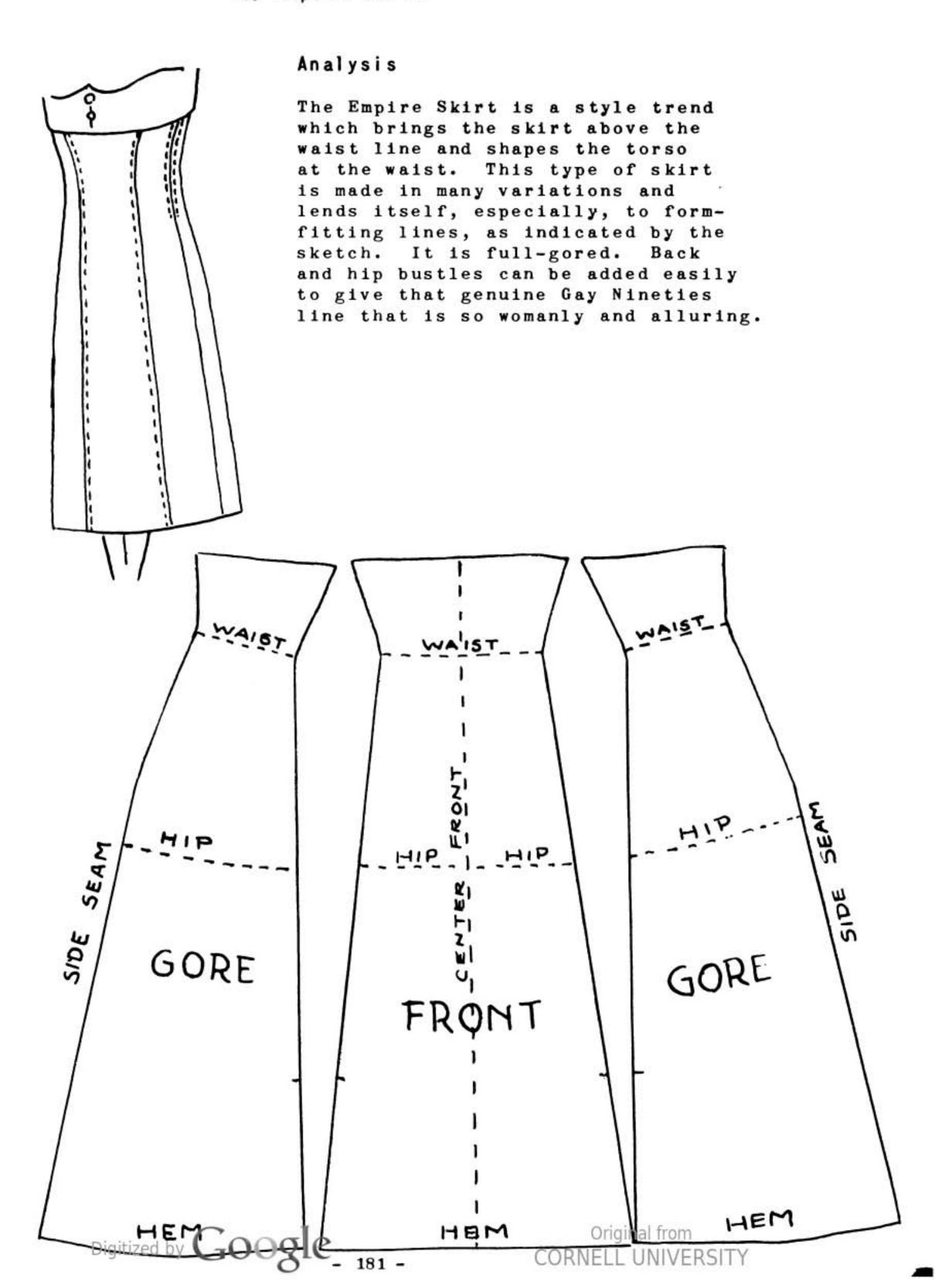
Move the gore pattern to the left with midseam point A on point 5, and with side seam point C on control 2. Mark the side to the hip notch (a 1/8-inch drop).

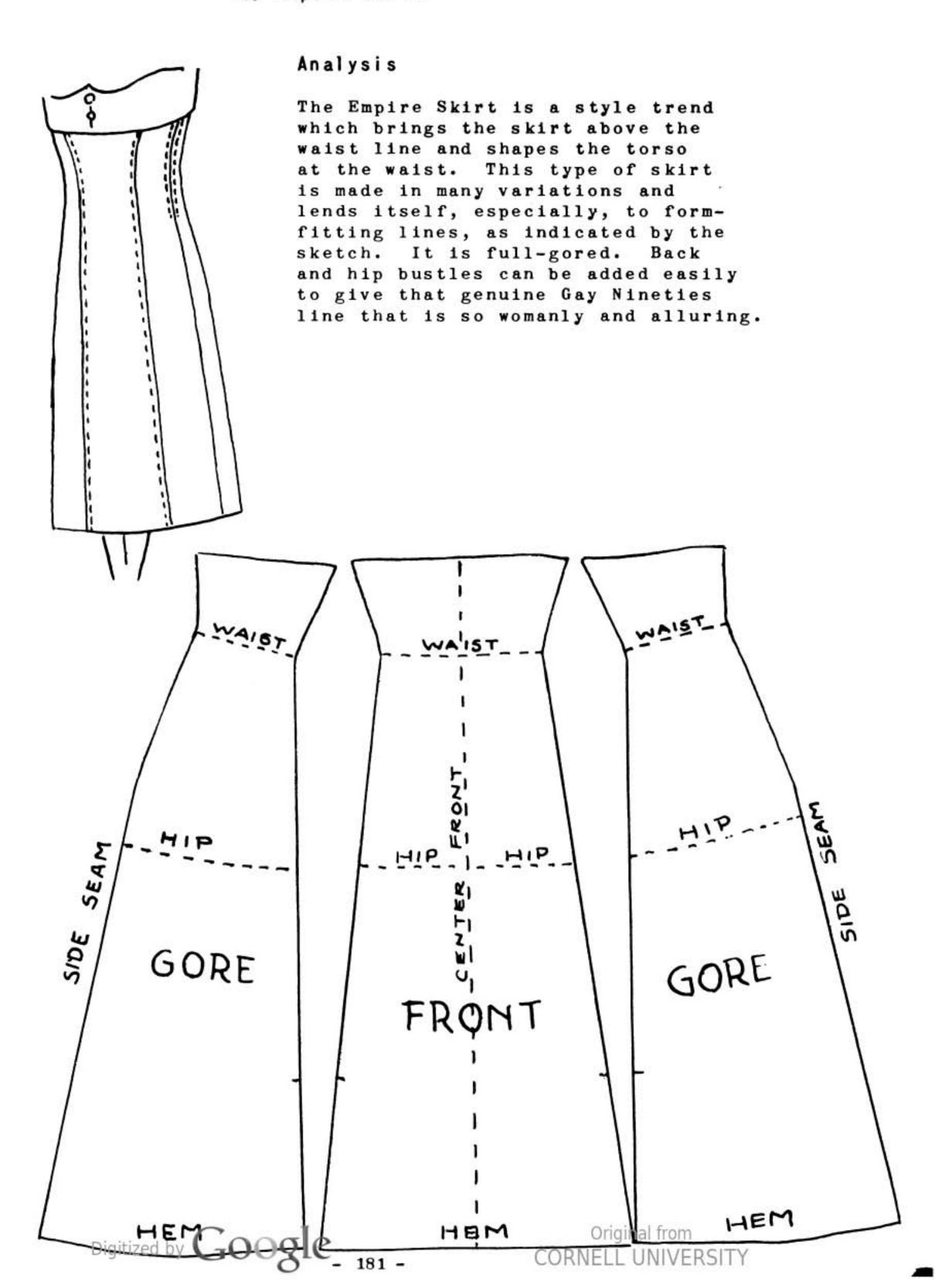


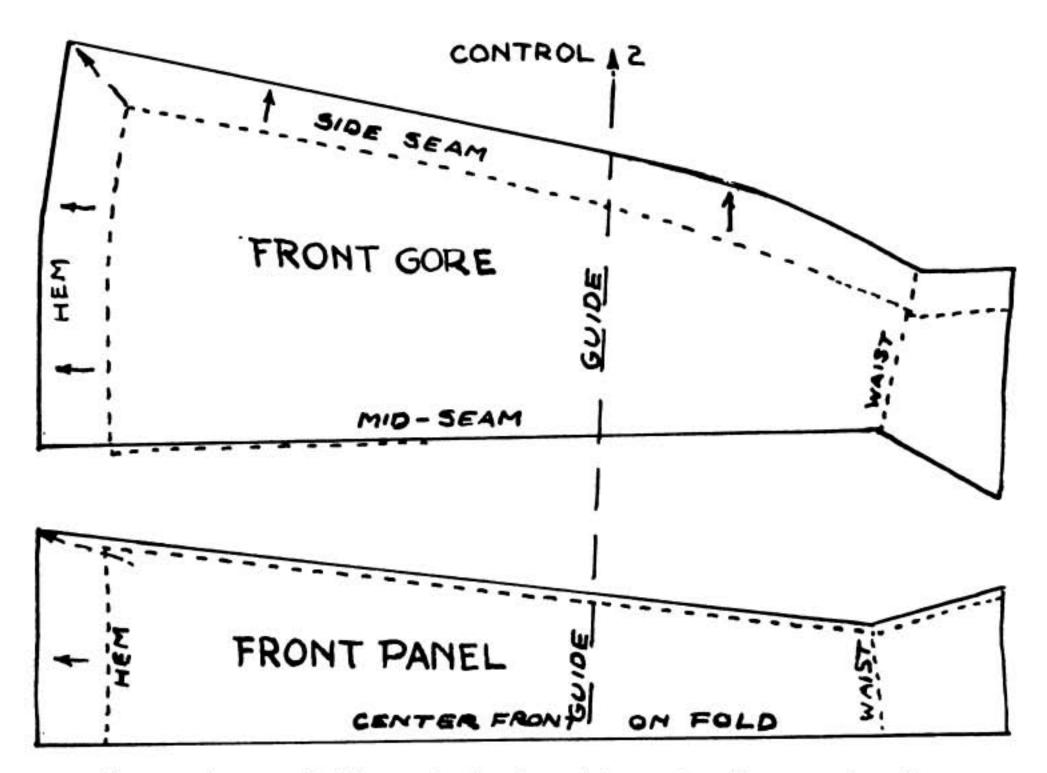
PART TWELVE

Move the gore pattern to the left with the midseam point B on point 5 and the side seam point D on control 2. Mark the hem at the side and join it to the hip notch in order to complete the gore grade.





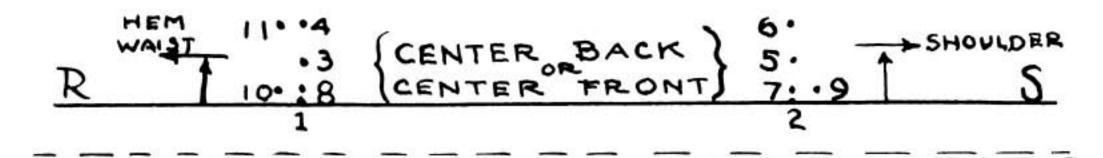




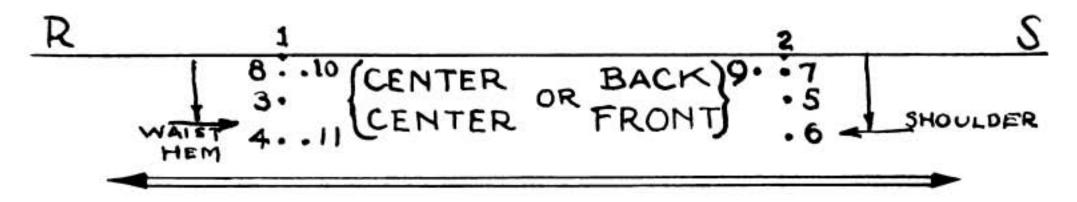
Comparison of the original pattern to the grade shows the relationship of the grade increases for the various parts. The front and back parts of the pattern are graded in the same manner.

NOTE: The waist line remains at the same level. There is no raise above the waist line. Proportionate increases are executed in the same manner as for the simple gored skirt.

INCREASE



DECREASE (De-grade)



Analysis:

De-grade is the direct opposite of the regular grade; it refers to the act of making a pattern proportionately smaller, according to the accepted differences as noted in the chart of differentials, size to size. The procedure followed for size to size increases is therefore carried out in an exactly opposite manner.

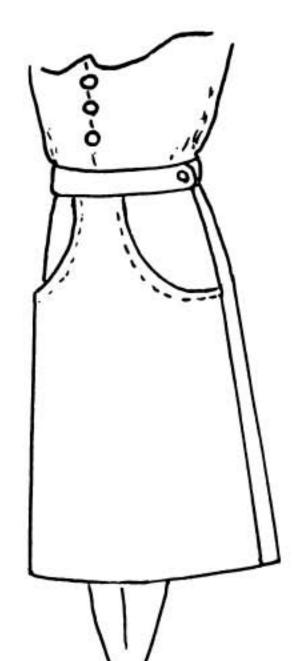
All guide lines along which the pattern moves run in the opposite direction. All points or measurements for the de-grade are pointed off along the guide lines in the opposite direction, as will be shown.

Where the increase measurements were forward, and parallel to the center front line, R-S, and the center back line, R-S, the decrease measurements are pointed off on the guide line continued back or below the center front or center back line, here also designated R-S, and operate for all decreases around the form.

The de-grade for the shoulder drop is made toward the waist, or below guide line 2. The de-grade for the raise of the waist is made above guide line 1, pointing towards the shoulder drop.

The diagrams shown at the top of this page graphically illustrate the position of the measured differences between grading for increase and grading for decrease (de-grade).

5. Skirt with Side Yoke and Pockets

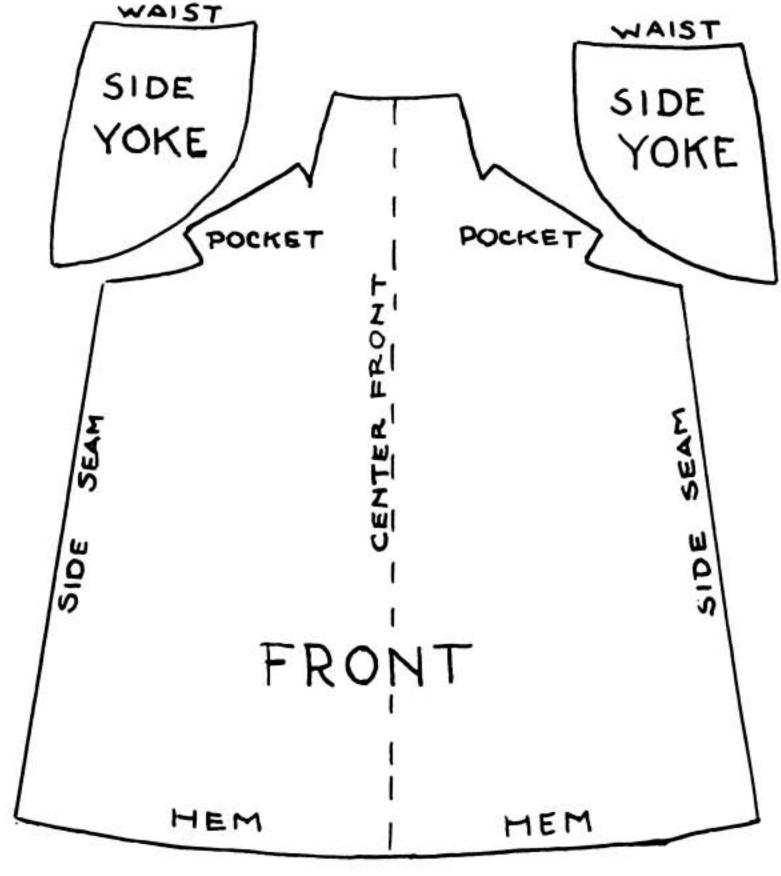


Analysis

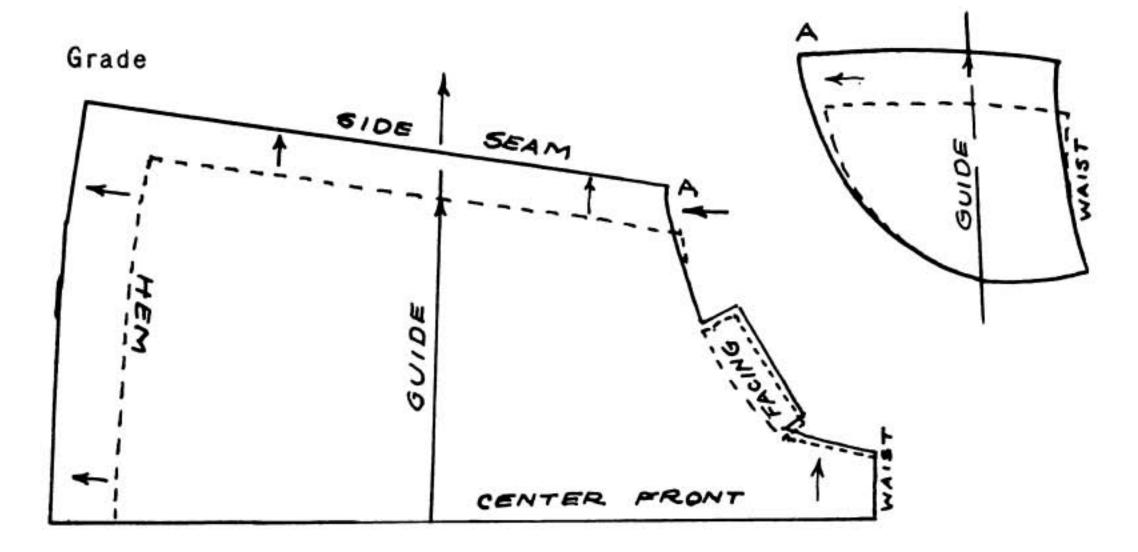
One of the very popular types of skirts is the simple, straight type, with a side yoke running into pockets. It is shown here by a sketch and a layout of the front pattern. It is a very simple matter to grade this pattern from size to size.

In the simple analysis, the main portion which is different is the upper part at the waist, where the side yokes receive the major grade increase.

Pockets or side yokes move from the center front the same distance a dart would.



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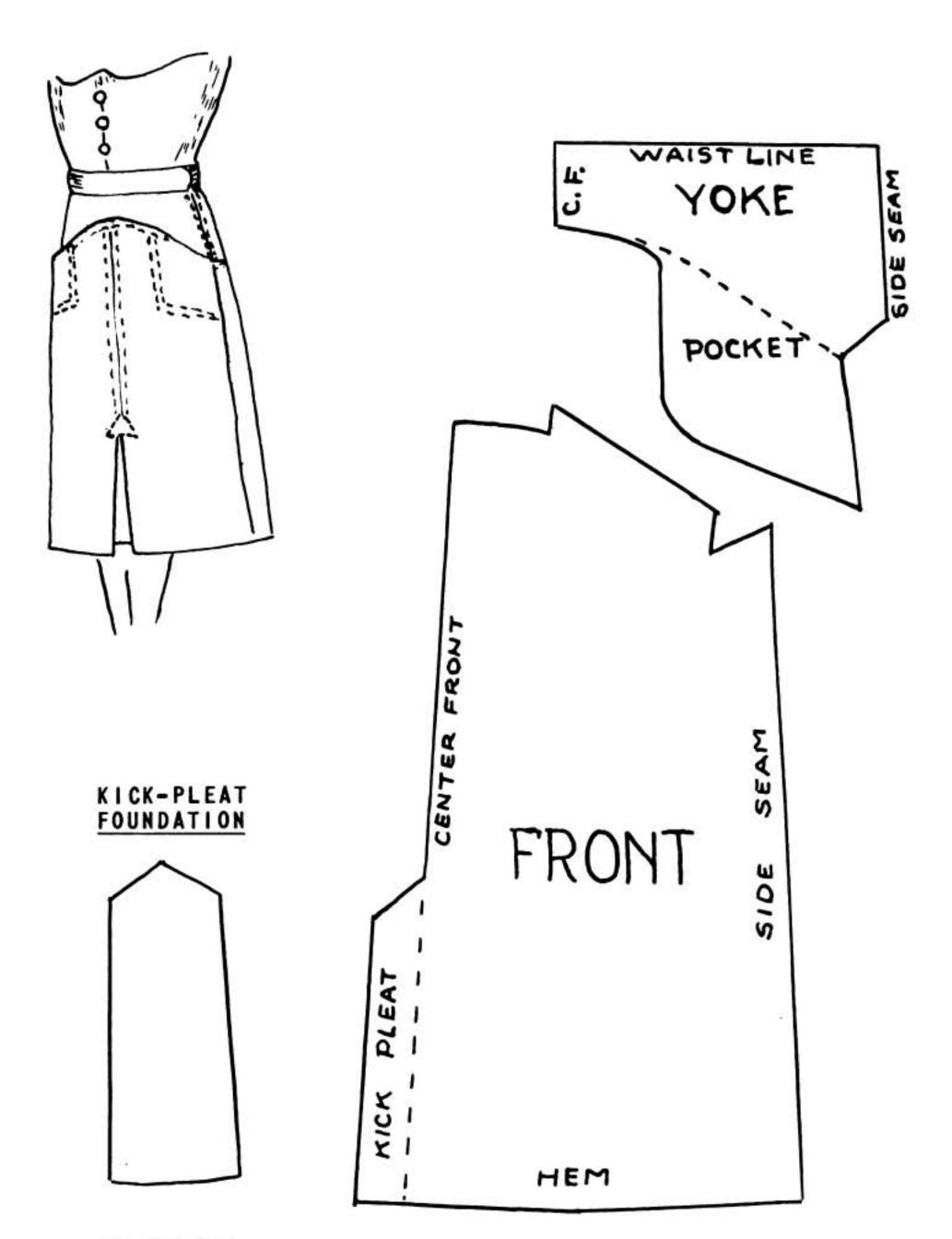


The comparative grade of the skirt and side yoke graphically explains the manner of treatment. The lower style portion of the skirt is treated in the same way as a simple skirt in relation to the side and hem. The difference in treatment is in the upper part, where the yoke fits in and forms the pocket openings.

As is shown, the center portion, up to the pocket, moves only 1/16-inch to the pocket facing end. The balance of the grade is added to the side seam. Therefore, the side yoke, which fits into that portion of the skirt from the pocket point to the side seam, receives the balance of the grade.

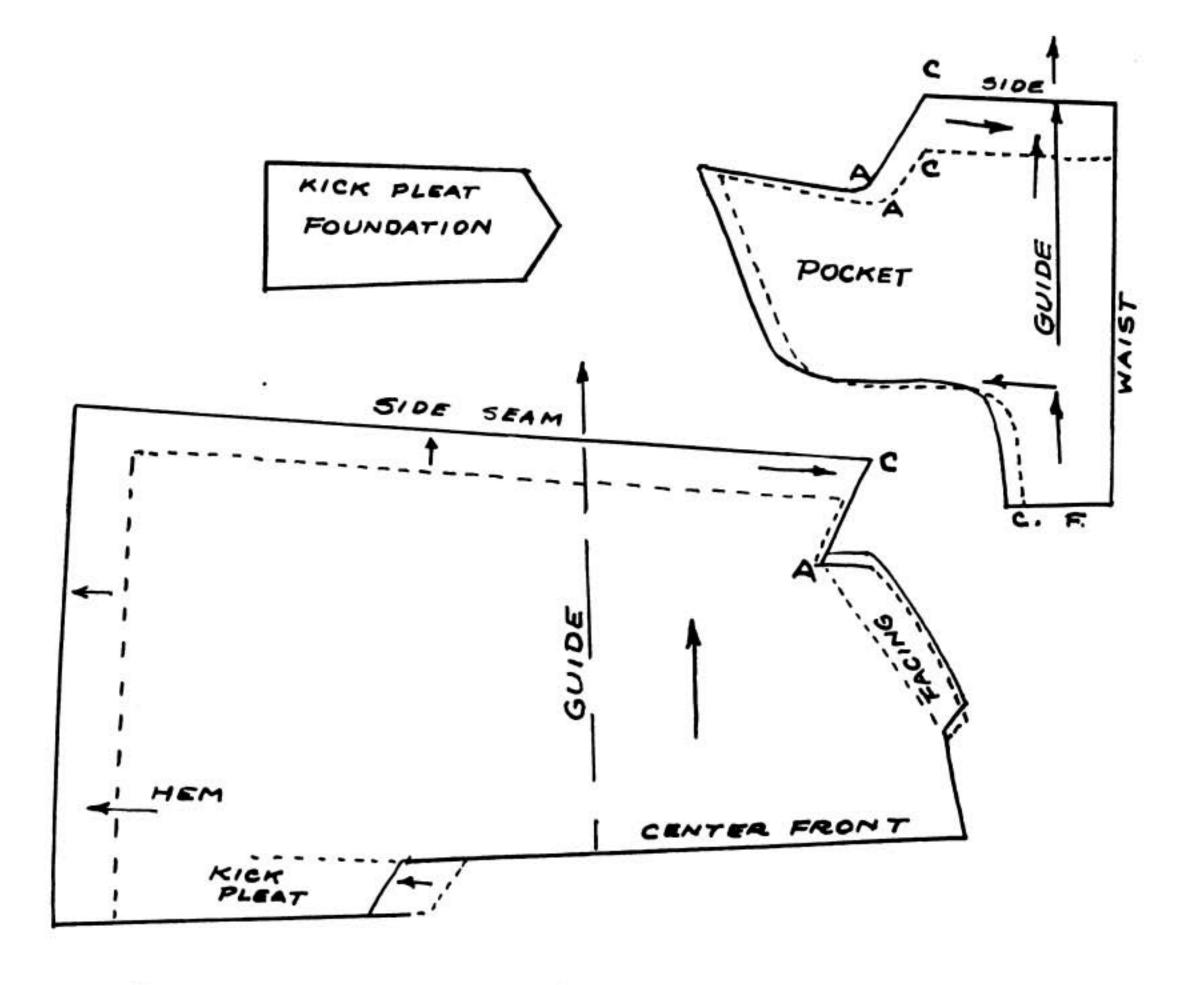
All lines of grade are at right angles. Therefore, all curved lines of the increase in length must be graduated in the side yoke and in the body part of the skirt.





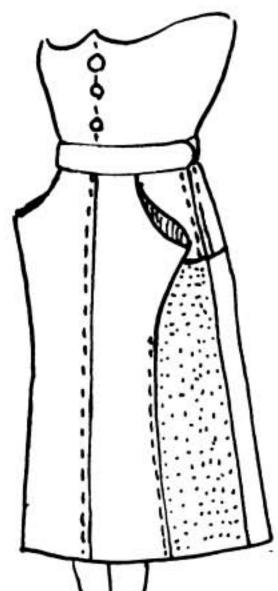
Analysis:

This is a composite of three simple style features, all attached to the simple, straight skirt. The grade treat-ment follows the normal increase with a few variations -- such as yoke angle and hip line direction.



The grade comparison, as shown here, explains in detail how point C (at the side seam) must be raised an extra 1/8-inch to allow for a 3/8-inch hem drop, making a total increase of 1/2-inch. The drop at the center front is 3/8-inch. The increase of the pocket line to point A is 1/16-inch.

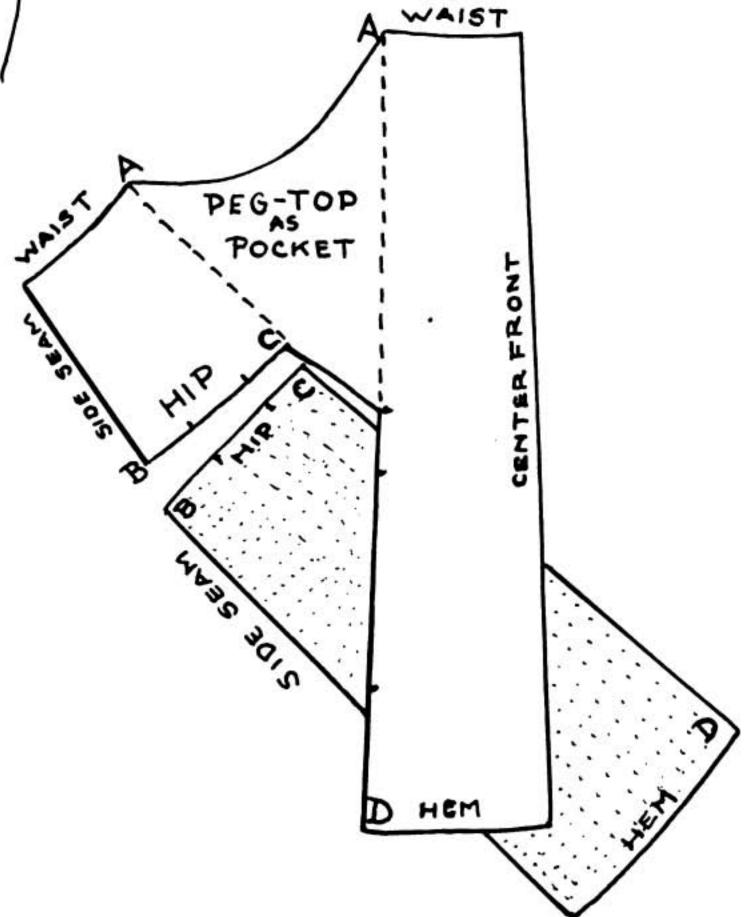
The yoke is dropped 1/8-inch (at the center front) making a total length increase of 1/2-inch. The pocket moves 1/16-inch and the side yoke (C) has no grade in length. In this way the lines continue to keep the style directions in accordance with the original.

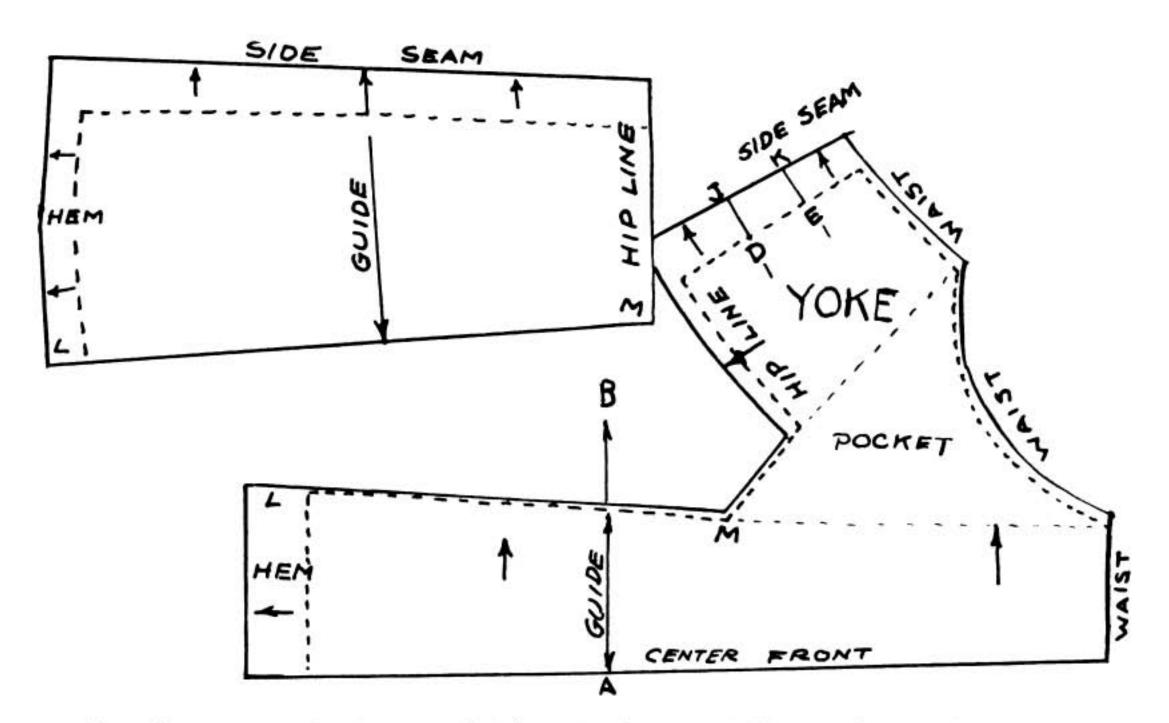


Analysis

The sketch at left shows the details which make up the peg-top skirt. The pattern analysis shows how the various parts line up in relation to each other. In grading, treatment of the various parts must be carried out in a variation of the normal pattern increase. The front panel part receives a 1/16-inch increase; the pocket part, or peg-top, receives no increase. The angle of the side part yoke sets up a variation which must be increased at right angles.

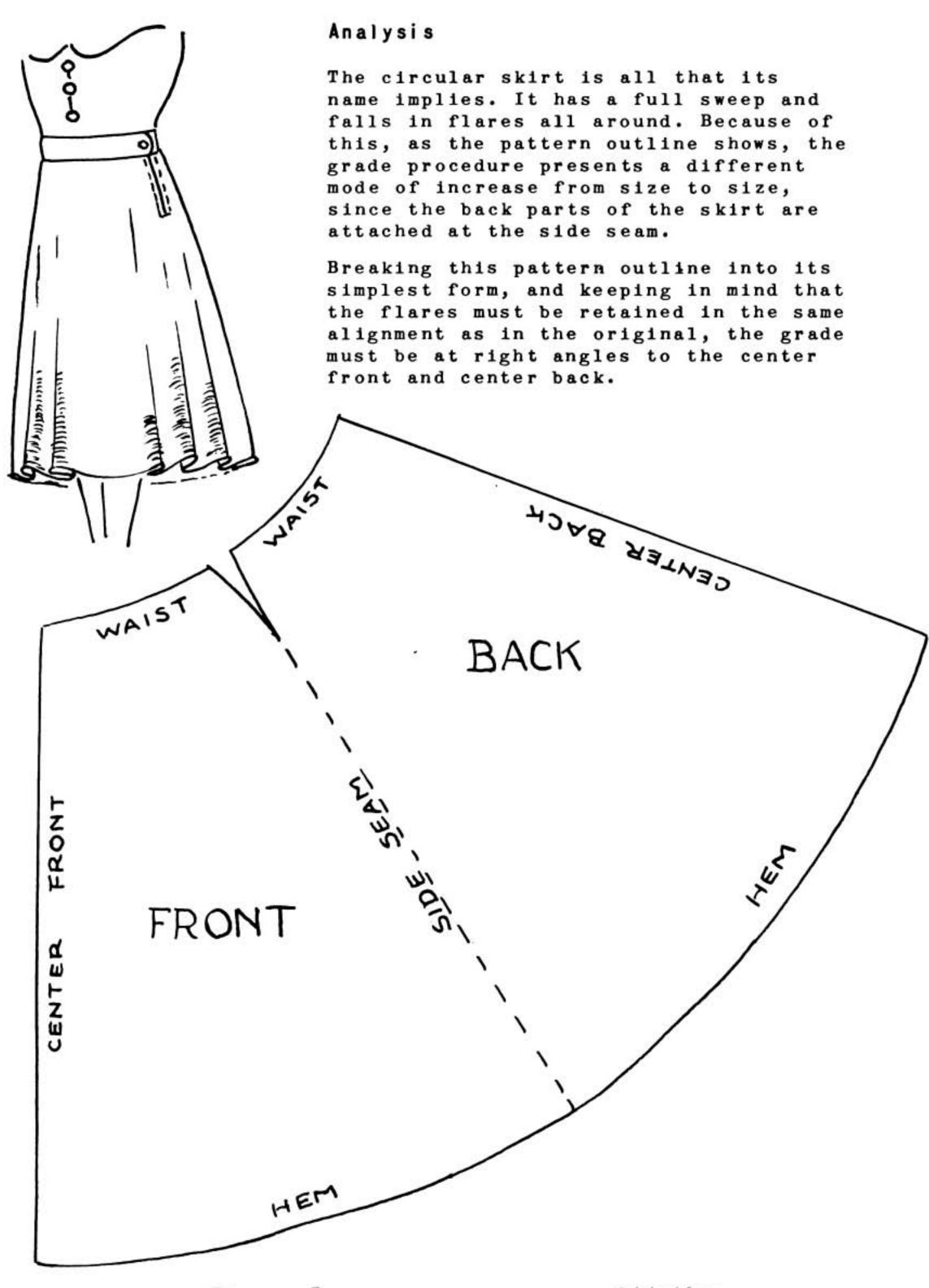
The reason for grading this style is to get the desired increase and still retain the style and fit.





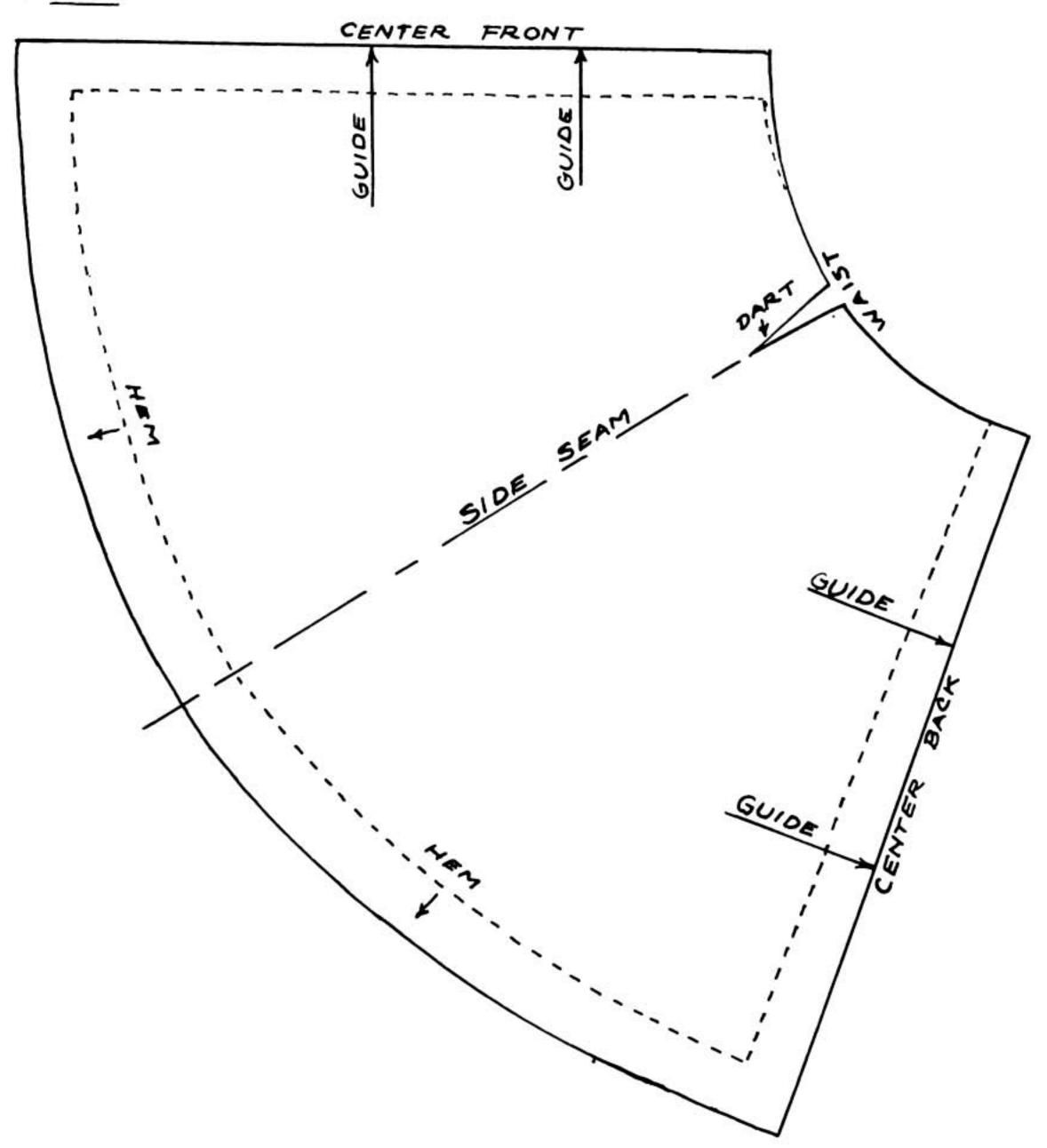
The front panel is moved 1/16-inch at right angles and the hem is dropped 1/2-inch. Mark out the entire waist line, the pocket part and the panel mid-seam up to the hip yoke line. Draw guide lines J-D and E-K at right angles, and extend them outwards for the balance of the skirt grade. Draw the side seam of the yoke part. Drop the yoke hipline 1/8-inch, at right angles to guides D-J and E-K. The lower side piece that attaches to the yoke part receives the balance of the grade (equal to the yoke grade).

The lower side piece is dropped 3/8-inch at the hem which, with the hip drop of 1/8-inch at the hip line of the yoke part, equals the 1/2-inch hem drop of the hem line at the center front panel part.



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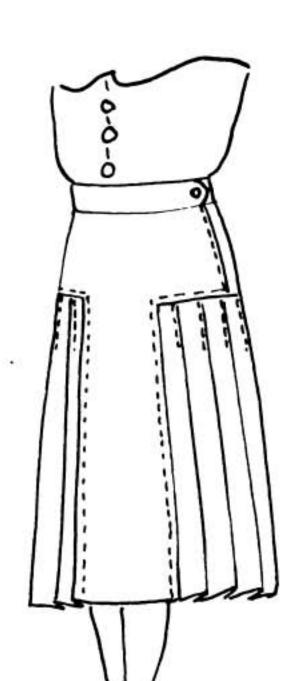
As the comparison grade shows, each part is graded as an individual part (front and back) by moving each part away from the side seam at right angles the total amount of the grade of each part.

By grading the circular skirt in the manner drafted above, the original style intent is kept and the flares fall in the same manner as in the original skirt. The same curve and line direction must be kept in all types of circular, or flare type, style patterns.

This grade is in parallel.

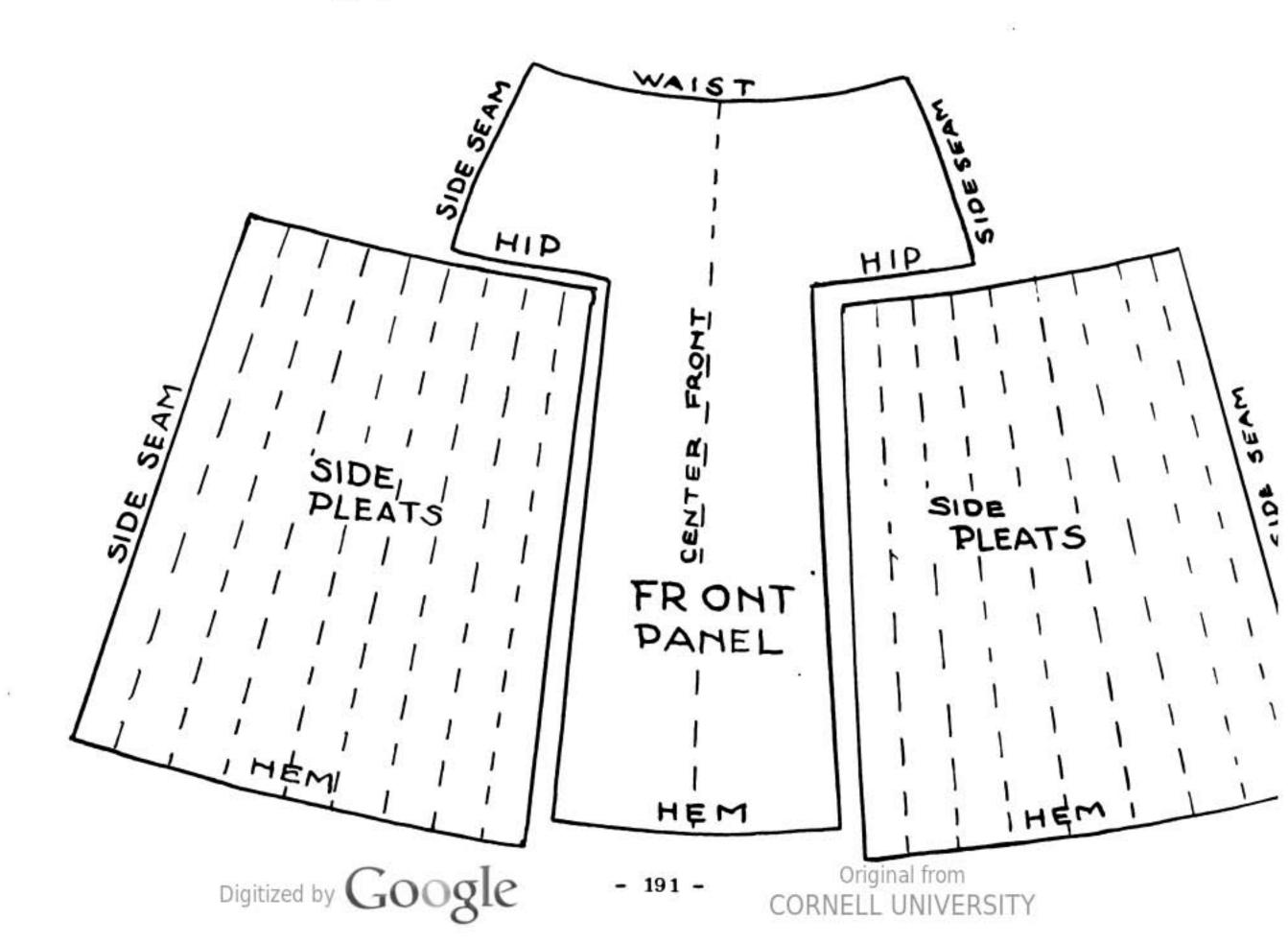
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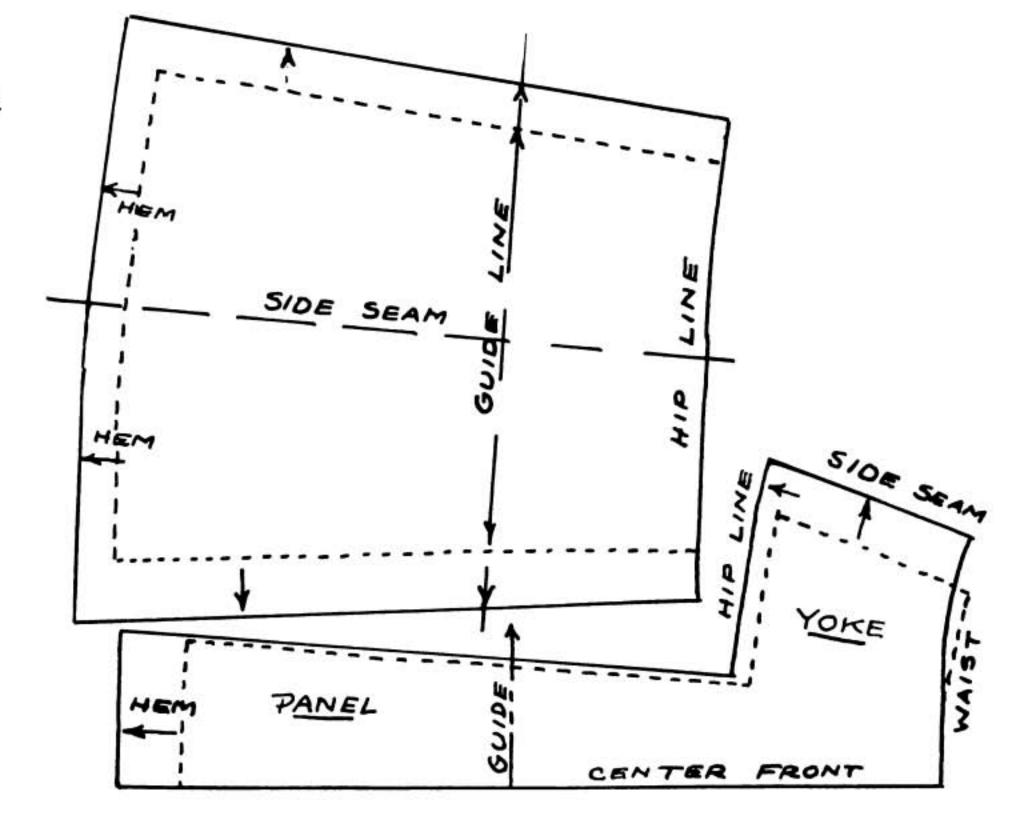
9. Panel Skirt, with Side Pleats



Analysis

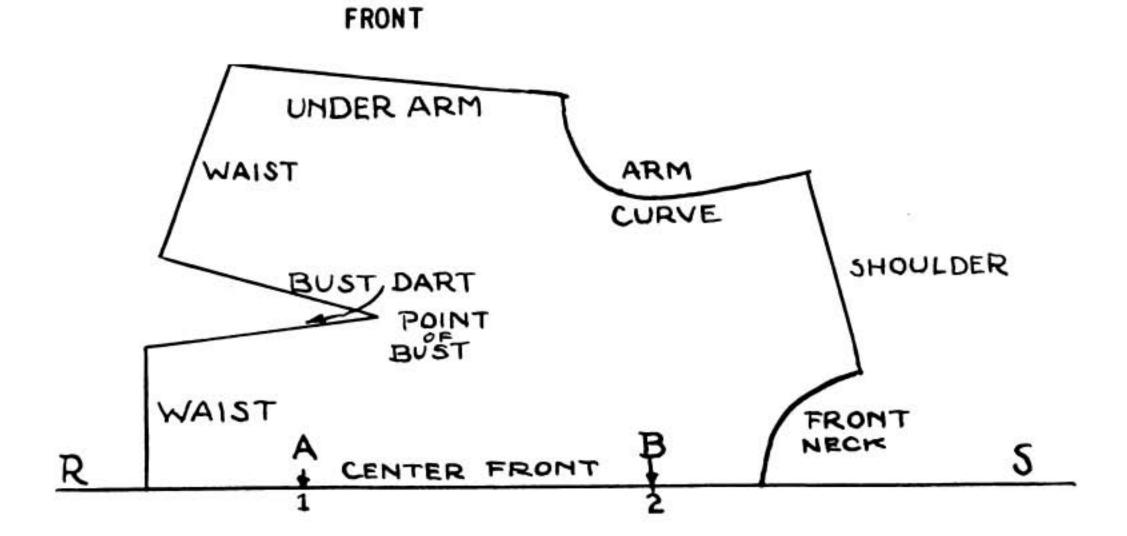
This sketch shows the simple skirt lines split into style variations. The pattern layout, as is shown, gives the clue to the grade. The increase of the various parts may be made in a variety of ways, but the basic procedure is simple. The center panel part increase will determine the amount of increase to be made in the other components of the original skirt style pattern.



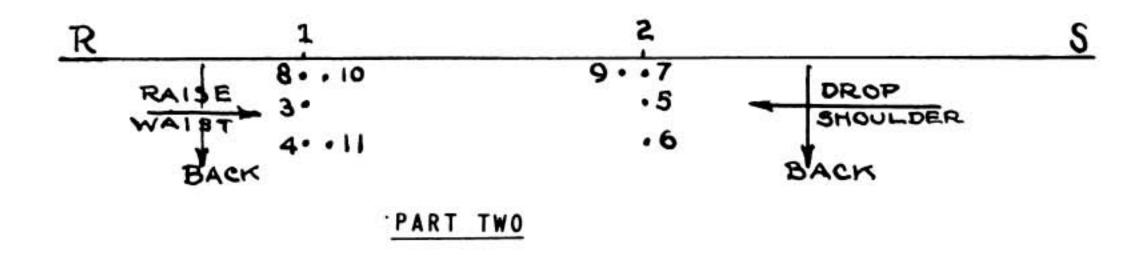


If, as in the comparison grade diagrammed, the lower center front panel is graded 1/16-inch, then its complement (the pleated part which joins to it) must be graded the balance of the grade to the side seam.

The upper part, or yoke, is graded the full amount from the center front to the side. The cut off at the hip line 1/8-inch. Therefore, the side piece is dropped 3/8-inch to align it with the front and back length increases. The side piece, being one piece -- one half back and one half front -- will receive an equal grade for each half. When the grade increases of the pleated side pieces become too large, an extra allowance can be made for additional pleats to take up the uneven space increases.



Place front edge of front pattern upon the paper edge, or upon line R-S, and transfer guide points A and B of the pattern on to this line as points 1 and 2. Line R-S is a line drawn about one inch from the paper edge.

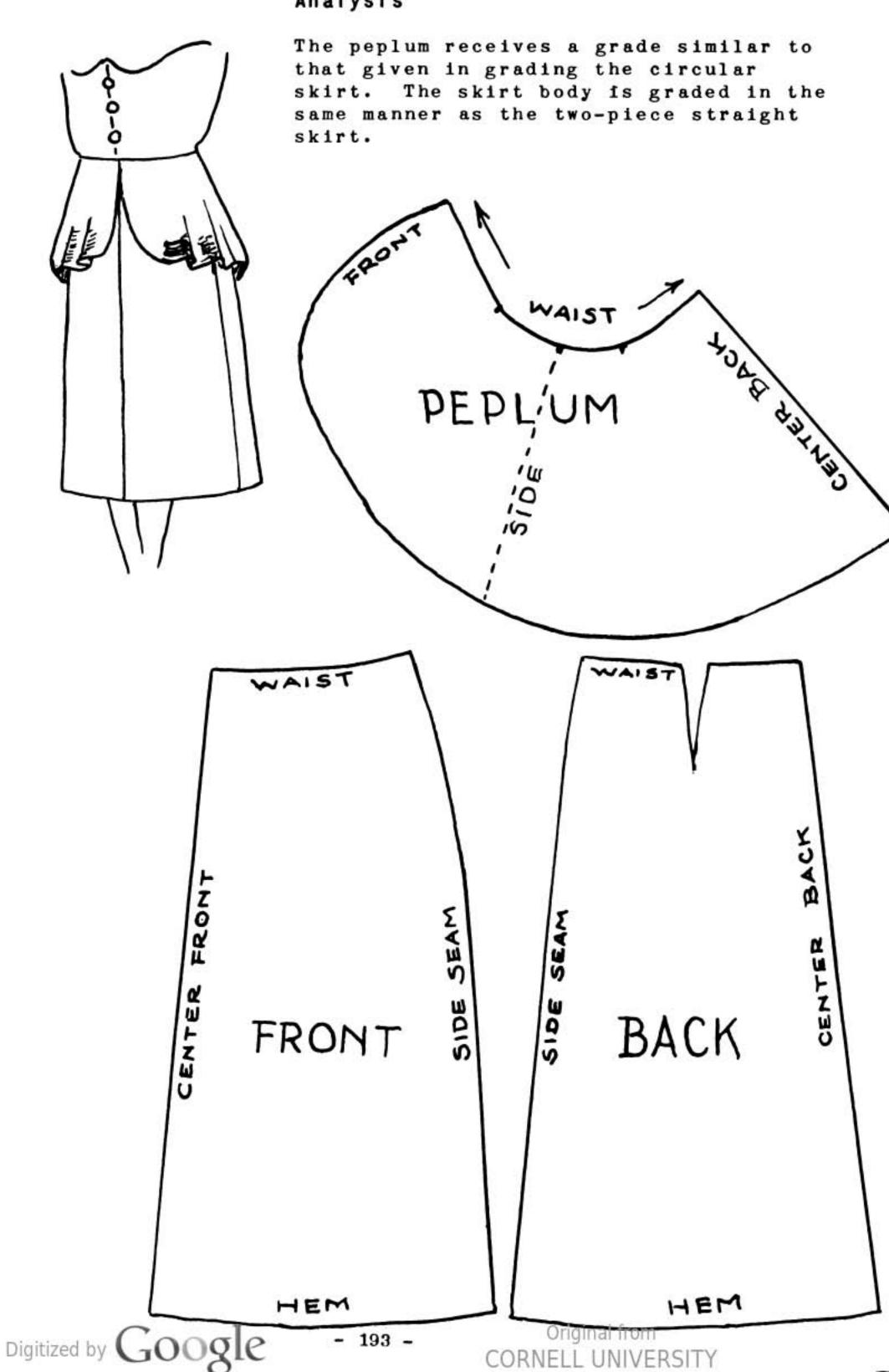


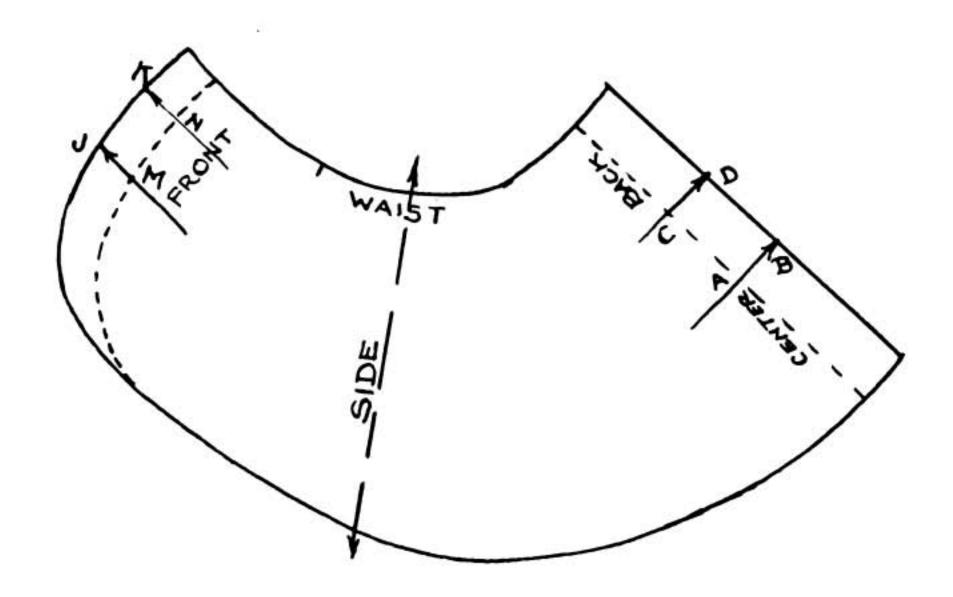
At points 1 and 2, drop guide lines perpendicularly downward or back in the directions indicated in the above diagram. The arrowheads point in the opposite direction from the normal grade movements.

Upon line 1 measure and point off 1 to 8, one-sixteenth inch; 8 to 10, one-eighth inch; 1 to 3, one-quarter inch; 3-4, one-quarter inch.
Upon line 2 measure and point off 2 to 7, one-sixteenth inch; 7 to 9, one-eighth inch; 2 to 5, one-quarter inch; 5 to 6, one-quarter inch.

The crossed arrows at the left and right, below line R-S, indicate the directions of pattern movement.

Analysis





Keeping the peplum side stationary, guide lines are drawn out at right angles to the center back. The total grade amount for that section is on guides C-D and A-B.

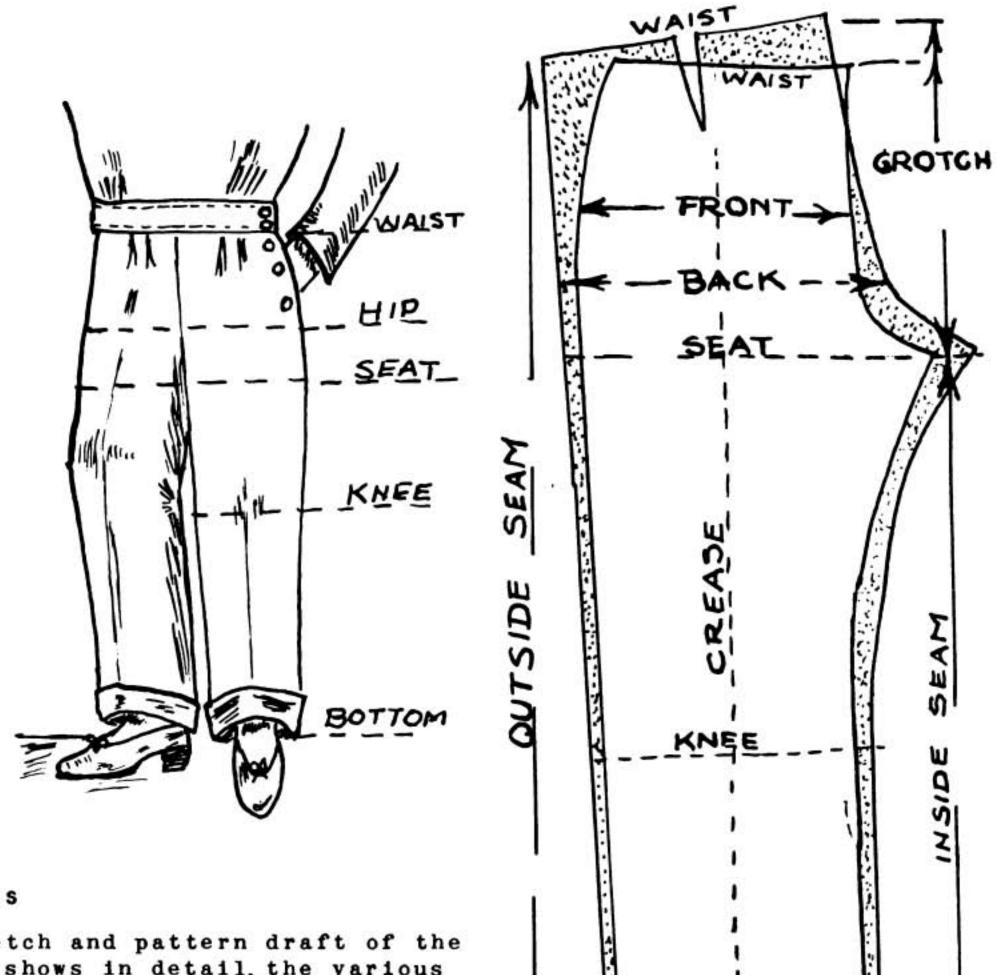
Draw guide lines perpendicular to the front edge of the peplum (K-N and J-M) and mark out the front curve and the compensating sweep curve of the peplum. Note how the peplum has retained its shape in the grade. All grades of circular parts should be carried out in this manner.

Any pattern or part of it which has flare causing a circular effect must be graded in paralell.

This method of grading in paralell is explained by the circular skirt grade, and the flared peplum grade.



XXI Slacks and Shorts

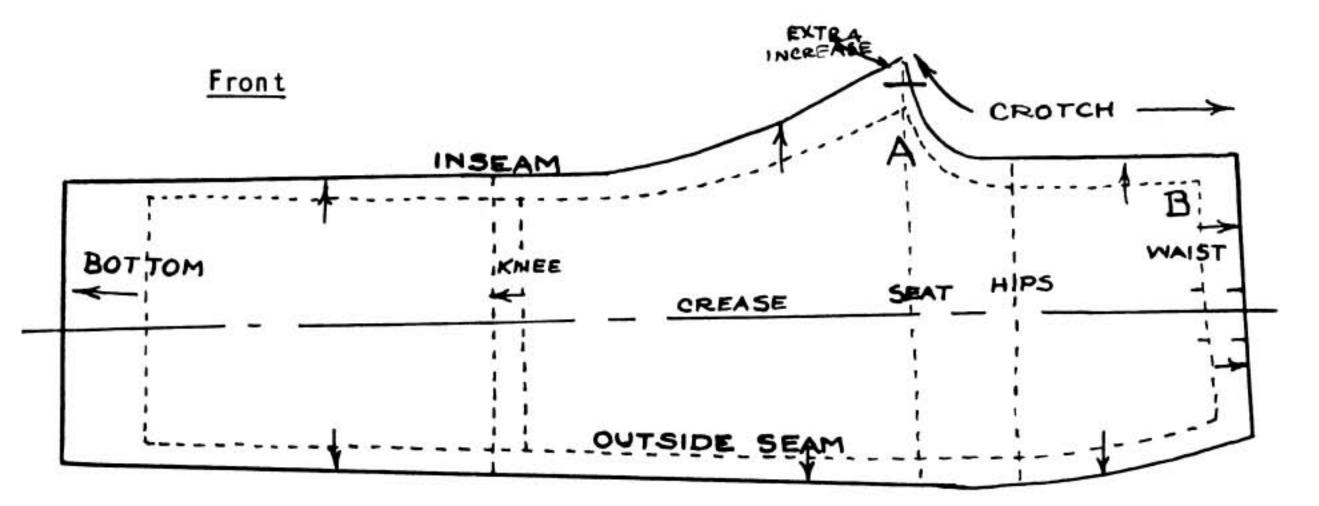


Analysis

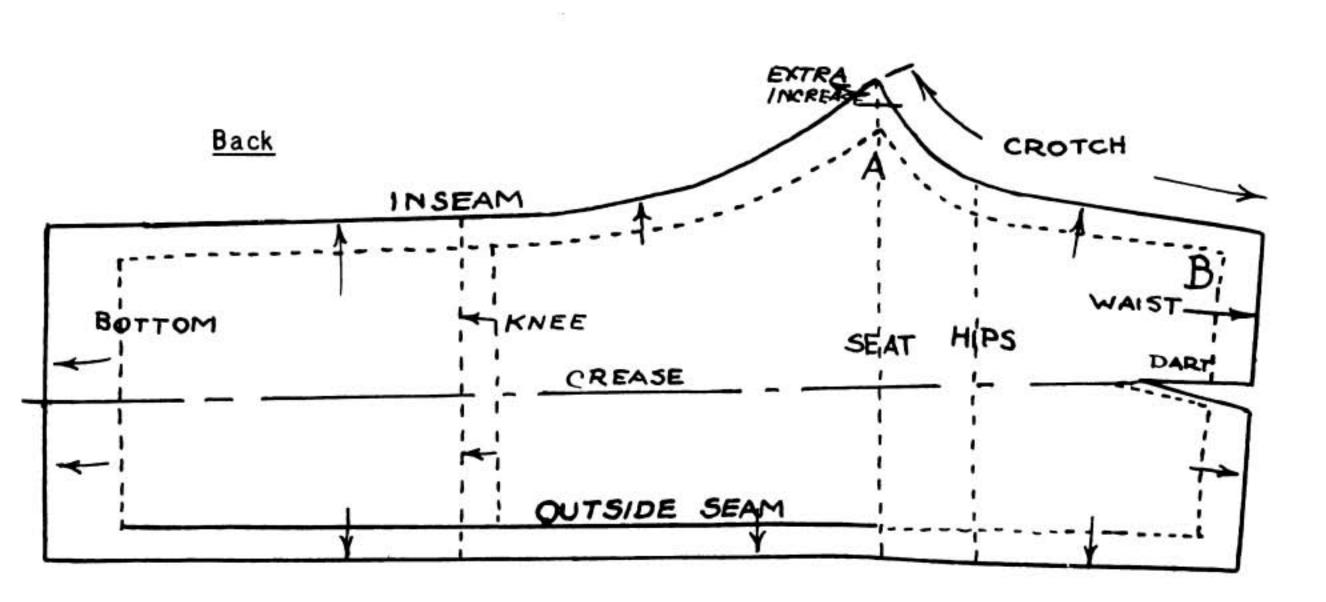
The sketch and pattern draft of the slacks shows in detail, the various points of importance that must be taken into account in grading from size to size. The seat and the crotch are the key points of slacks or shorts upon which the proper comfort and fit depends.

The crease is used as the central point from which the grade is made on either side. The crotch increase is taken care of by over-extending the point of the crotch and by raising the waist line.

BOTTOM



Grade out at right angles to the crease line half of the total front grade on the outside seam line and on the inside seam line, with an extra 1/4-inch at point A and 1/4-inch at the waist line (point B). The bottom is dropped 3/4-inch for added length.



The back is graded in the same manner as the front. The back dart increases 1/8-inch in length.

In grading shorts, the knee line is taken into account. It is dropped 1/4-inch per size.

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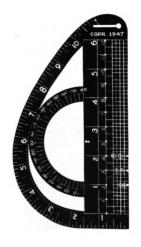
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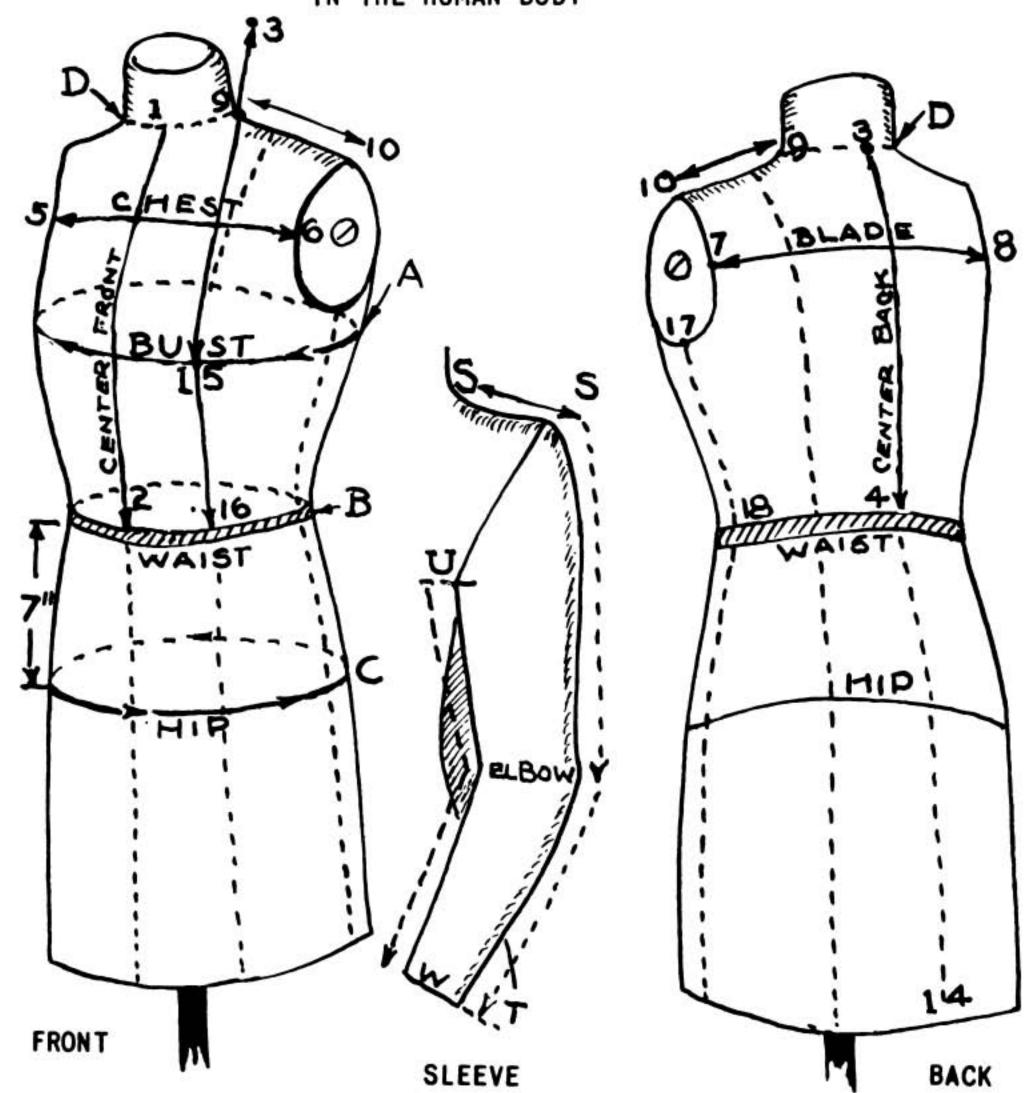
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Grader's Rule

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Jack Kirschner

RELATIVE POINTS OF GRADE IN THE HUMAN BODY



Measurements Around

A - Around - BUST
B - Around - WAIST
C - Around - HIPS
D - Around - NECK

Measurements Across

5-6 - Across - CHEST 7-8 - Across - BACK 9-10- Along - SHOULDER

Measurements in Length

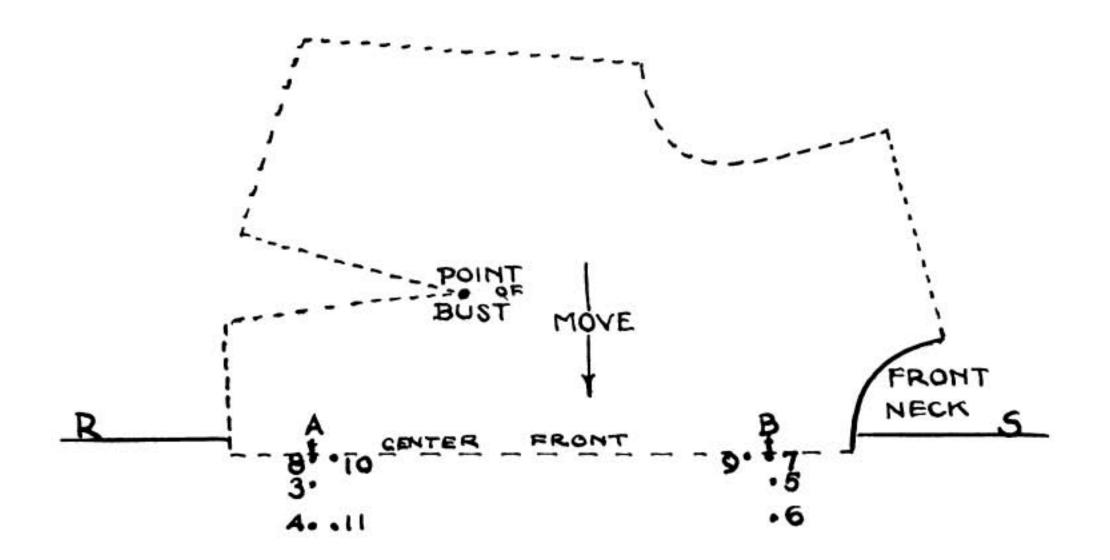
3-4, Back Neck to Waist
3-14, Back Neck to Length
17-18, Underarm to Waist
1-2, Front Neck to Waist
3-9-15, Neck to Bust
3-9-15-16, Neck to Bust to
Waist

Sleeve Measurements

S-S, Shoulder S-S-7, Outside U-W, Inside

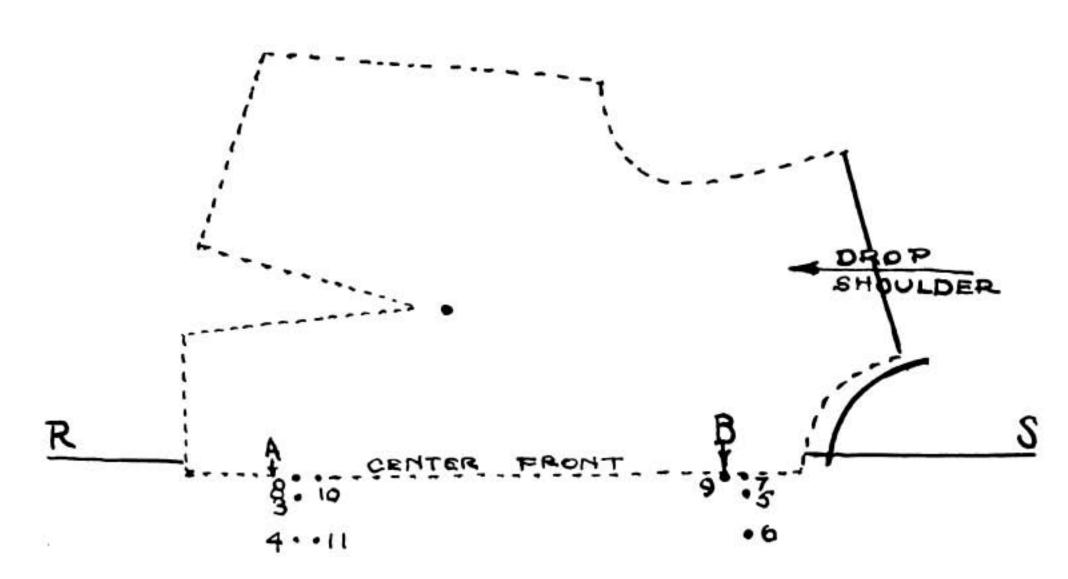
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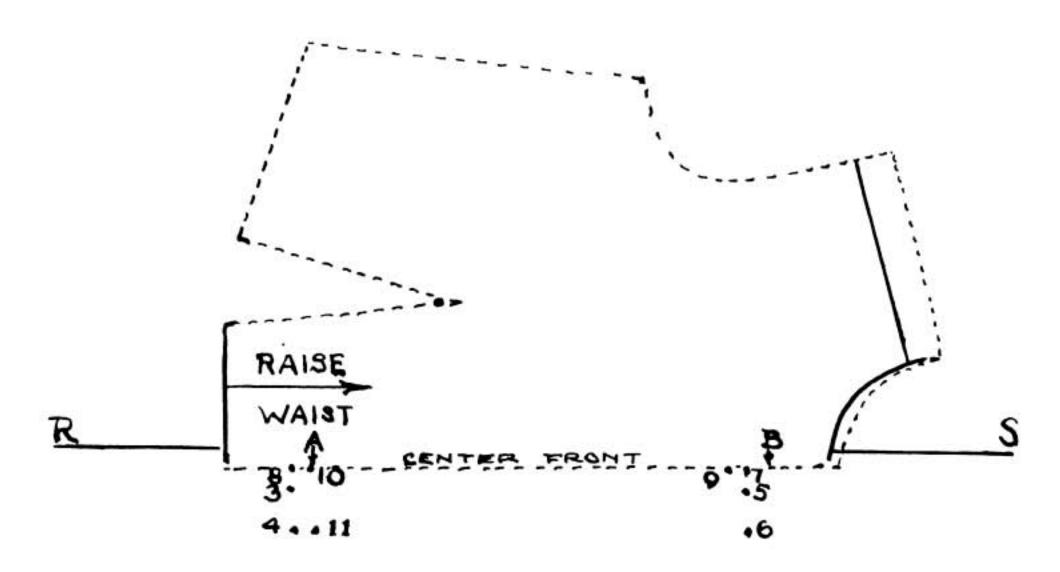
PART THREE

Place front edge of front pattern so that guide point A is upon point 8, and guide point B is upon point 7. Draw front neck from shoulder until it reaches line R-S. Also mark point of bust dart.



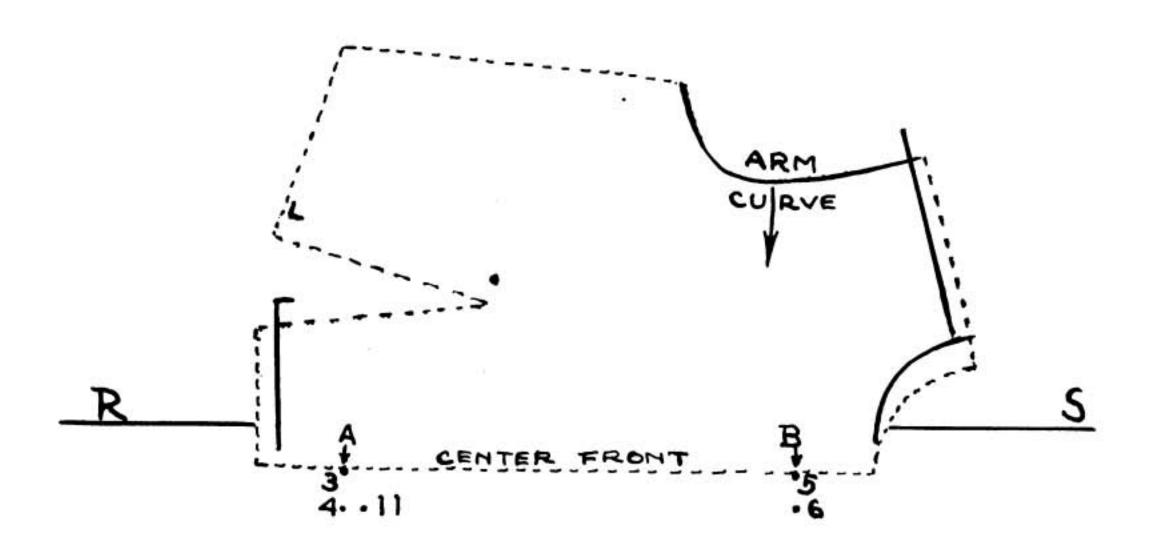
PART FOUR

With front edge of pattern placed so that guide point B is upon point 9, and the front edge touching points 8 and 10, hold the pattern firmly in place. Draw along the shoulder the line indicated above. This drops the shoulder.



PART FIVE

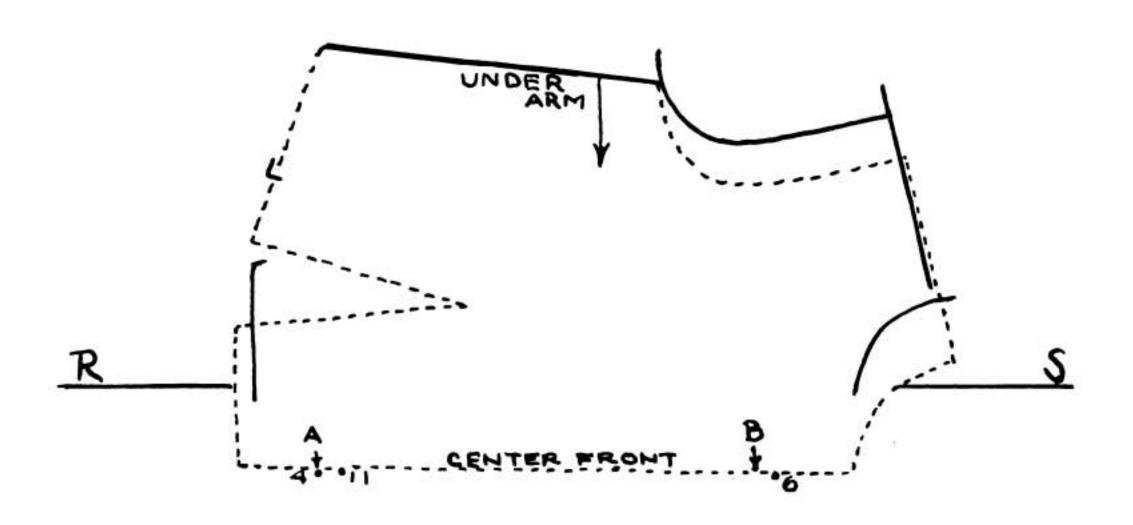
Place front edge of front pattern so that point A of the pattern is upon point 10 and touching points 7 and 9. Hold firmly in place and mark the front half of the waist line (as indicated above). This raises the waist one-eighth inch.



PART SIX

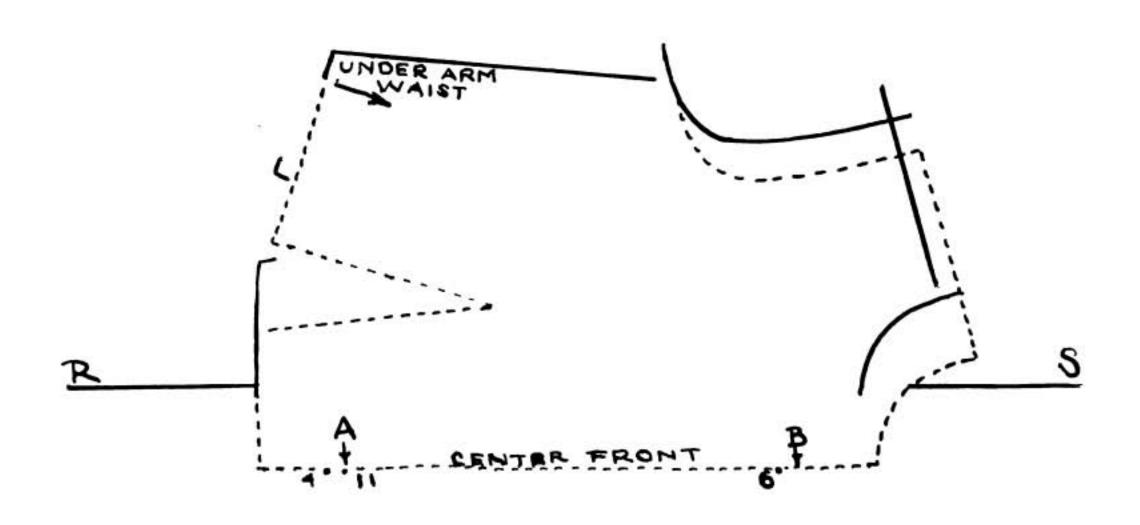
Place front edge of front pattern with guide point A upon point 3, and guide point B upon point 5. Hold firm-ly in place and draw arm curve outline of pattern as indicated. This moves it one-quarter inch toward line R-S.





PART SEVEN

Place front edge of front pattern with guide point A upon point 4, and guide point B on point 6. Hold firm-ly in place and mark outline of upper underarm line from the pattern so that it touches the arm curve, as indicated.

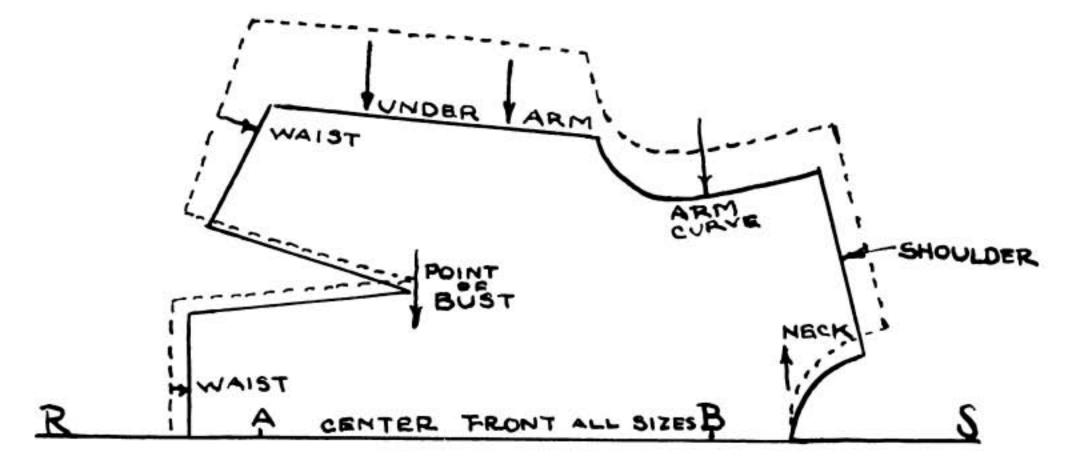


PART EIGHT

Place front edge of front pattern with guide point A upon point 11, and the edge touching point 6. Hold firm-ly in place, and draw outline of lower underarm line and waist line as indicated.

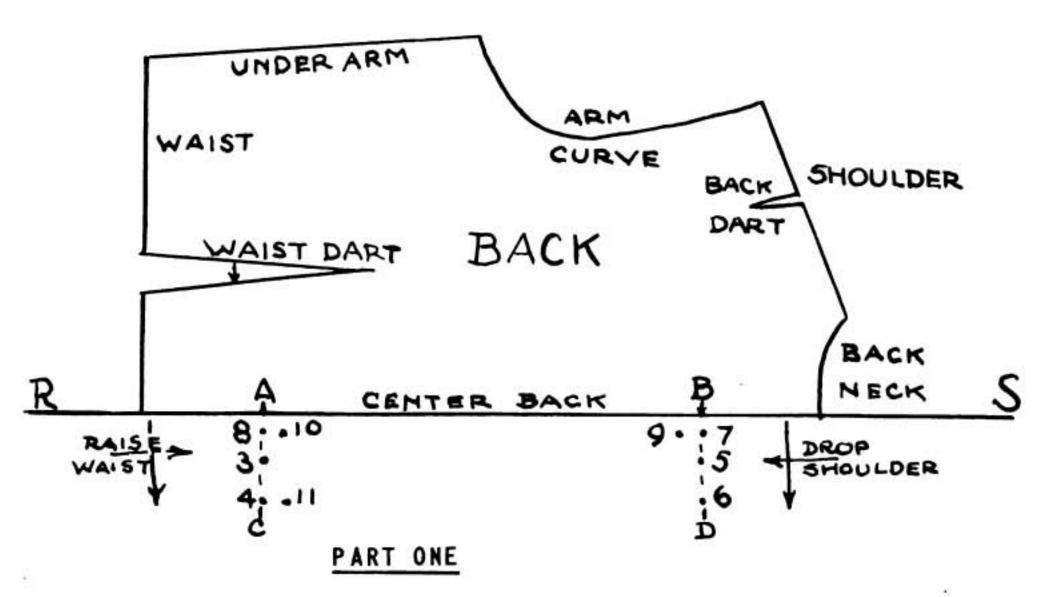
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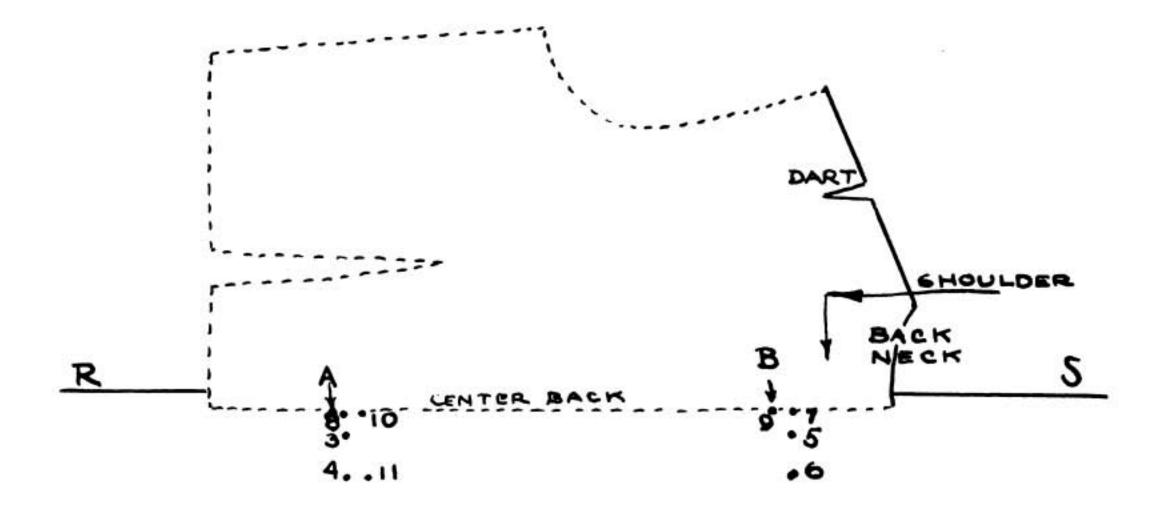
PART NINE

Use the pattern to connect all points. Join the points, and outline the bust dart. Line R-S becomes the front edge of the pattern. The dotted line indicates the original pattern and the unbroken line indicates the reduced grade outline.



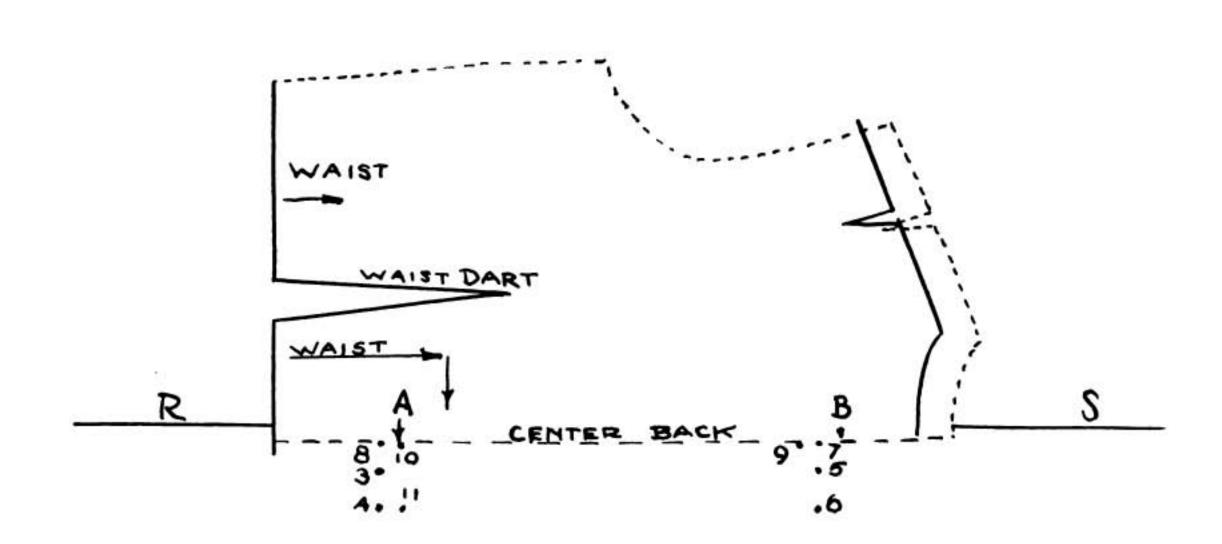
Draw line R-S one inch from paper edge. Place center back of back pattern upon this line. Extend guide points A and B perpendicularly downward from line R-S, as lines A-C and B-D.

A to 8 is one-sixteenth inch; A to 3 to one-quarter inch; 3 to 4 is one-quarter inch; 8 to 10 is one-eighth inch; and 4 to 11 is one-eighth inch. B to 7 is one-sixteenth inch; B to 5 is one-quarter inch; 5 to 6 is one-quarter inch; and 7 to 9 is one-eighth inch.



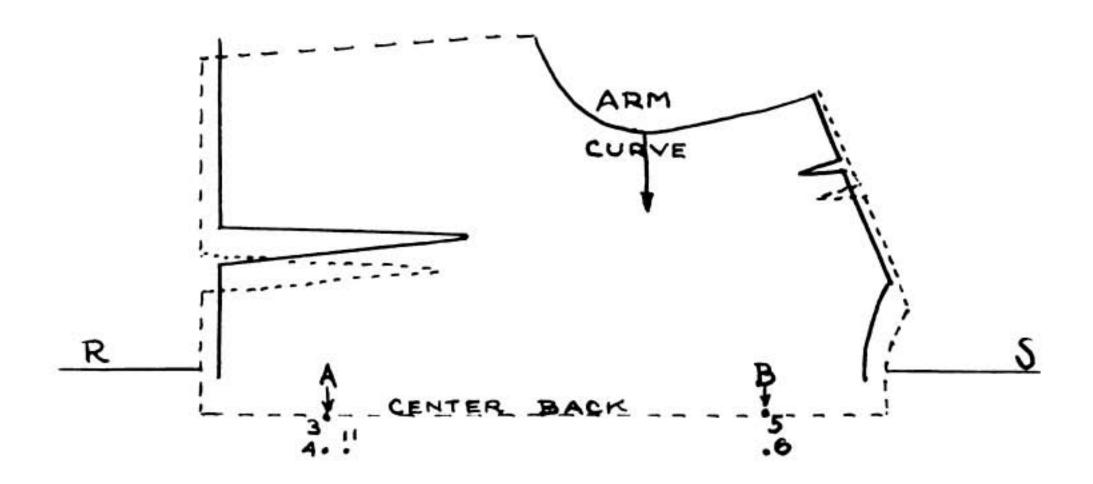
PART TWO

Place center back of back pattern with guide point B upon point 9, and touching points 10 and 8. Hold firmly and mark back shoulder, entire shoulder dart, and back neck. The move here was one-sixteenth inch back and one-eighth inch down, shortening the center back length and decreasing the back neck by one-sixteenth inch.



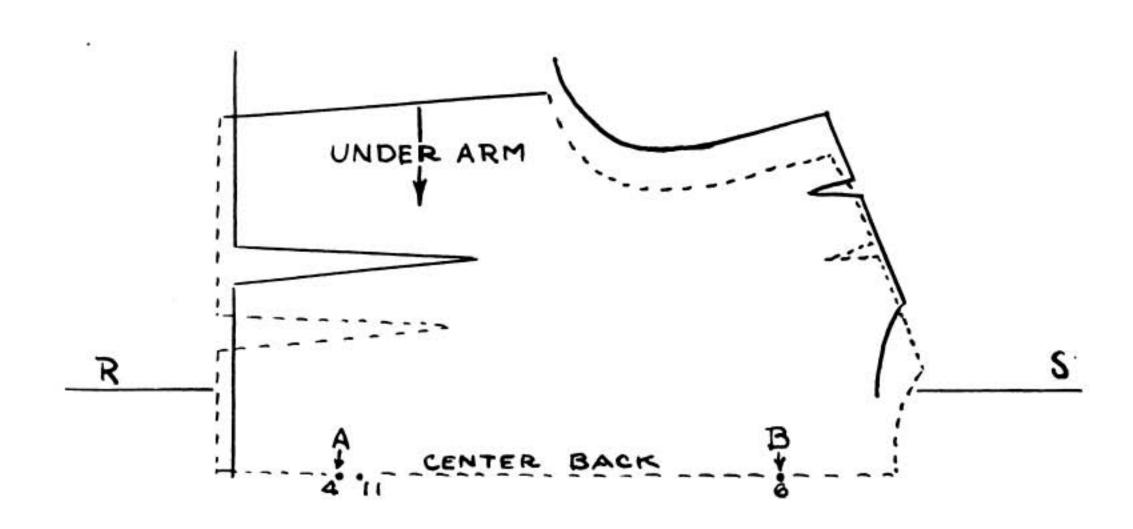
PART THREE

Place center back of back pattern with guide point A upon point 10, and touching points 7 and 9. Mark part of waist line and entire waist dart. This moves the waist line up. The shoulder and waist darts are shown to move together.



PART FOUR

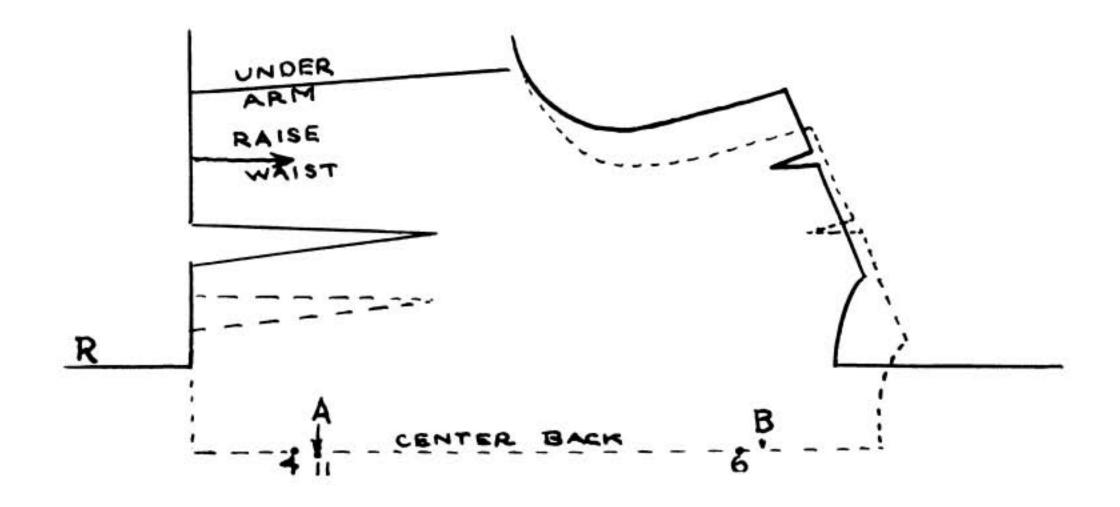
Place center back of back pattern with guide point A upon point 3, and guide point B upon point 5. Hold firmly in place and mark outline of arm curve.



PART FIVE

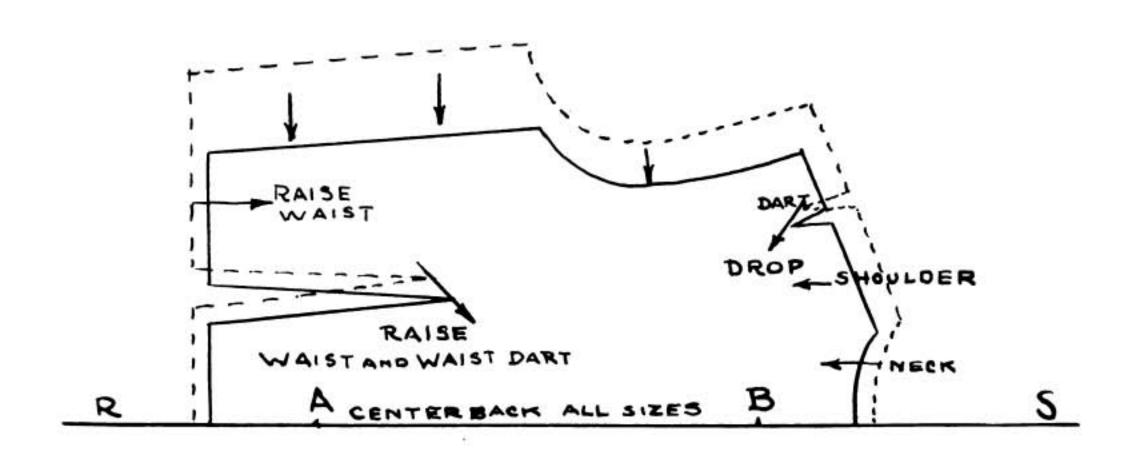
Place center back of back pattern with guide point A upon point 4, and guide point B upon point firmly in place and mark short part of underarm line.





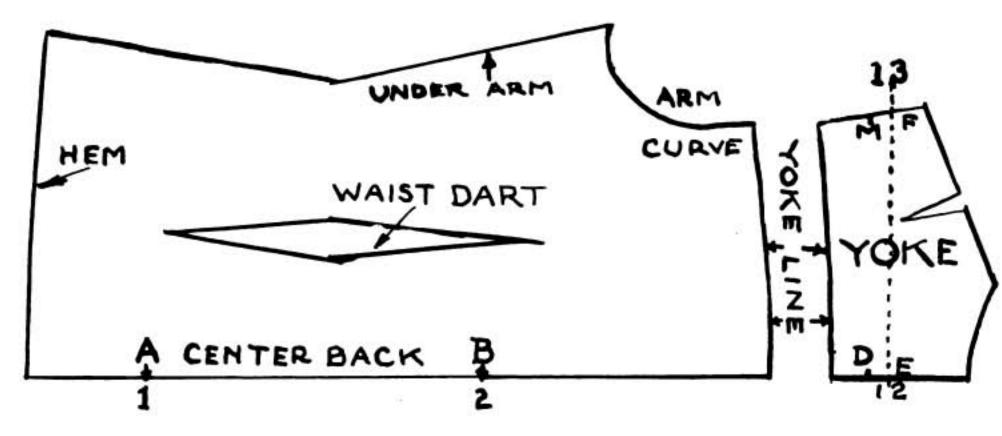
PART SIX

Place center back of back pattern with guide point A upon point 11, and touching point 6. Hold firmly in place and mark waistline and lower underarm at waist.



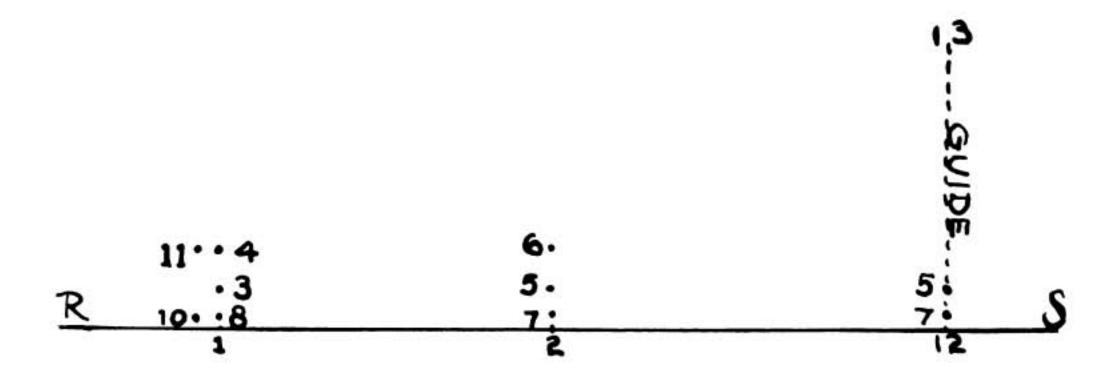
PART SEVEN

The pattern is used to connect all points of the decreased grade. The difference is clearly seen in this completed de-grade of a simple back pattern. The arrow-heads at the dart points show the closing up of the darts as the grade would continue to decrease.



PART ONE

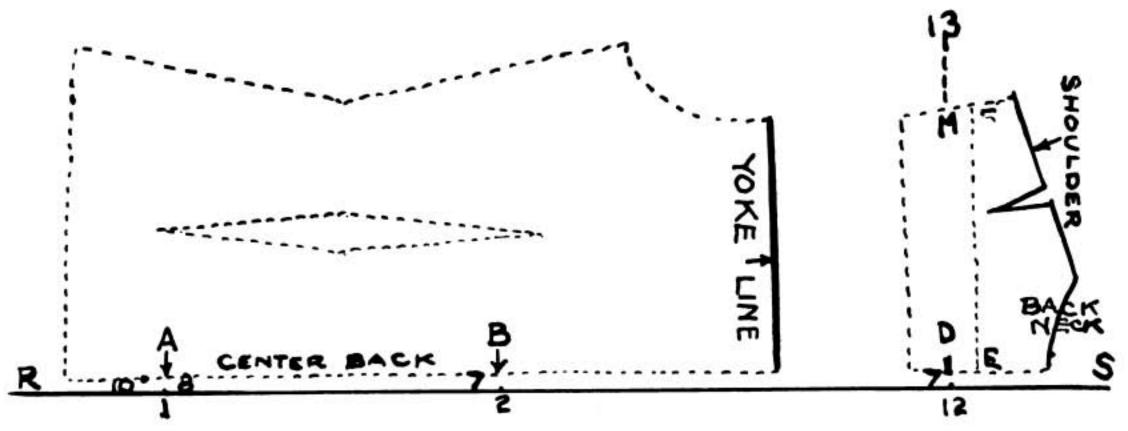
Make two guide points on the center back -- points A and B. Transfer them to line R-S as points 1 and 2. Draw a single guide line perpendicular at point E, extending to point F at the arm curve of the yoke. Point D is one-eighth inch to the left of point E at the center back of the yoke. F to M is one-eighth inch.



PART TWO

On a line perpendicular to point 1 measure 1 to 8 one-sixteenth inch; 1 to 3 one-eighth inch; and 3 to 4 is three-sixteenths inch. Do the same at point 2 for points 2 to 7, 2 to 5, and 5 to 6. Points 11 and 10 are one-eighth inch directly to the left of points 4 and 8 respectively.

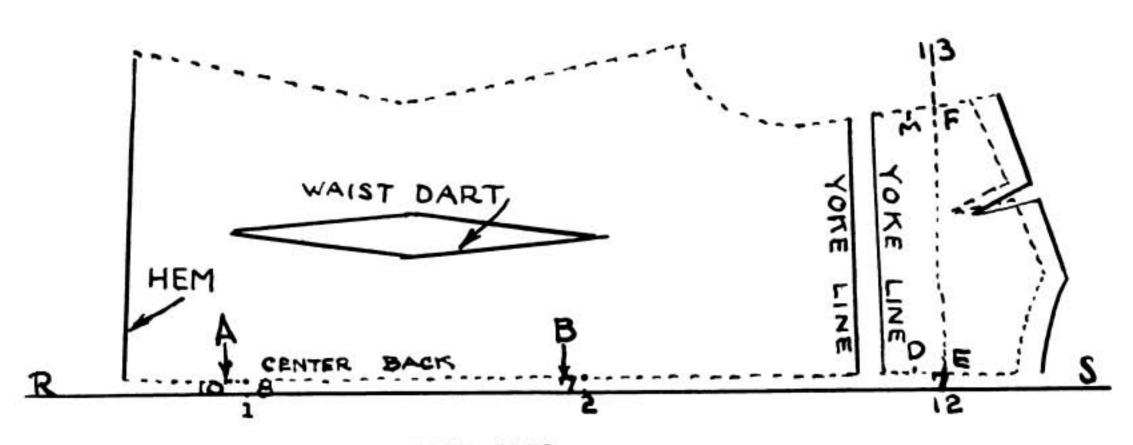
At point 12 draw a perpendicular so that point 13 falls beyond the arm curve of the yoke. From point 12 measure one-sixteenth inch to point 7 and one-quarter inch to point 5. These are the measurements for an inch-and-one-half grade.



PART THREE

BODY: Move lower part of pattern forward one-sixteenth inch with point A of center back on point 8, and point B on point 7. Mark yoke line.

YOKE: Move yoke forward and to the right, so that point D is on point 7, and point M at arm curve on guide line 13. Draw the back neck and shoulder, and the dart at shoulder.

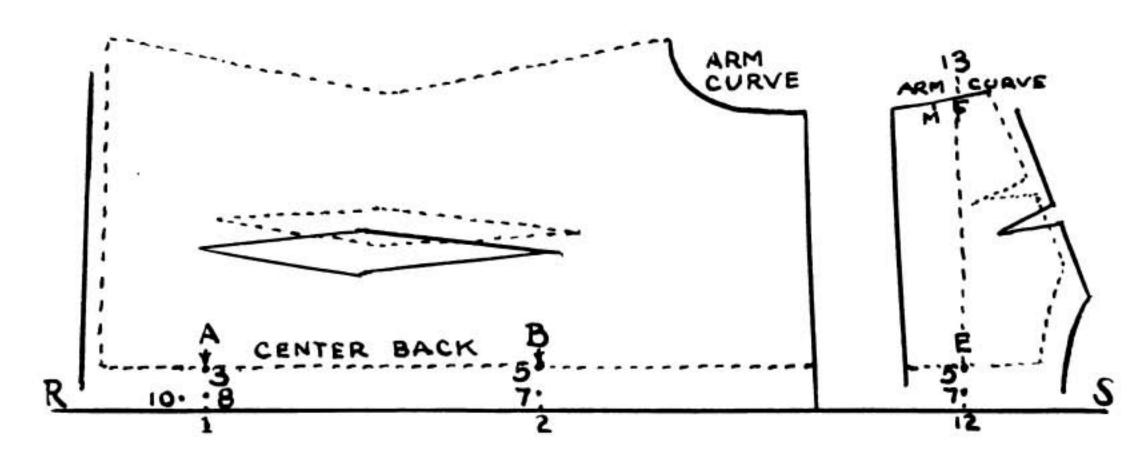


PART FOUR

BODY: Move pattern to left until point A touches point 10, and the center back of the pattern touches point 7. Draw part of hem and the entire waist dart.

 $\frac{\text{YOKE}}{\text{and F}}$ is on guide line 13. Draw yoke line.

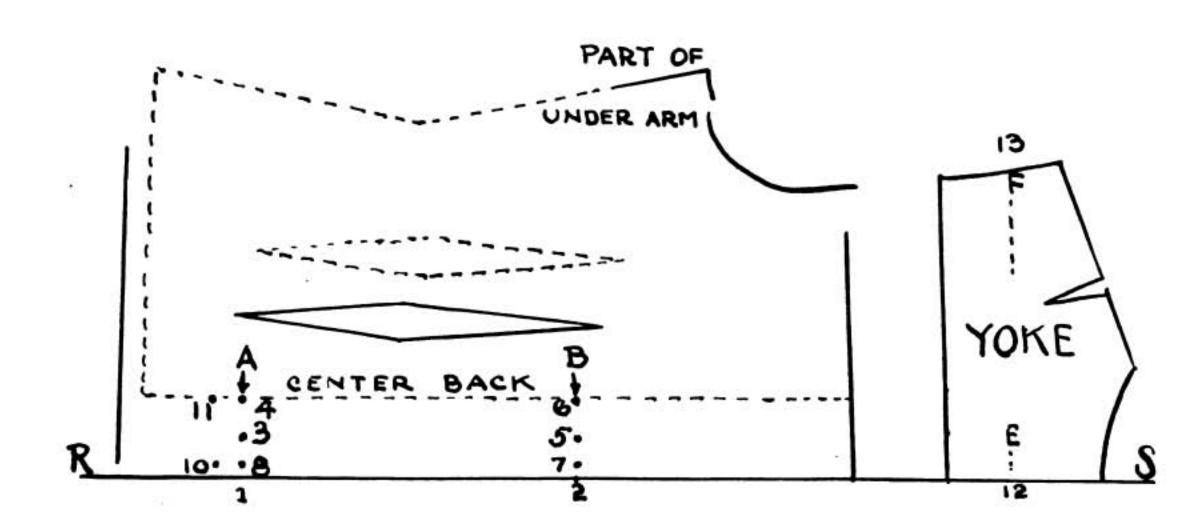




PART FIVE

 \underline{BODY} : Move pattern forward until point A is upon point 3, and point B is on point 5. Mark the arm curve.

 \underline{YOKE} : Move yoke pattern forward so that point E is upon point 5, and point F is on guide line 13. Mark the arm curve.



PART SIX

BODY: Move pattern forward so that point A is upon point 4, and point B is upon point 6. Mark upper part of underarm to armpit.

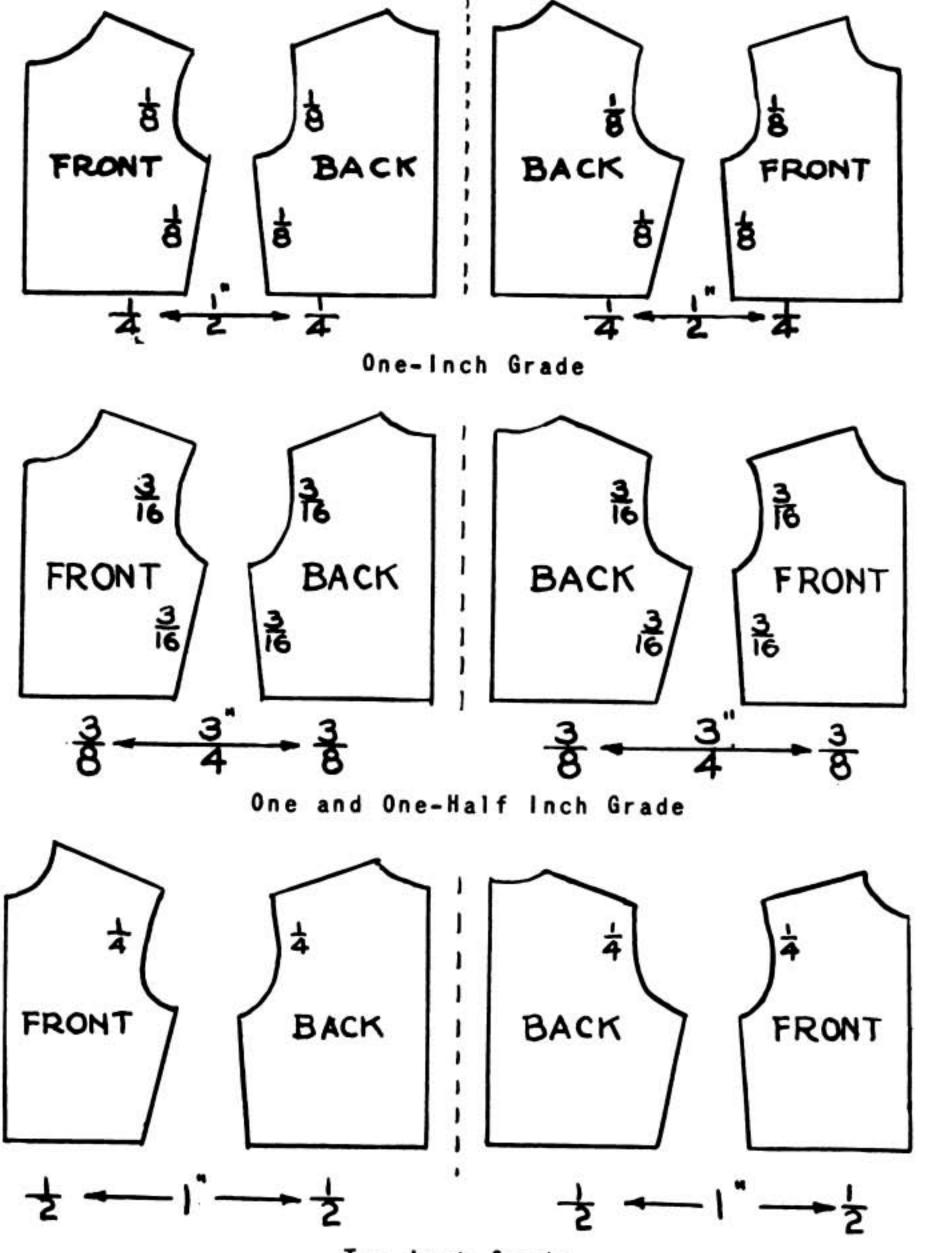
YOKE: Close all open ends and points of the yoke patterns.

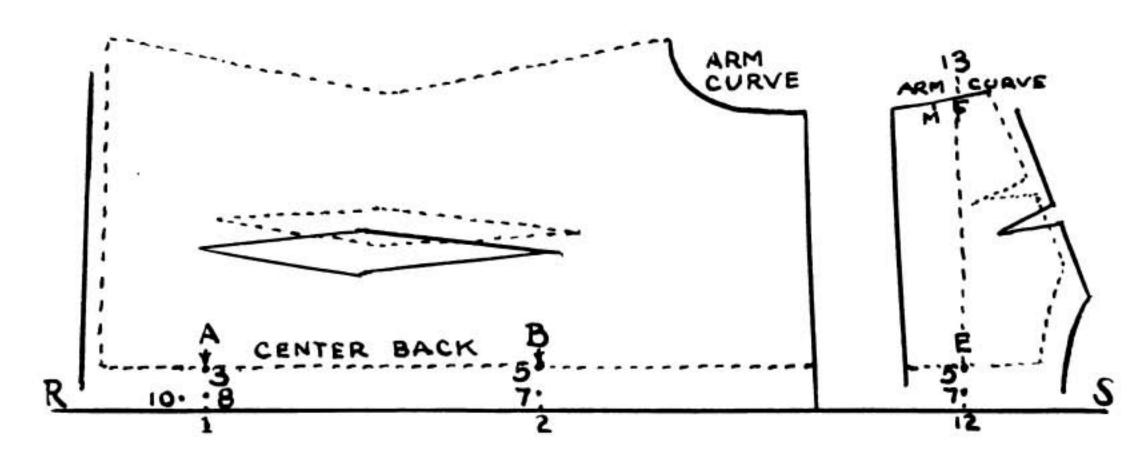
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GRADE INCREASES In Width

ONE INCH GRADE

JUNIORS' 9-11 13-15-17-----------One and one-half inches MISSES' 10-12 14-16-18-20----------One and one-half inches WOMEN'S 32-34-36-38-40-42--Two inches $14\frac{1}{2}-16\frac{1}{2}-18\frac{1}{2}-20\frac{1}{2}----$ Two inches

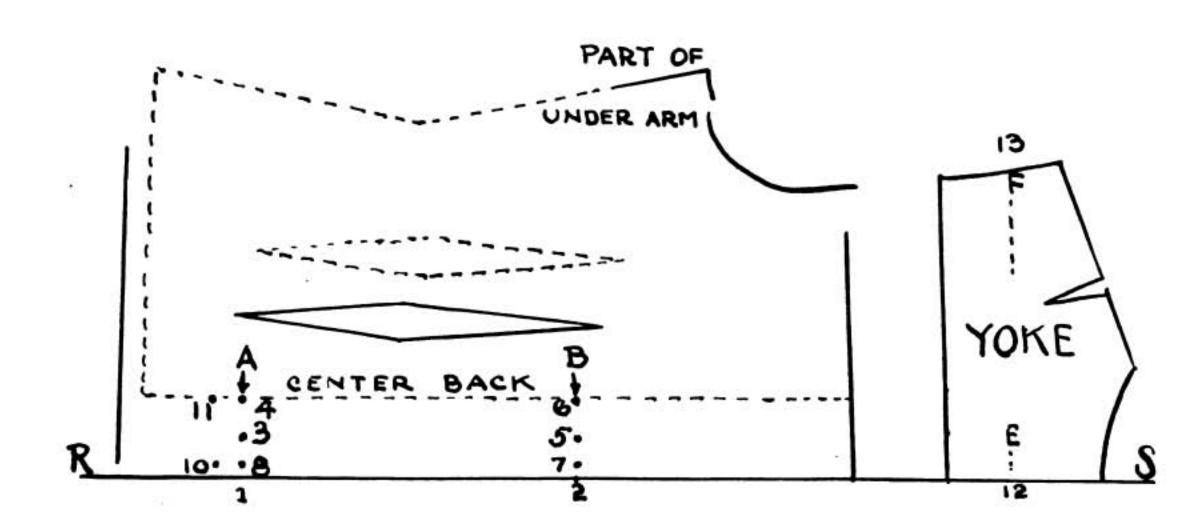




PART FIVE

 \underline{BODY} : Move pattern forward until point A is upon point 3, and point B is on point 5. Mark the arm curve.

 \underline{YOKE} : Move yoke pattern forward so that point E is upon point 5, and point F is on guide line 13. Mark the arm curve.

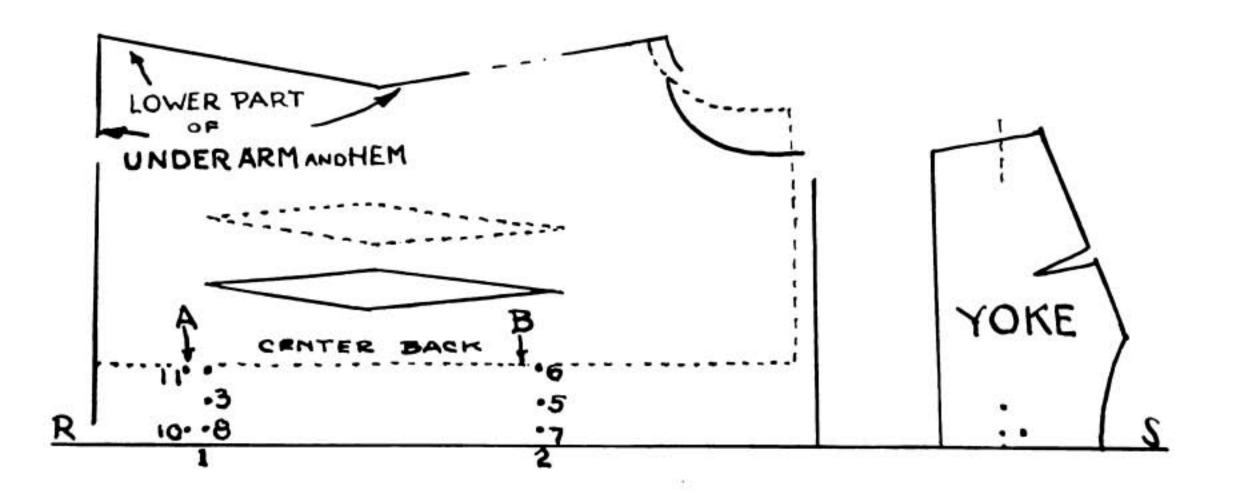


PART SIX

BODY: Move pattern forward so that point A is upon point 4, and point B is upon point 6. Mark upper part of underarm to armpit.

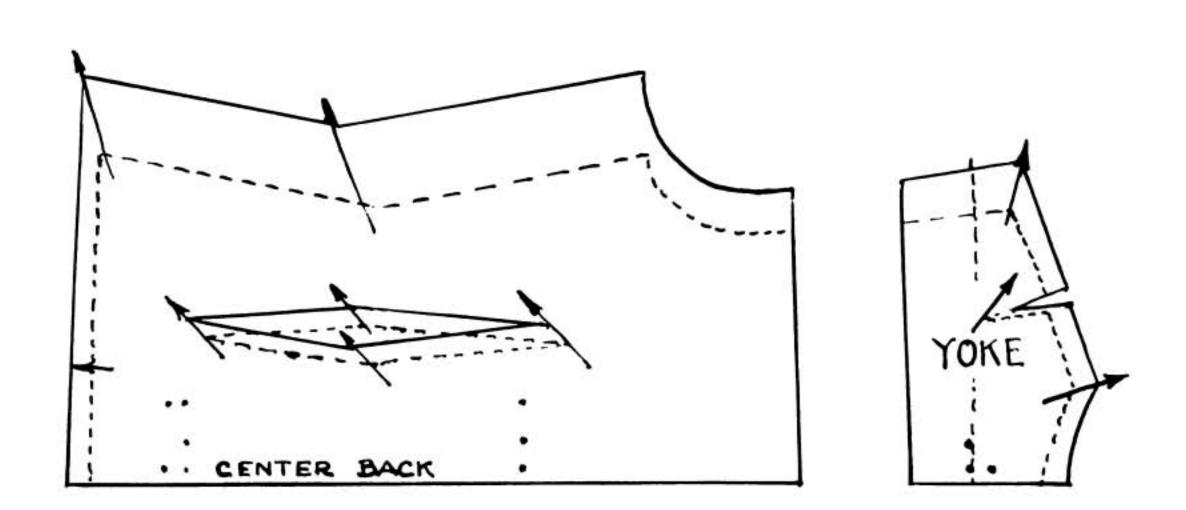
YOKE: Close all open ends and points of the yoke patterns.

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PART SEVEN

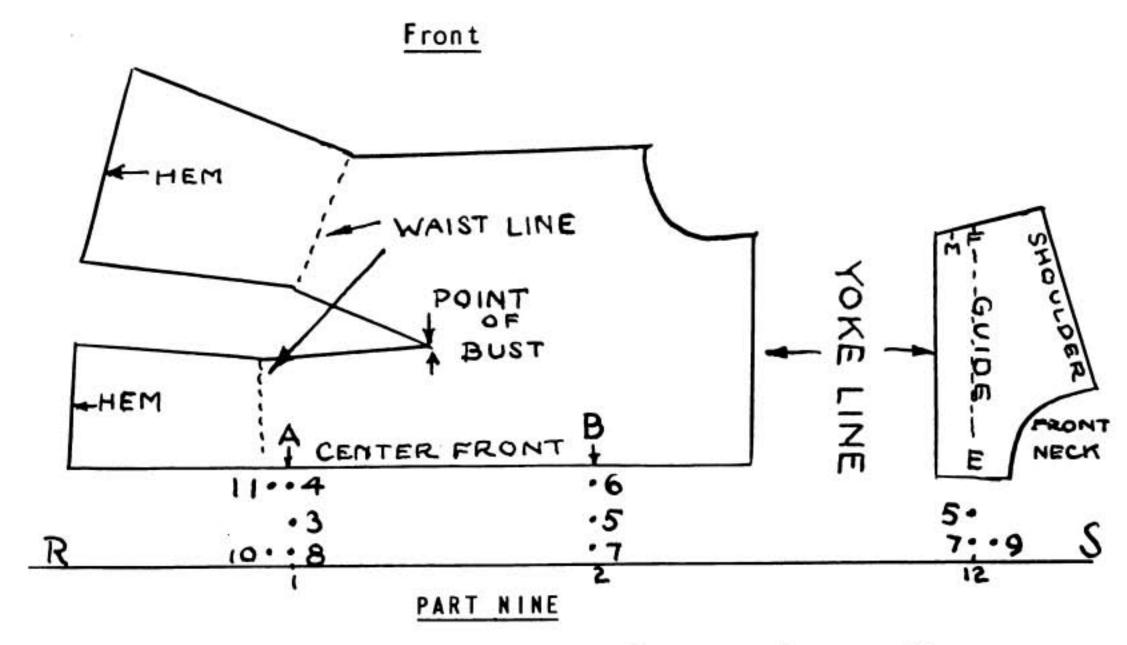
BODY: Move pattern to left one-eighth inch so that point A is on point 11, and the center back touching point 6. Mark out lower part of underarm and hem.



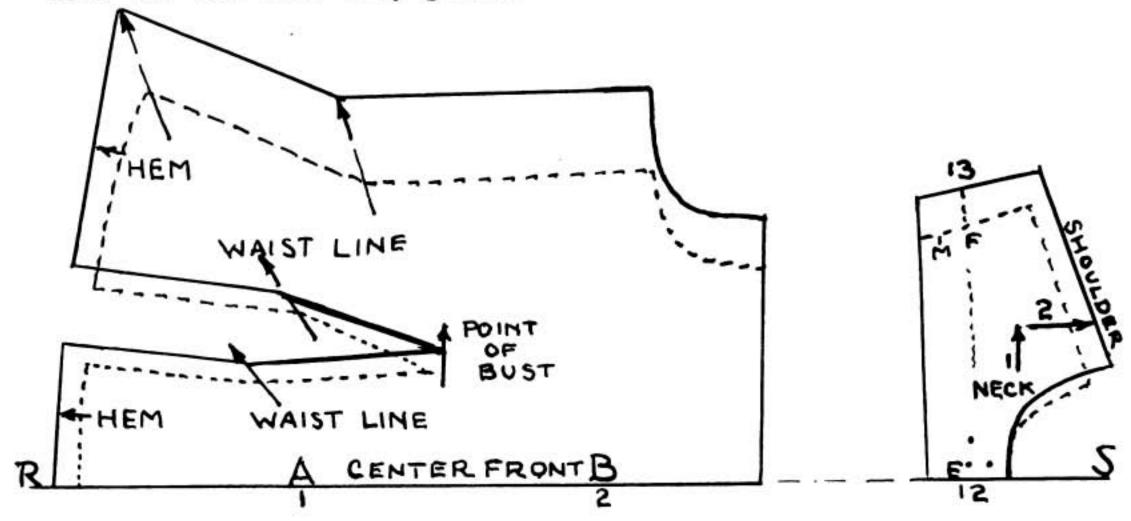
PART EIGHT

The pattern grades show, by comparison, the one and one half-inch grade. There is no increase at the yoke line. There is a raise at the shoulder of the yoke and a drop at waist line of body. The underarm shows the increase double of that at the arm curve.





To grade front, set up points A and B as was done on the back. Grade E and F on front yoke in the same manner. Point off the same divisions at points 1 and 2 as was done for the back body grade.



PART TEN

The grade above shows that the bust line was kept on the same level with points A and B. On points 8 and 7 the balance of the front grade is the same as the grading done upon the back.

In grading the yoke, E on point 7 and guide 13 are used to outline the front neck. Then the shoulder is marked when moved to the right using the same method for grading the front neck in all previous grades.

Simple Single-Guide Grade: Increase

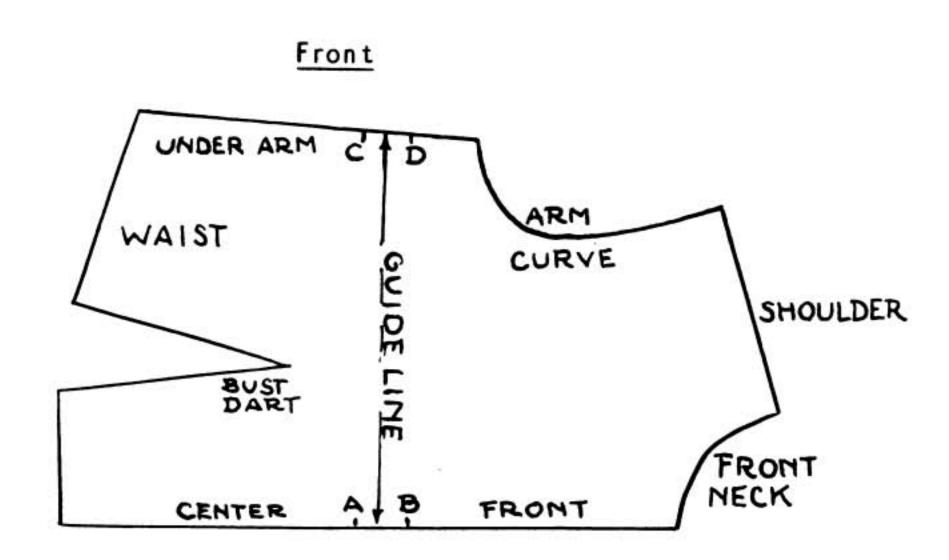
Analysis:

The single guide line method in grading from size to size in a normal progression is graphically diagrammed, step by step, for ease in understanding. They should be followed and practiced until ease in execution is accomplished.

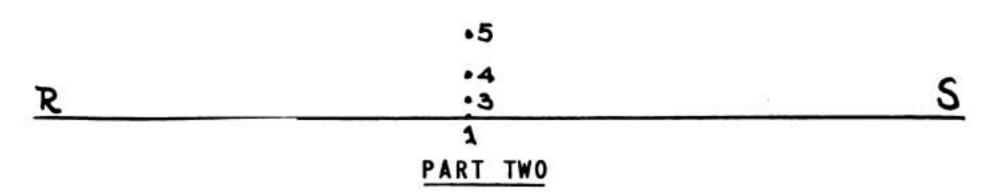
The control guide line is drawn perpendicular to the center front and center back about two inches from the arm curve. When grading, the control guide line is continued off the pattern and onto the paper upon which the grade is to be made.

The movement of the pattern at right angles to left and right for raise of shoulder and for waist drop is controlled by the points A and B and C and D on either side of the control guide.

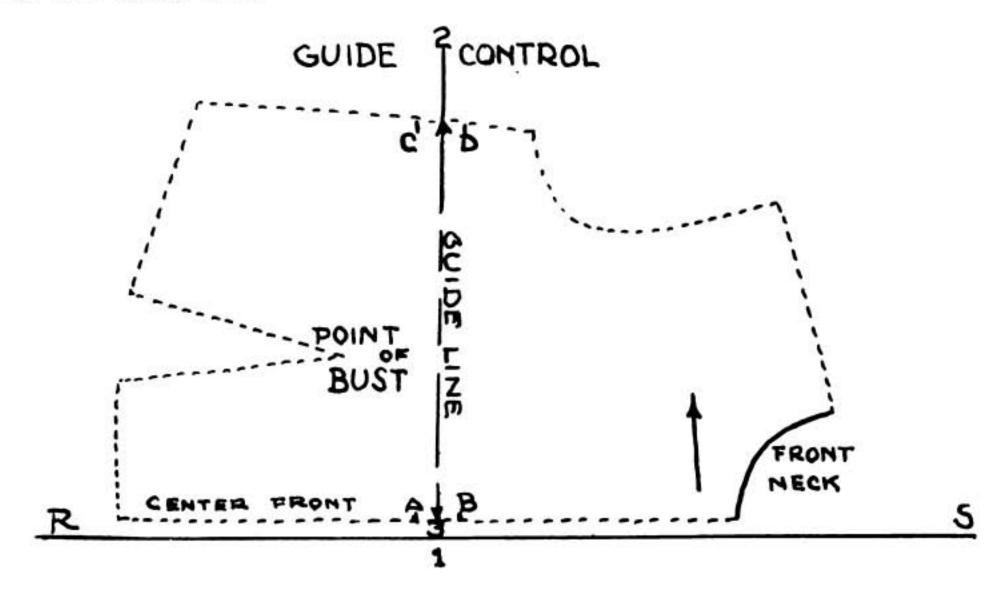
This is a relatively simple method for grading practically all types of patterns. Additional aids can be added to accommodate special measurement grades.



The guide line is perpendicular to the center front so that it reaches the underarm line two inches below the arm curve. Points A and C are equal to the amount of shoulder raise. Points B and D are equal to the amount of the waist drop below the normal.



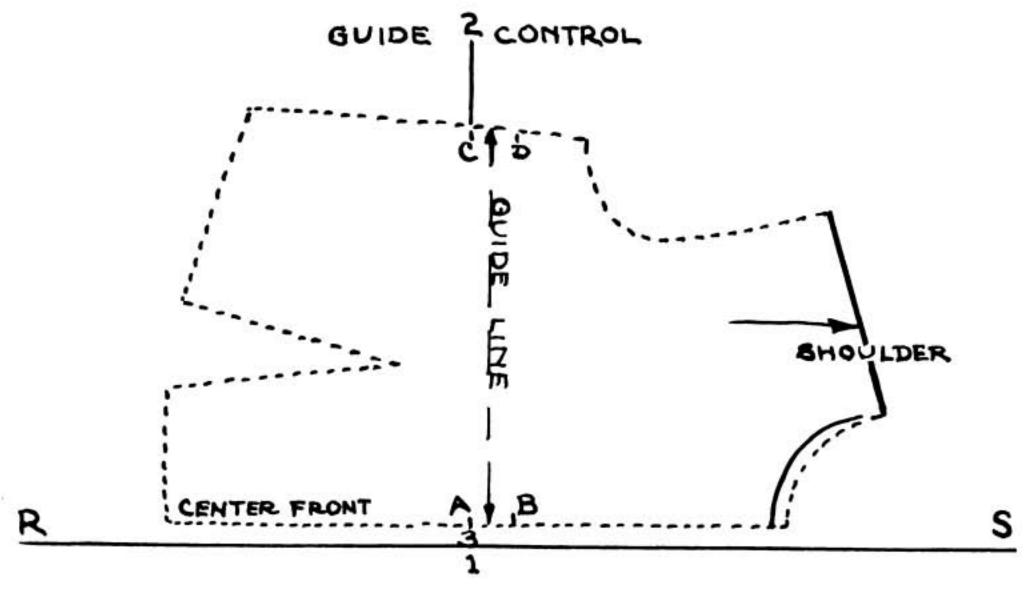
Draw line R-S, and place the center front of front pattern upon this line. Continue guide line on pattern by placing ruler or straight edge upon it, point off front part on line R-S and draw the continuation to point 2 on the paper. Make the following measurements from point 1: 1 to 3, the distance the darts are to be moved; 1 to 4, the increase to the arm curve; and 4 to 5, the increase to the underarm.



PART THREE

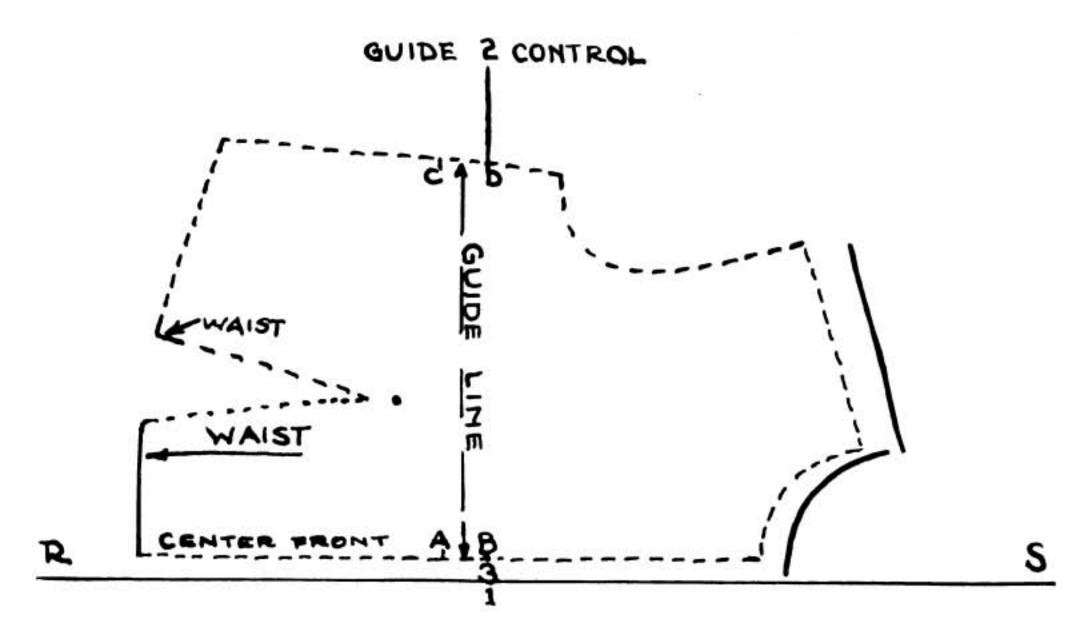
Place guide line of center front on point 3, and guide line at underarm on guide control 2. Mark out front neck and point of bust dart.





PART FOUR

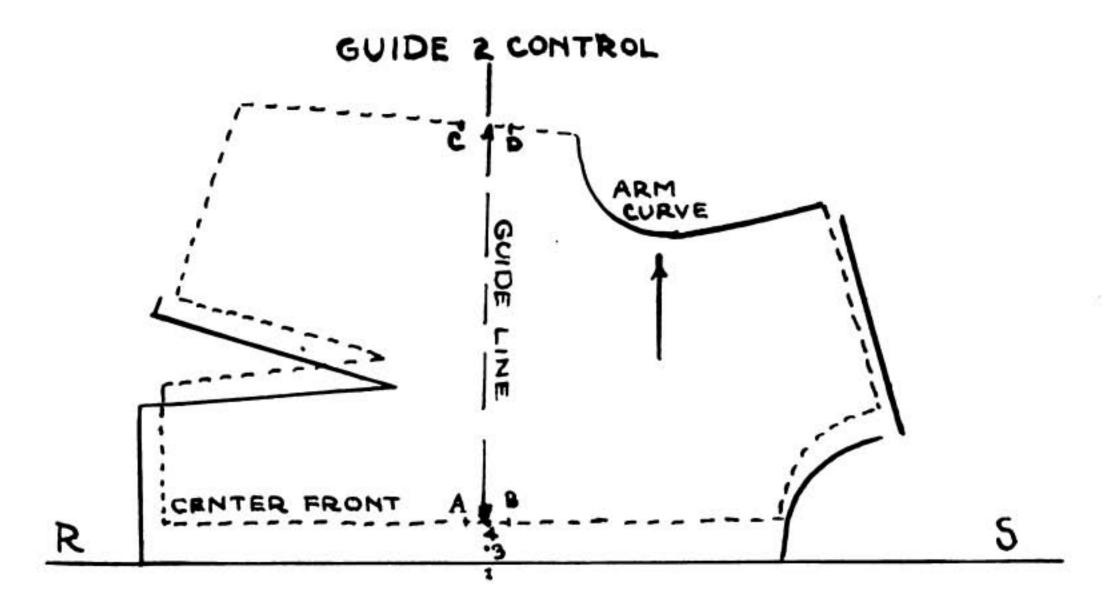
Place center front of front pattern so that point A of the pattern, which is below the guide line, is on point 3 and so that point C at the underarm is on control 2. Draw shoulder line. This raises the shoulder the amount determined for the raise.



PART FIVE

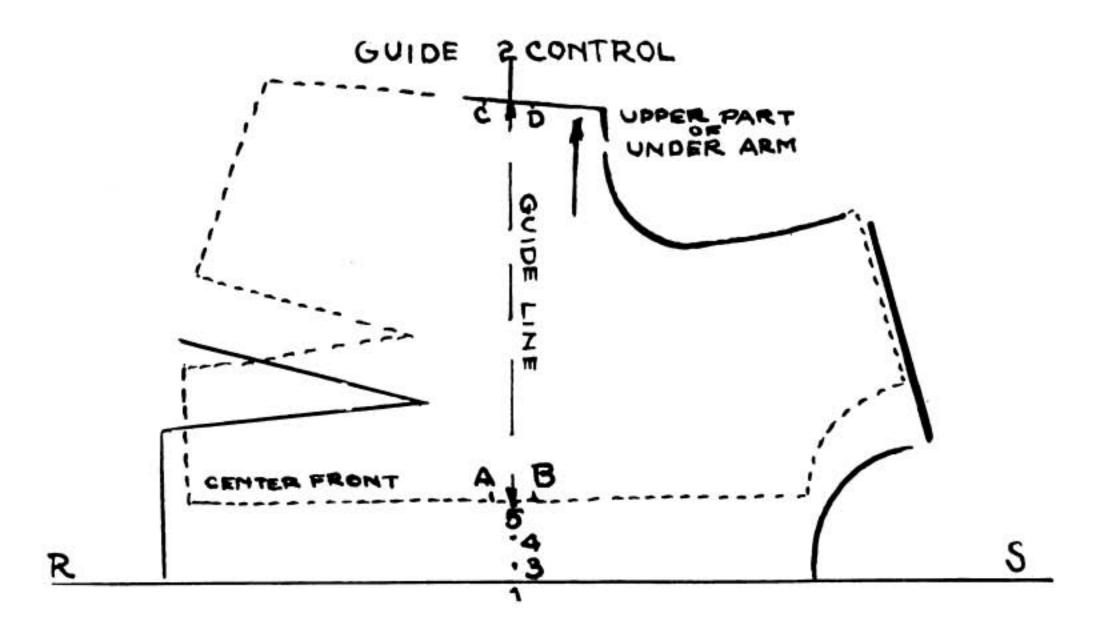
Place center front of front pattern so that point B of the pattern is on point 3 and so that point D of pattern is on control 2. Mark out front part of waist and dart This move drops the waist line in the points at waist. front the required amount. Original from Digitized by GOOGIE

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PART SIX

Place center front of front pattern so that guide line at front touches point 4 and so that the guide line at underarm is on control 2. Mark out the arm curve. This increases the width across the chest the required amount.

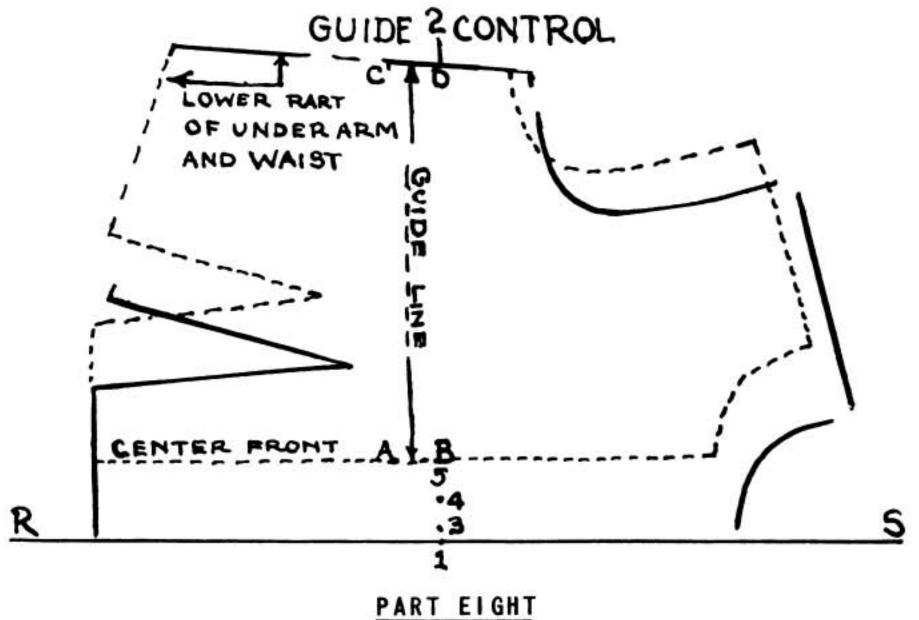


PART SEVEN

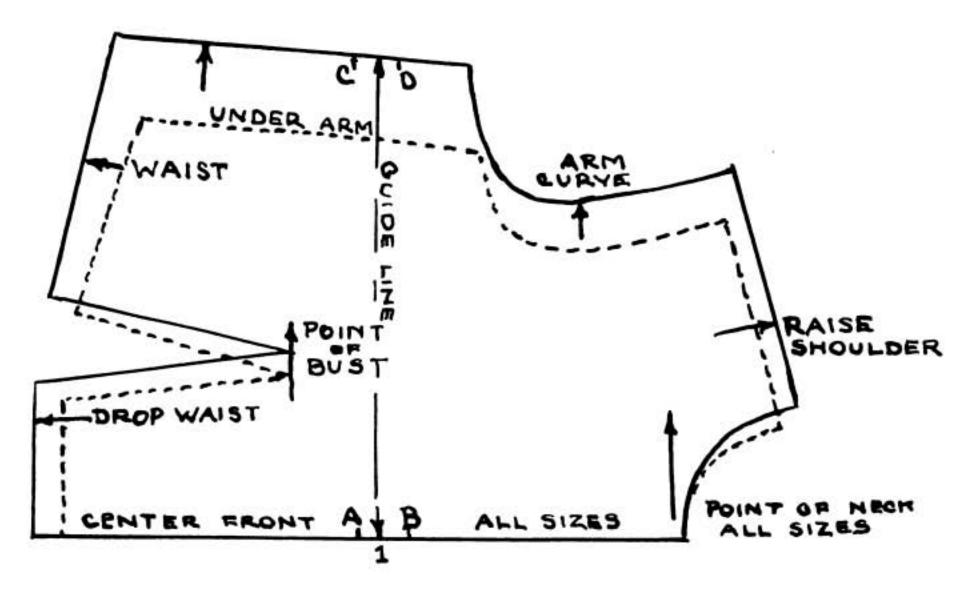
Place center front of front pattern so that the guide line touches point 5 and the guide line at the underarm touches control 2. Mark out upper part of underarm. This increases the width of the pattern at the side seam the required amount.

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Original from CORNELL UNIVERSITY



Place center front of front pattern so that point B of the pattern is on point 5 and point Dat the underarm of the pattern touches control 2. Draw lower part of underarm and part of the waist. In this way the proportionate increase has been divided into the proper amounts and is at the desired points.

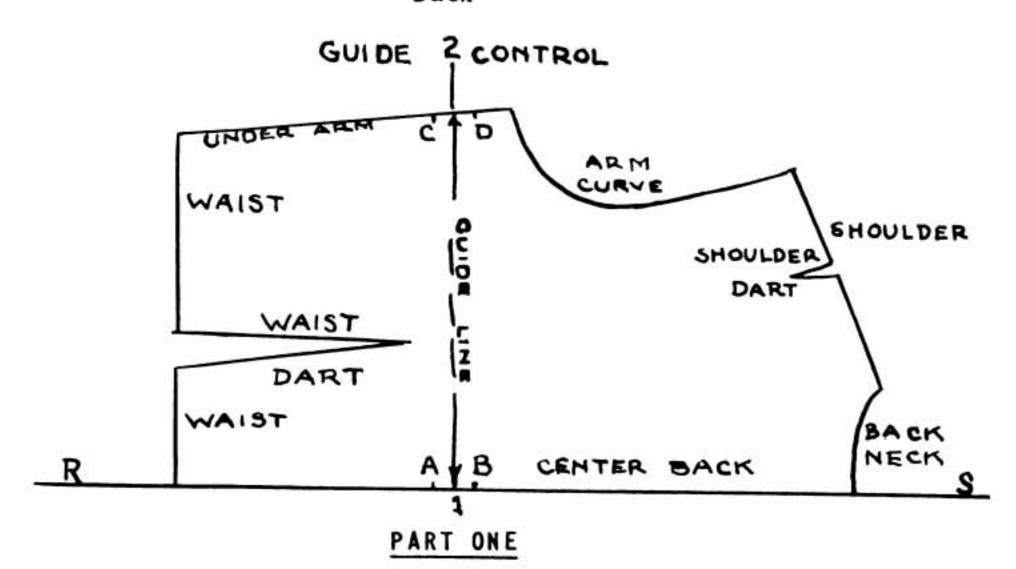


PART NINE

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Line R-S being the center front for both the original pattern and the pattern grade, shows distinctly, when both guide lines coincide, how and where the increases have occurred all around the pattern outline. This also shows the dart meyement. Original from

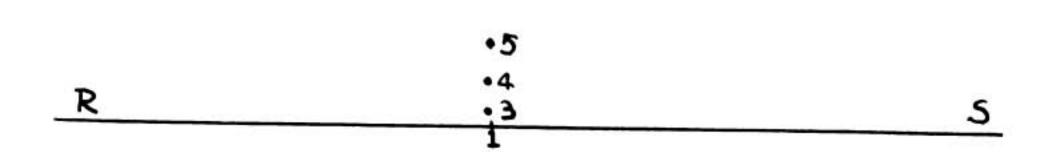
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Draw a line from the center back to the underarm line two inches below the arm curve and perpendicular to the center back. This is the guide line on either side of the center back. Point A is one-eighth to left of guide line and point B is one-eighth inch to the right at the center back and point C is one-eighth inch to the left and point D is one-eighth inch to the right of the guide line on the underarm.

Place center back of back pattern on line R-S. Transfer guide line to point on line R-S. Continue guide line on to the paper beyond the underarm line as control 2.





PART TWO

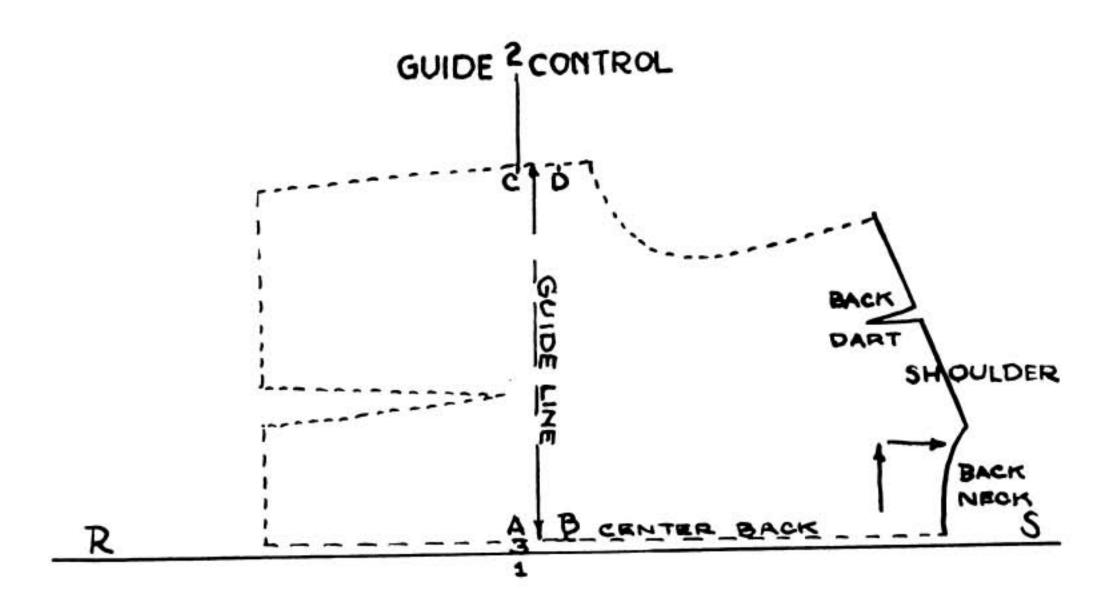
From the guide point, draw continuation of control 2.

Measure and point off from line R-S to point 4 one-quarter inch; 4 to 5 is also one-quarter inch; from line R-S to point 3 is one-sixteenth inch, for two-inch grade.

Original from

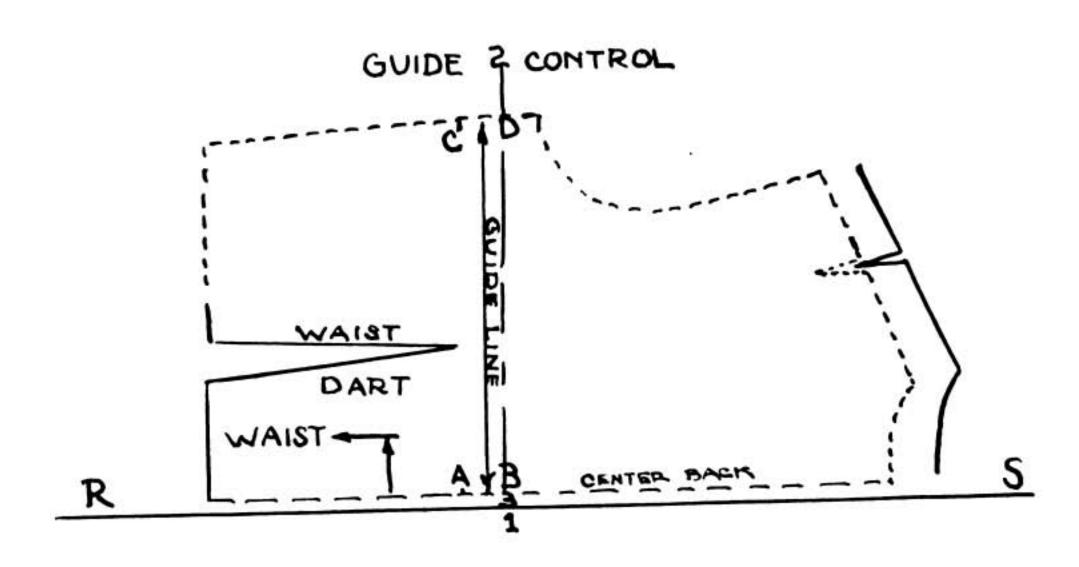
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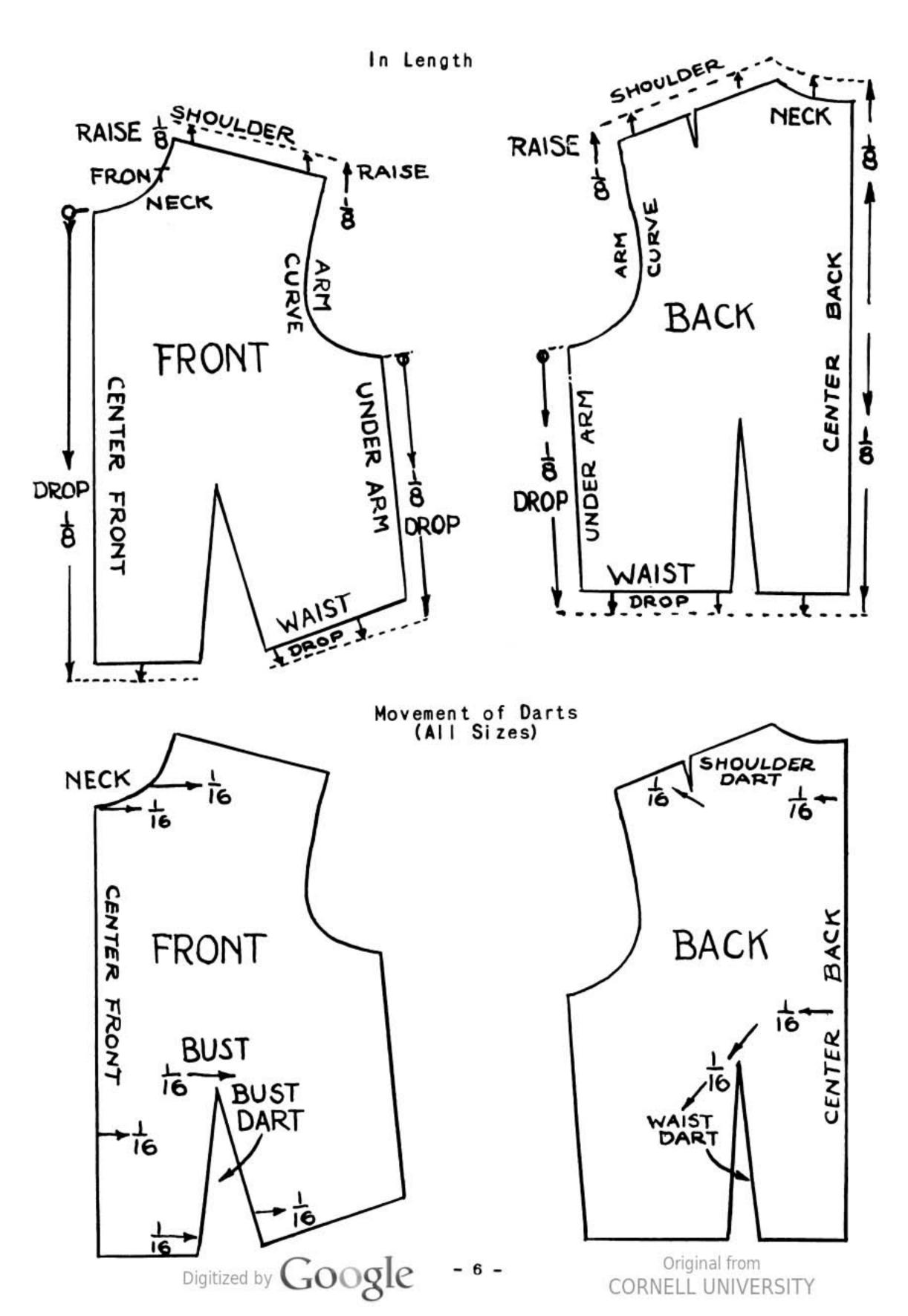
PART THREE

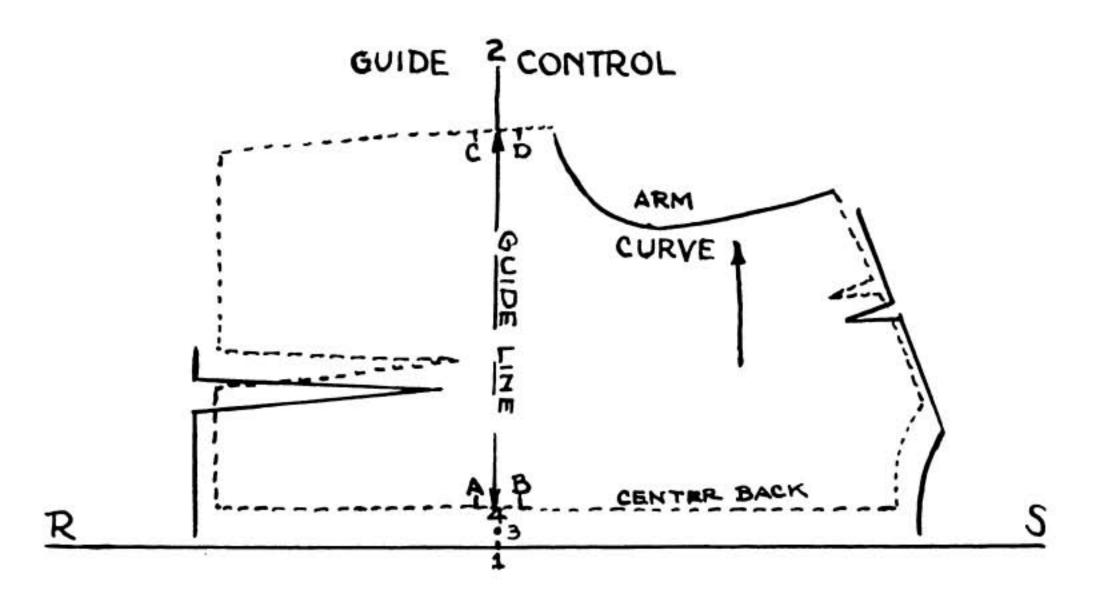
Place center back of back pattern so that point A of the pattern is on point 3, and so that point C at the underarm is on control 2. Mark back neck, shoulder and shoulder dart. This operation raises the neck and shoulder one-eighth inch.



PART FOUR

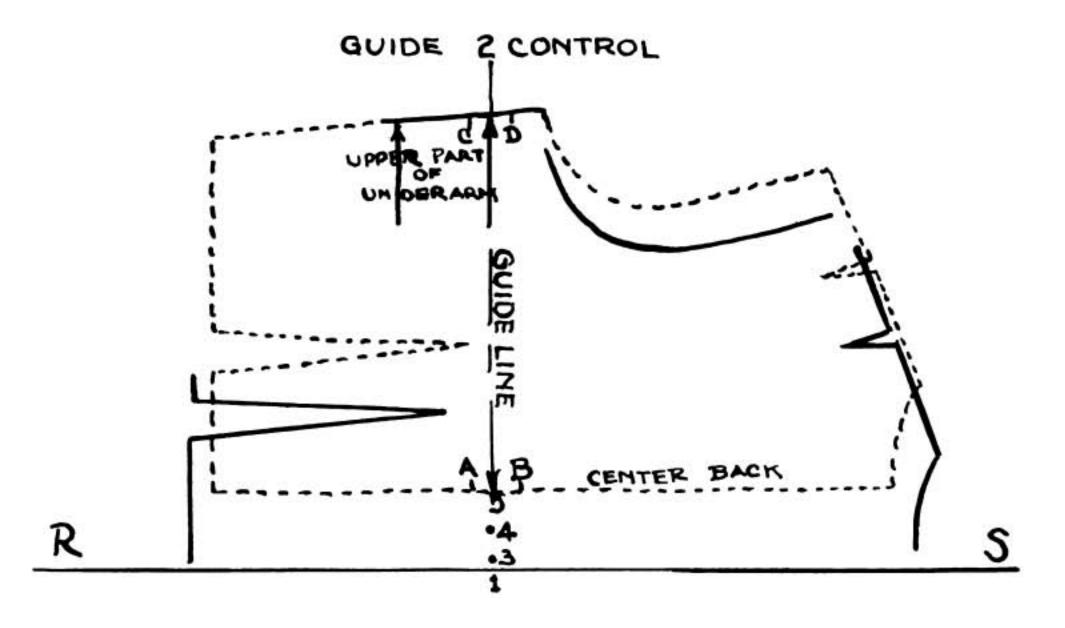
Place center back of back pattern so that point B of the pattern is on point 3, and so that point D at the underarm is on control 2. Draw part of waistline at the back and the entire waist dart. This move drops the waistline and the dart one-eighth inch. The center back in the grade has now increased one-quarter inch.





PART FIVE

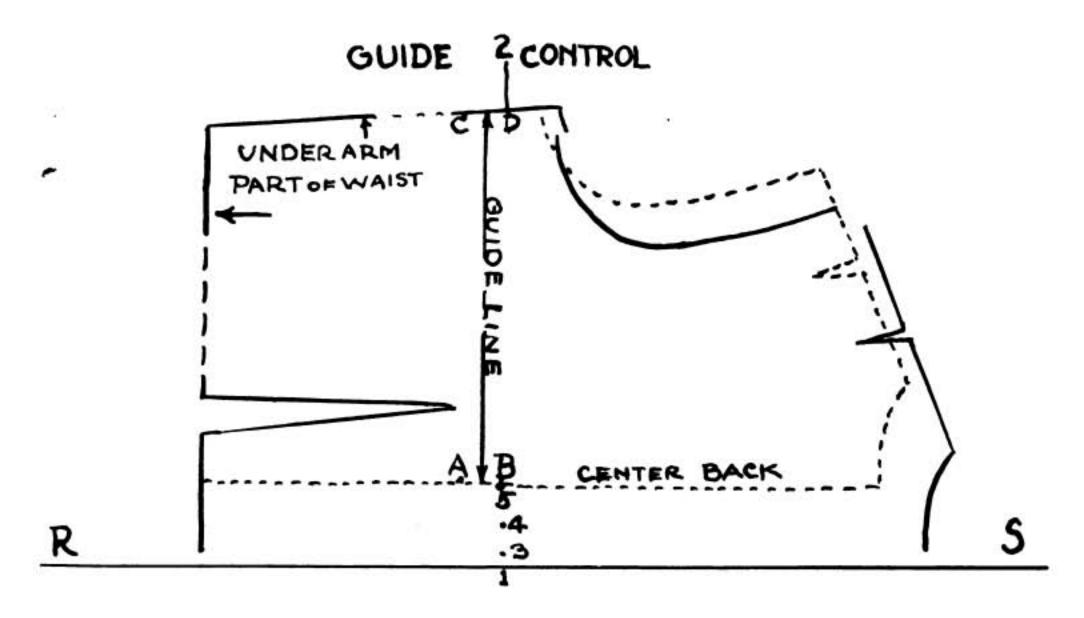
Place center back of back pattern so that the guide line point touches point 4 and the continuation of the guide line at the underarm is touching control 2. Mark the arm curve as indicated above. This move increases the grade across the back by one-quarter inch.



PART SIX

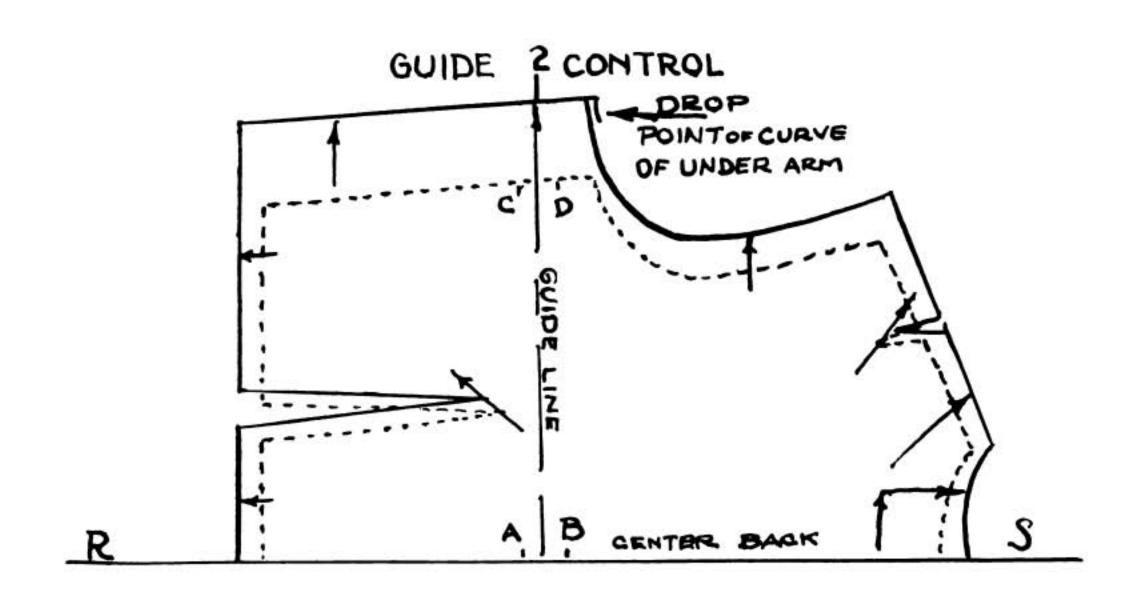
Continue the guide line of the back so that the guide point at the center back is on point 5 and the continuation of the guide line is on control 2. Mark the upper part of the underarm as indicated above.





PART SEVEN

Place the pattern so that point B of the center back is on point 5 and point D at the underarm is on control 2. Mark the lower part of underarm, and part of the waistline. This has increased the width of the pattern at the waist by one-half inch.

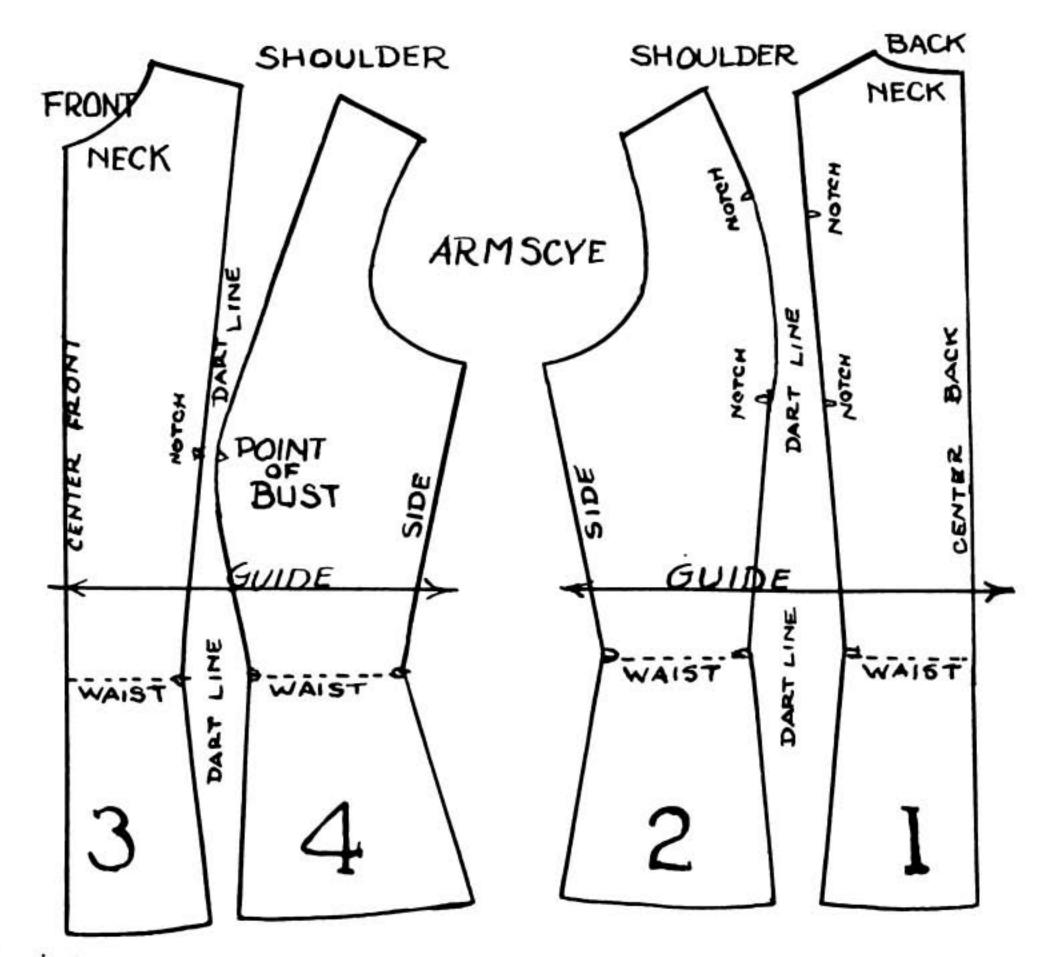


PART EIGHT

Use the pattern to close up all openings. At the underarm point of the arm curve, drop out one-sixteenth inch. (The arrowheads point in the direction of the increases from the original pattern to the graded pattern.)

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Single Guide Split Pattern Grade: Straight Princess



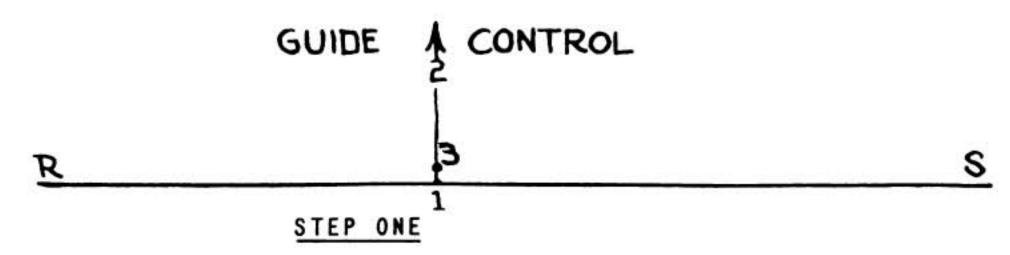
Analysis:

To be able to grade this pattern intelligently -- as with any other that is split into parts of unfamiliar shape -- it is advisable to set all the parts together in relation to each other, using the notch points as guide. In this way, it is quite simple to set up the points of grade and the guide direction.

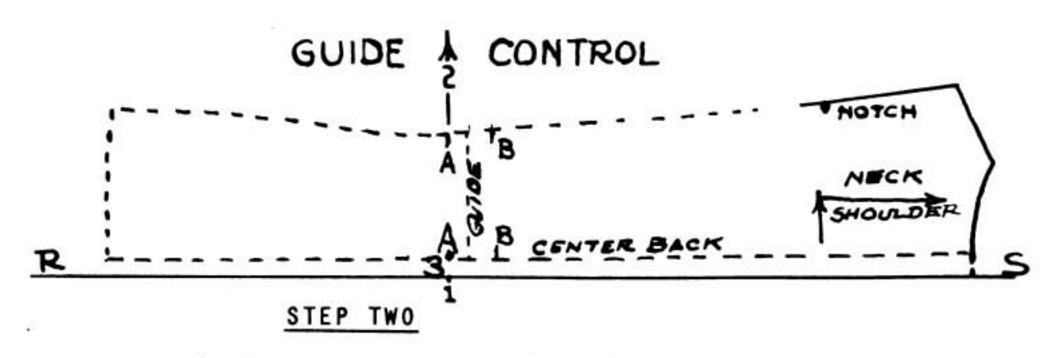
You will notice a single guide line drawn through the front and front gore square to the center front and also through the back gore square to the center back. You will also notice that this guide line runs parallel to the waistline, which should be remembered in grading split patterns that have no identifying marks other than notches or grain lines.

This pattern is split at the front and back dart line which gives us the clue to the method of grade procedure. Front and back Panel 1 and 3 are moved one-sixteenth inch -- or the amount the dart is to be shifted. The front and back gore -- Panels 2 and 4 -- receive the balance of the total grade of those parts.

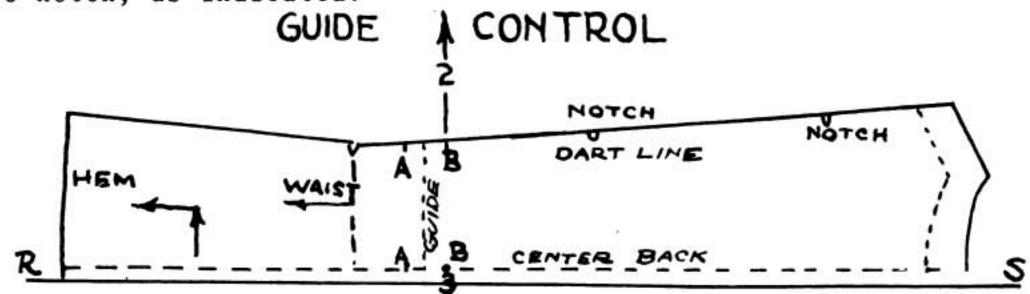
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Mark line R-S, and erect Guide Control 2 perpendicular to line R-S at point 1. Measure, on Guide Control 2, one-sixteenth inch from point 1 to point 3, or the amount of dart movement.

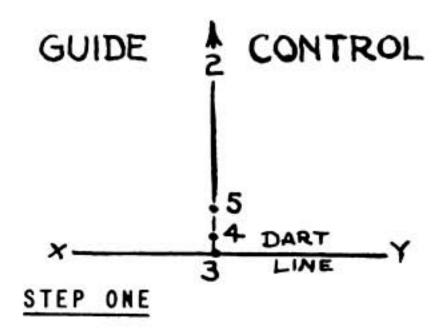


Place the back panel of the pattern so that the guide line marked on the pattern is on Guide Control 2 at point 1. Move the pattern so that points A-A are along Guide Control 2, and so that the center back touches point 3. This raises the neck and shoulder. Mark out neck, shoulder and dart lines to notch, as indicated.

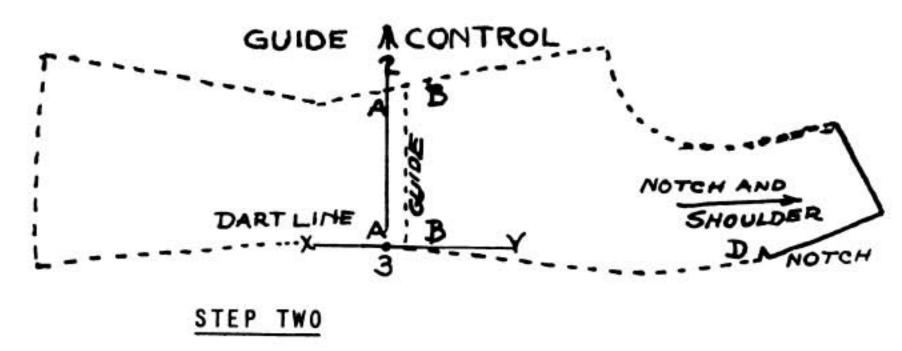


STEP THREE

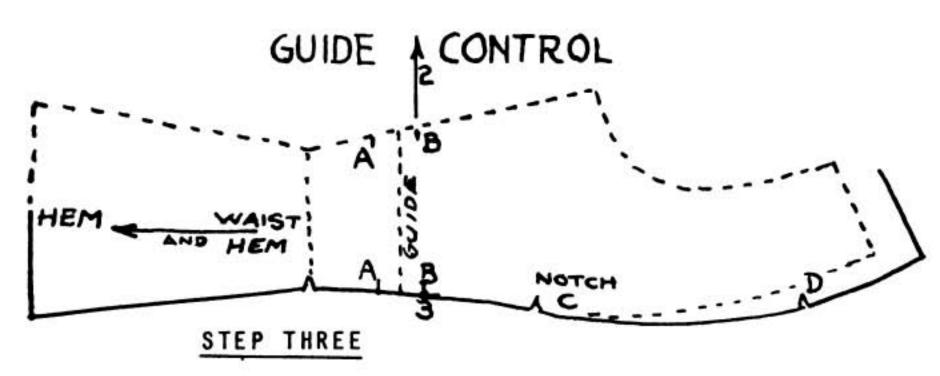
Place center back (points B-B) on point 3 and Guide Control 2. Mark out hem, dart line and balance of pattern to complete back panel grade.



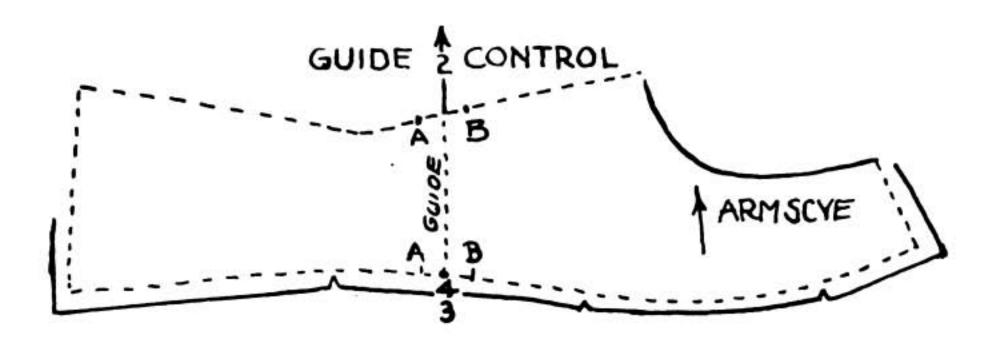
Mark the short line, X-Y, and draw Guide Control 2 perpendicular to point 3. This is the dart line start of the gore grade. Measure from 3 to 4, the balance of the cross back grade at the armhole, and from 4 to 5, the balance of the back total grade.



Place the dart line of the back gore of the pattern so that points A-A are on Guide Control 2 at point 3. Mark out the top notch (D) and the shoulder for the grade raise.

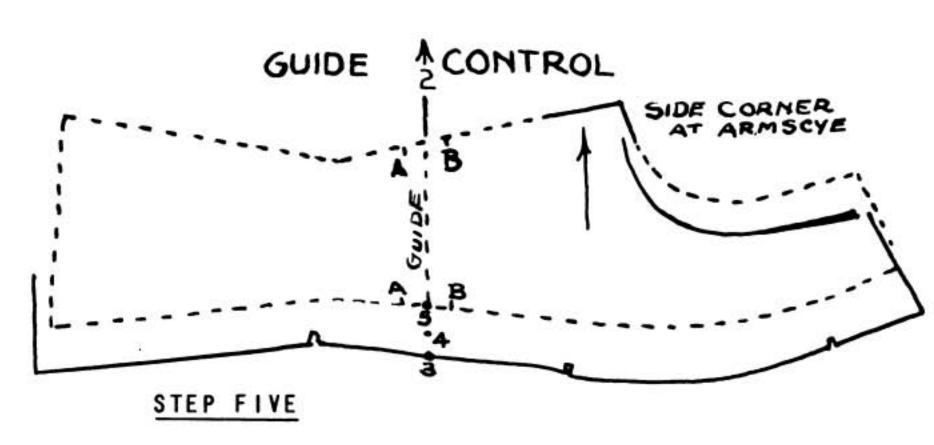


Move the pattern to the left with guide points B-B on point 3, on Guide Control 2. Mark out the lower part of the dart line (notch C), the waist notch and half of the hem line to drop the waistline.

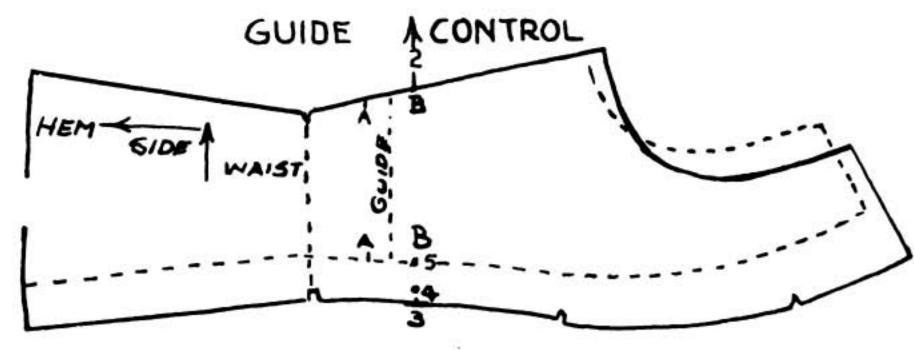


STEP FOUR

Move the back gore so that the guide line is on Guide Control 2, and the dart line is on point 4. Mark out the entire armhole and notches for the balance of the grade across the back at the armhole.

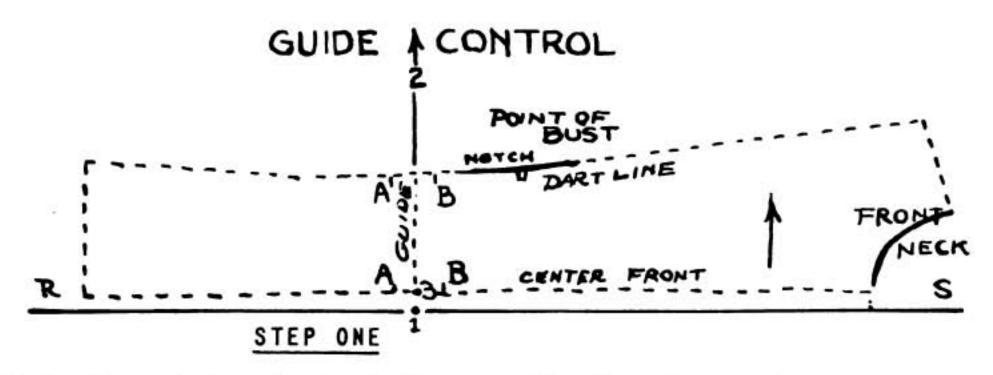


Move the back gore forward with the guide on Guide Control 2, and the dart line on point 5. Mark the side corner at the armscye.

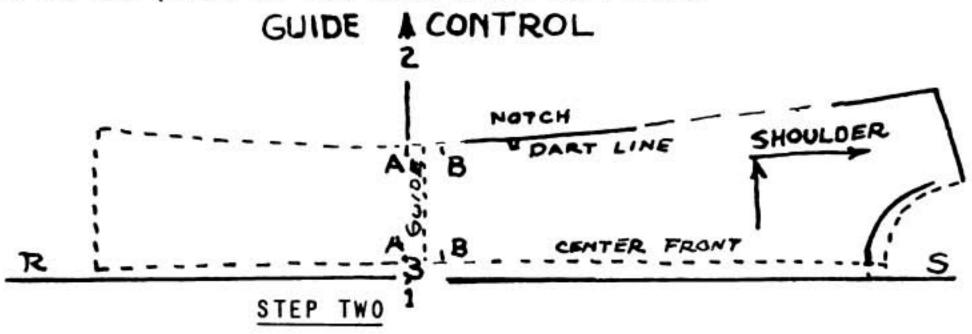


STEP SIX

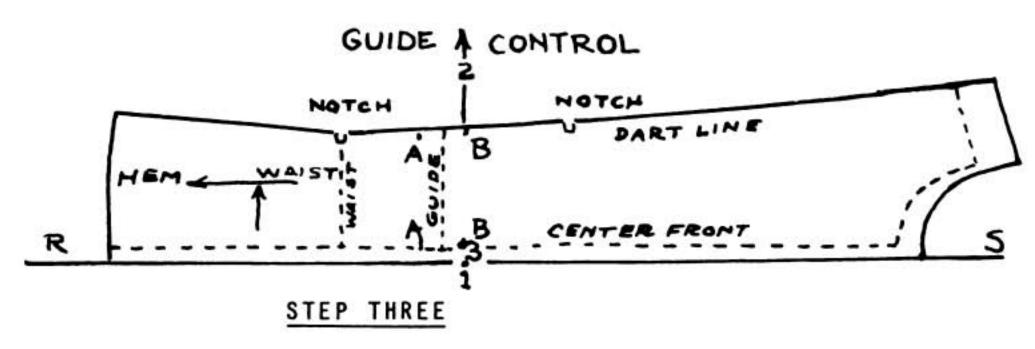
Move the pattern of the back gore to the left, placing points B-B on point 5, on Guide Control 2. Mark out the hem line, side and waist notch. Join the waist notch to the armscye. (See Step Five.)



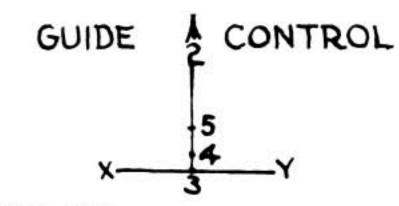
On line R-S, draw Guide Control 2 perpendicular to point 1. Measure, on Guide Control 2, from 1 to 3, the amount the front dart is to be moved. Place the pattern center front on line R-S, and the guide of the panel on Control 2. Mark the point of the neck. Move the pattern forward until the guide is on point 3. Mark out the entire front neck and short line at the point of the bust notch dart line.



Move the pattern center front on point 3 to the right, placing guide A-A on Guide Control 2 and point 3. Mark out the shoulder and the upper dart of the dart line to the bust notch.

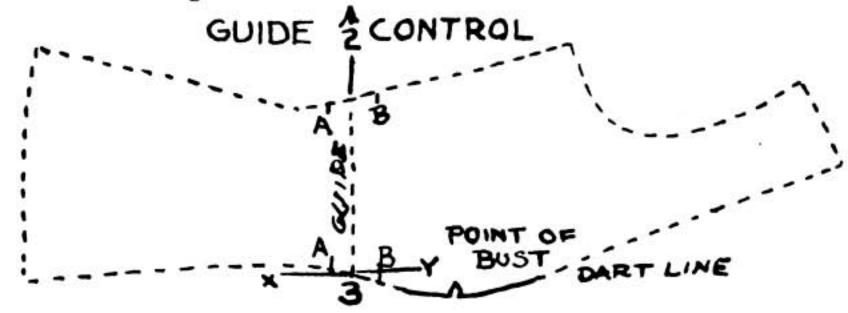


Move the pattern to the left with the center front guides (B-B) on point 3 and Guide Control 2 to drop the waist. Mark out the hem, dart line and waist notch to complete the front panel grade.



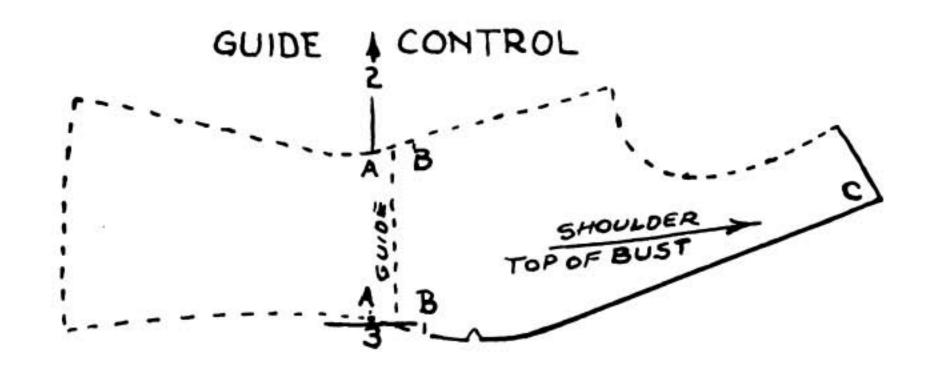
STEP ONE

Mark a short line (X-Y) and draw Guide Control 2 perpendicular to it at point 3. Measure, from point 3 on the Guide Control, the balance of the cross chest grade (point 4) and measure from point 3 to point 5 -- the balance of the total front grade.



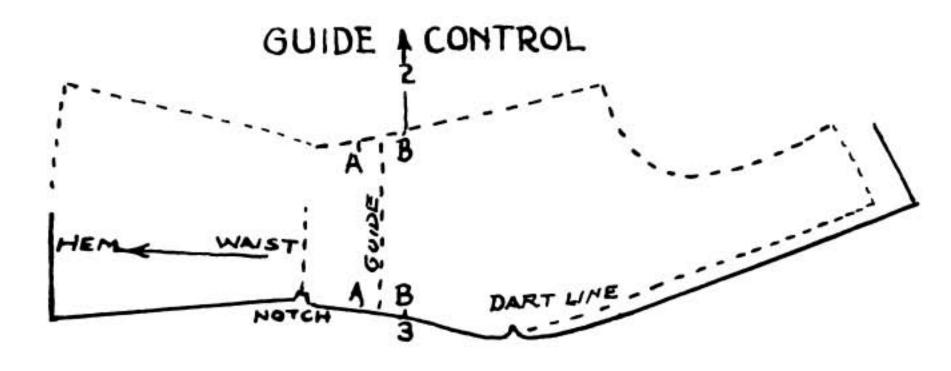
STEP TWO

Place the front gore with the guide on Guide Control 2 and the guide line on point 3. Mark the point of the bust notch as indicated by the heavy line.



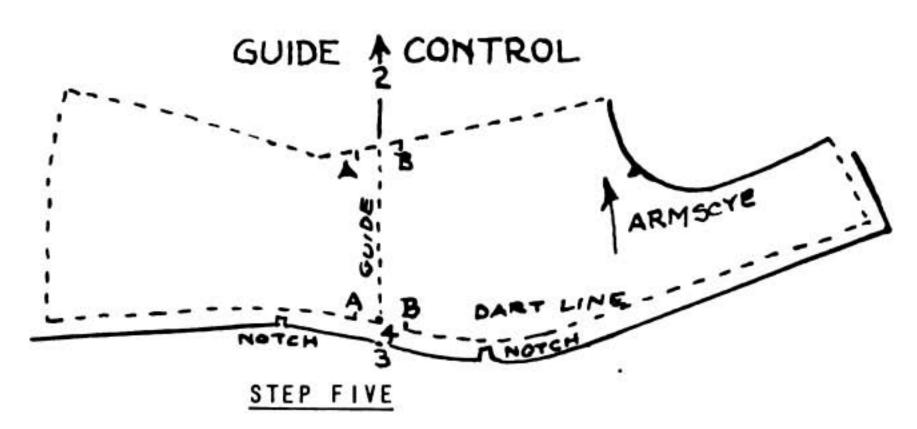
STEP THREE

Move the pattern to the right with the guide points (A-A) on Guide Control 2 at point 3. Mark out the shoulder line and swing from point C at the shoulder to continue the upper bust dart line into the point of the bust.

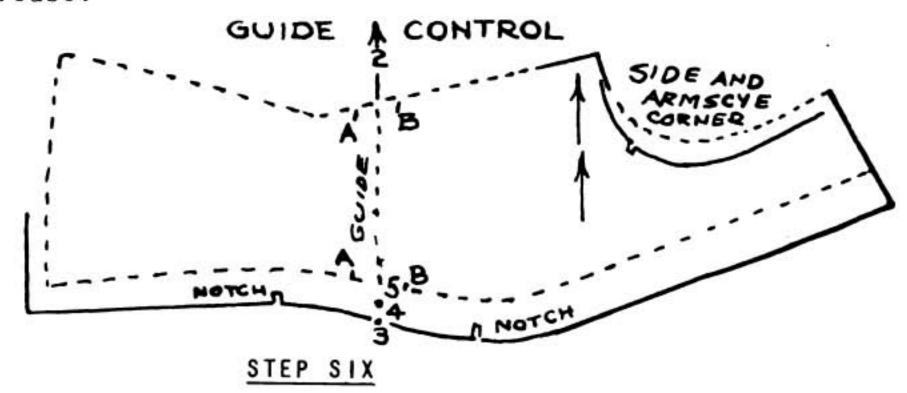


STEP FOUR

Move the pattern on the guide line to the left to drop the waist. Guides B-B should be on point 3 and Guide Control 2. Mark out the lower part of the dart line, waist notch and forepart of the hem line.

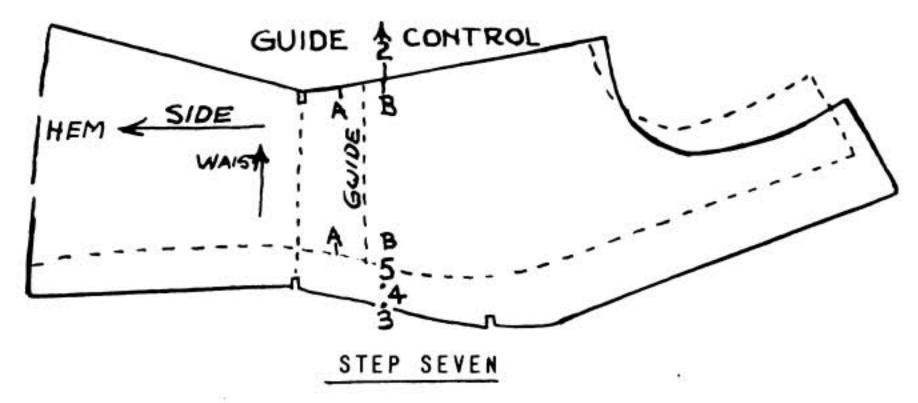


Move the pattern forward with the guide of the front gore on Guide Control 2 and the guide line on point 4. Mark out the entire armscye and arm notch to complete the total chest increase.

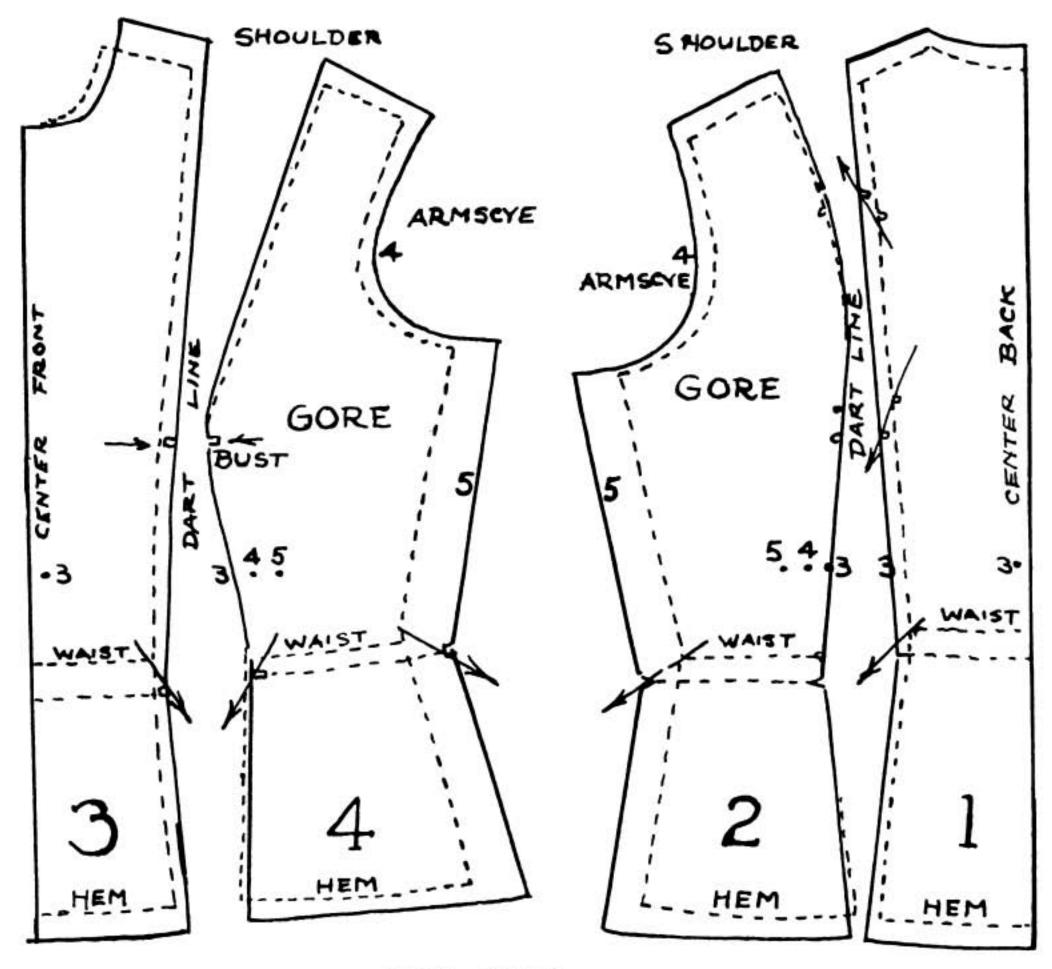


Move the gore pattern forward with the gore guide on point 5 and mark out the corner of the side and the girls maker of the arms when by as included.

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Move the pattern to the left so that points B-B are on Guide Control 2 and point 5. Mark out the side waist notch and the hem to complete the total grade of the front at the side gore.



TOTAL GRADE

The above diagram shows the relative grade increases of the various parts of the princess pattern, front and Original from back. Digitized by COOSIC - 54 - CORNELL UNIVERSITY

III SIZE DIFFERENCES: Total Overall

SIZES	9	to	п	to	13	to	15	to	17	
BUST		1		1 ½		1 ½		11		
ACROSS BACK		1/8		3/16		3/16		^{3/} 16		
WAIST		1		1 ½		1 ½		1½		
HIPS		1		1 ½		1 ½		1 ½		
WAIST Center Back		*		ŧ		*		ŧ		
SLEEVE		+		+		+		+		

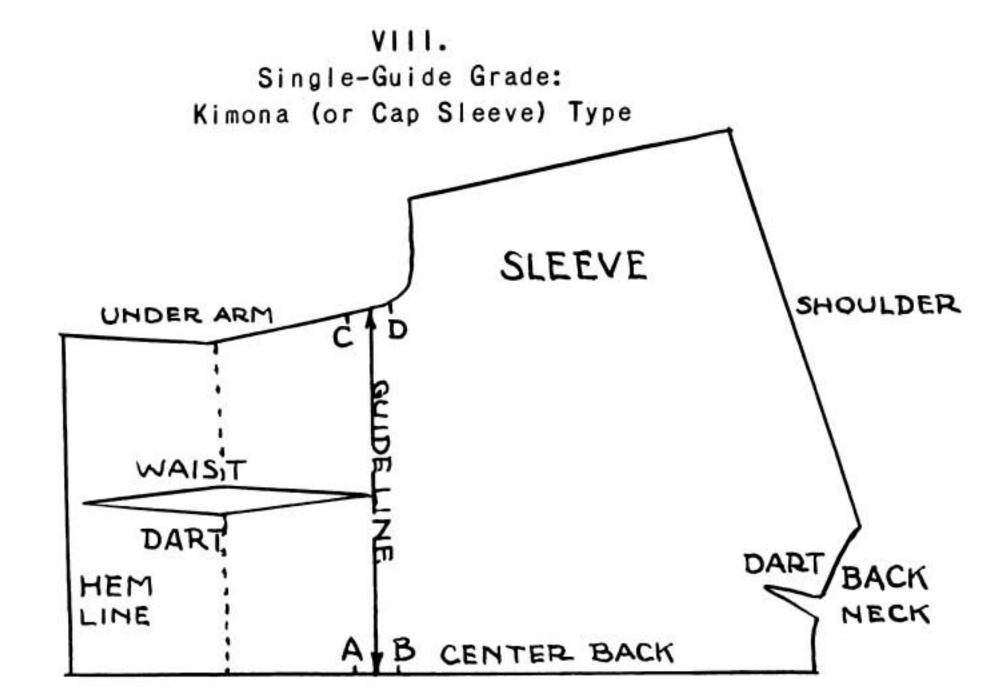
JUNIORS'

SIZES	10	to	12	to	14	to	16	to	18	to	20
BUST		1		1½		1 ½		1 ½		1 ½	
ACROSS BACK		1/8		3/ ₁₆		3/ ₁₆		3/16		3/6	
WAIST		ı		1 ½		1 ½		11/2		1 ½	
HIPS		1		11		1 ½		1 ½		1 ½	
WAIST Center Back		ŧ		ŧ		+		+		+	
SLEEVE		+		ŧ		1		+		*	

MISSES

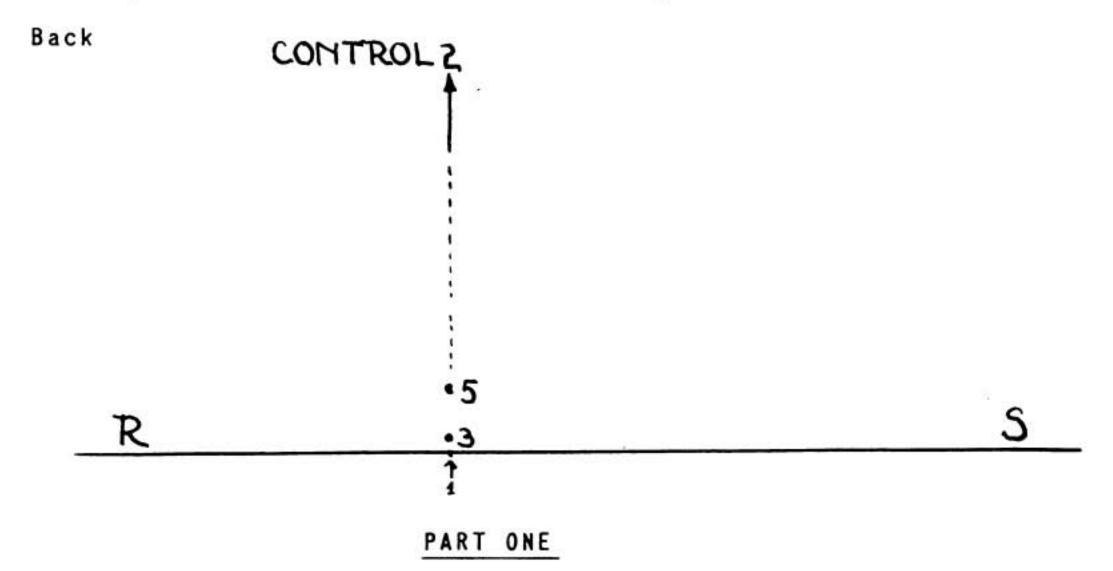
SIZES	32	to	34	to	36	to	38	to	40	to	42
BUST		2		2		2		2		2	
ACROSS BACK		ŧ		ŧ		ŧ		+		ŧ	
WAIST		2		2		2		2		2	
HIPS		2		2		2		2		2	
WAIST Center Back		ŧ		ŧ		4		ŧ		¥	
SLEEVE		ŧ		+		*		+		+	

WOMEN'S

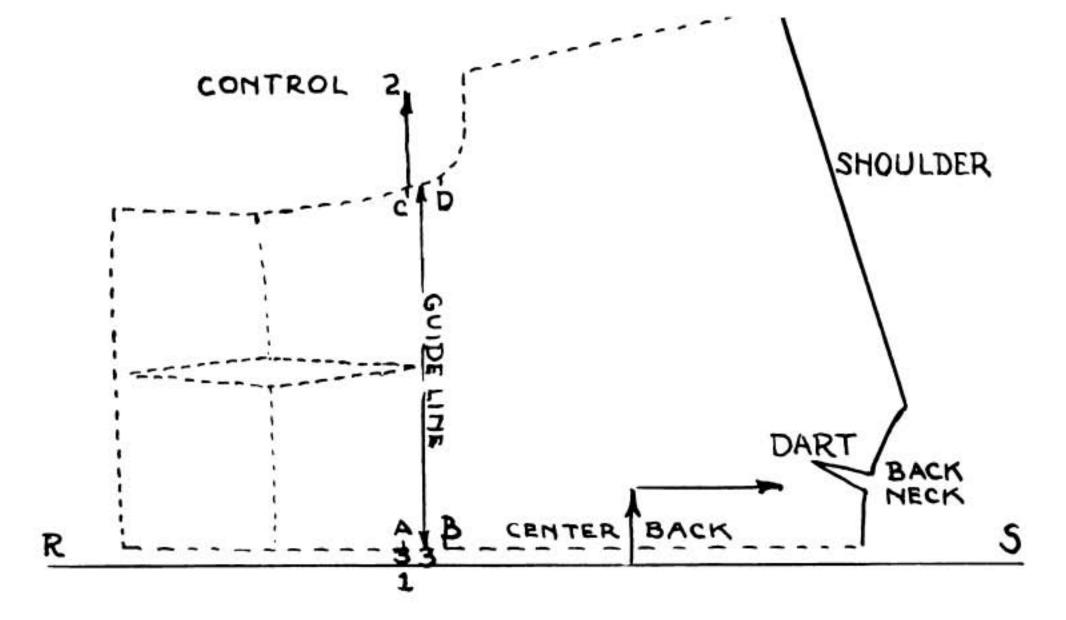


Analysis:

Draw the guide line below the sleeve and perpendicular to the center back. A and B and C and D are for the raise of the shoulder and the drop of the waist and are one-eighth inch on either side of the guide line.

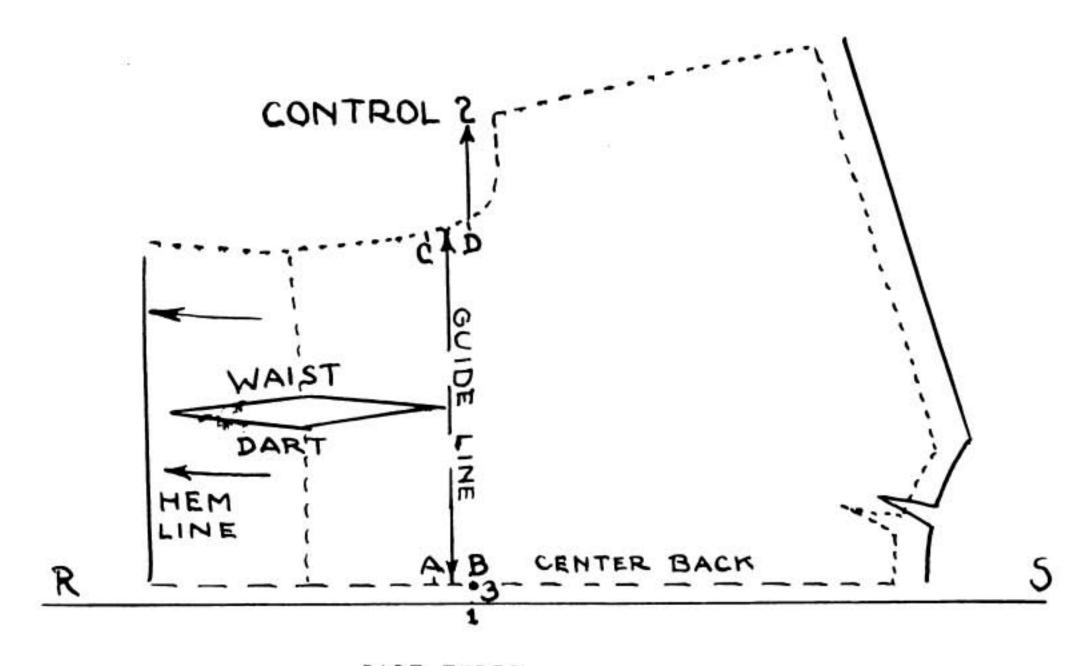


Mark line R-S. Place center back of pattern upon this line, and transfer guide line to point 1. Continue through to control 2. For an inch-and-a-half grade measure one-sixteenth inch to point 3 and three-eighths inch to point 5 from point 1.



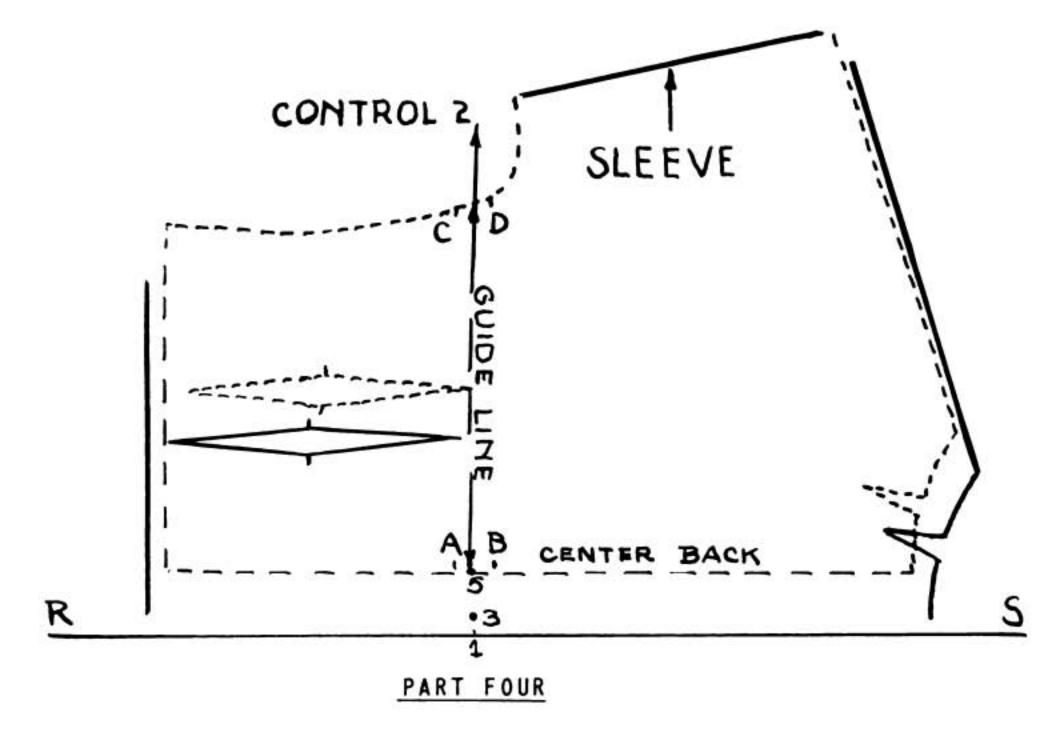
PART TWO

Move kimona pattern so that point A of the pattern is on point 3 and point C at the underarm is on control 2. This raises the neck and shoulder one-eighth inch. Mark out back neck, dart and shoulder.

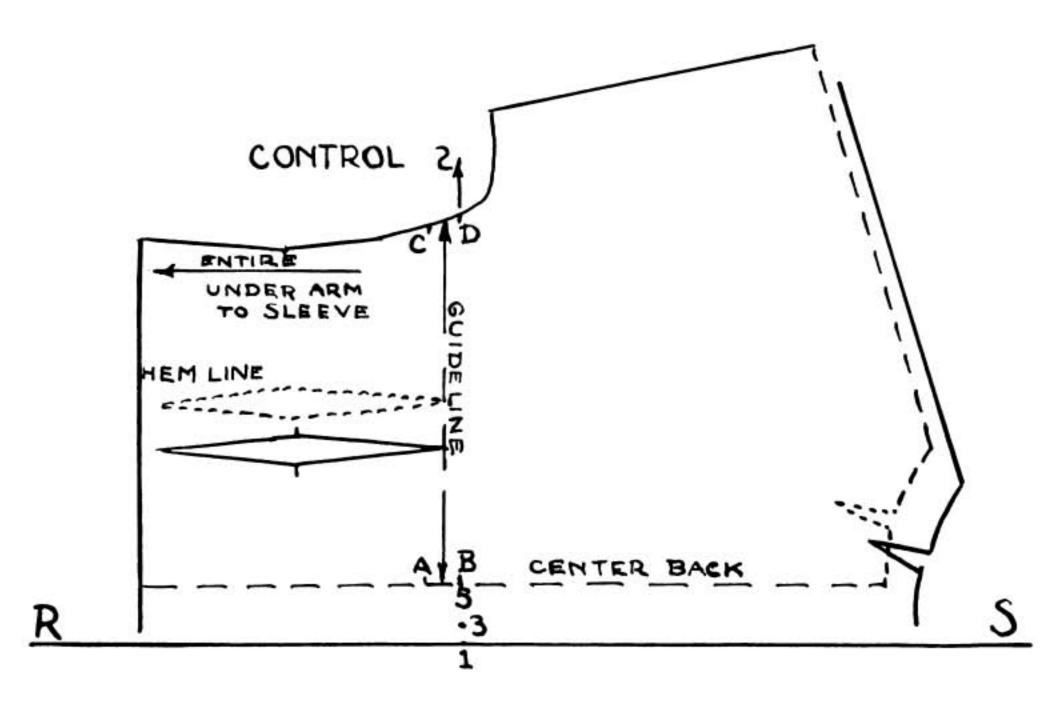


PART THREE

Move pattern so that point B of center back is on point 3, and point D is on control 2. This drops waist dart and hem one-eighth inch. Mark out entire waist dart and hem-line.



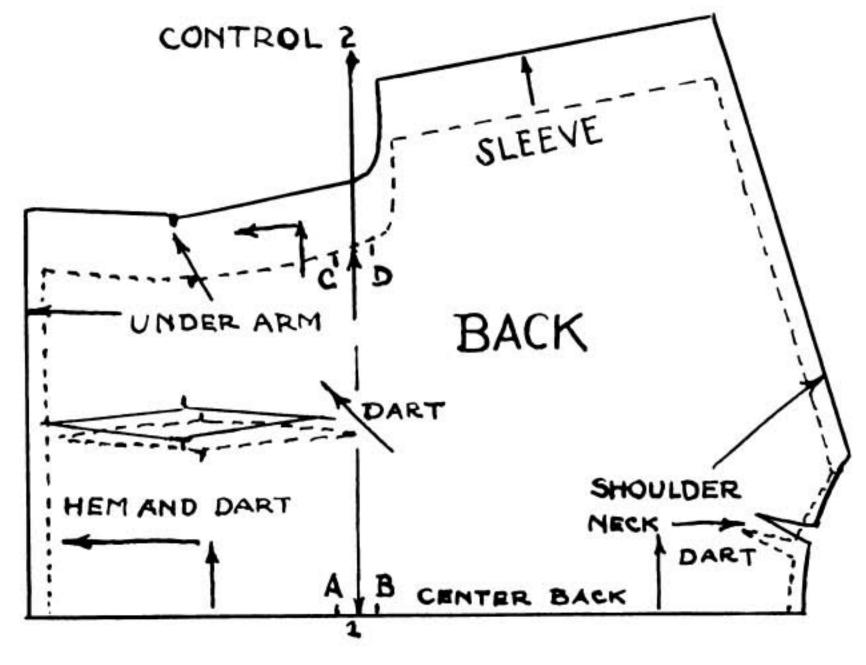
Move pattern so that guide line coincides with guide line of control 2 and so that the center back touches point 5. Mark the sleeve line.



PART FIVE

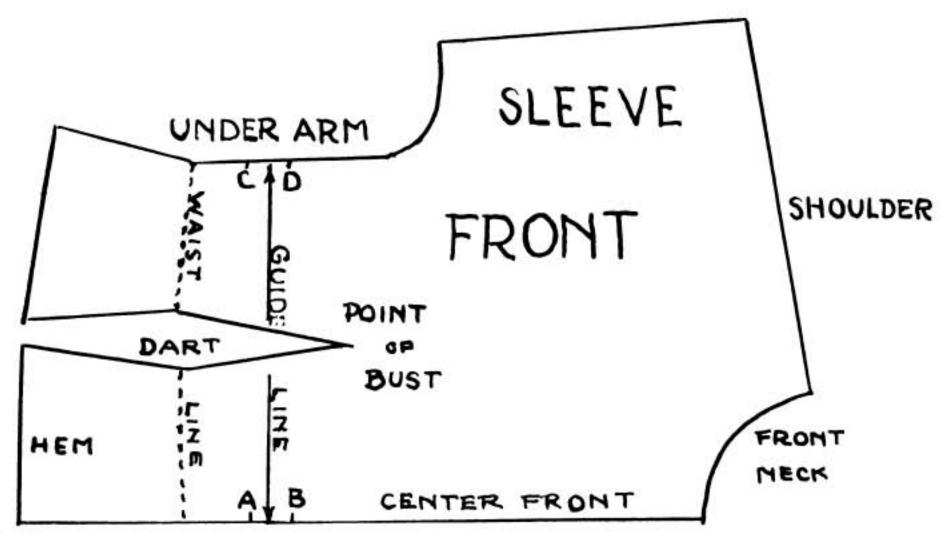
Move the pattern so that point B of the center back is on point 5 and point D at the underarm is on control 2. Mark out underarm and hem. This gives a one-eighth inch drop.

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PART SIX

The completed back grade, when placed even at center back and when guide line of pattern lines up with guide line of grade and with control 2, shows the proportionate increase from size to size of back with sleeve attached.

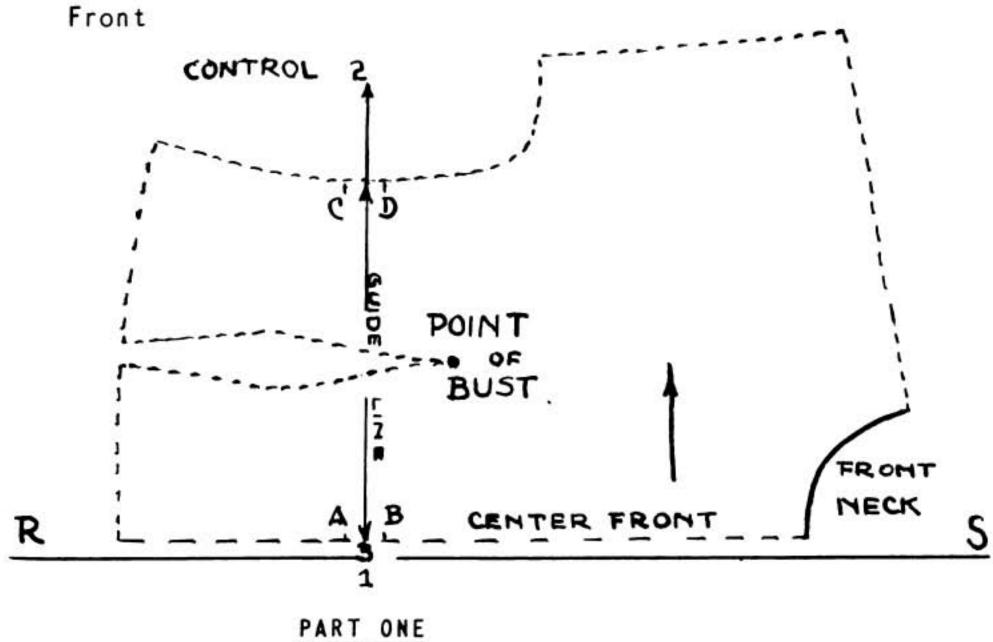


ANALYSIS Analysis:

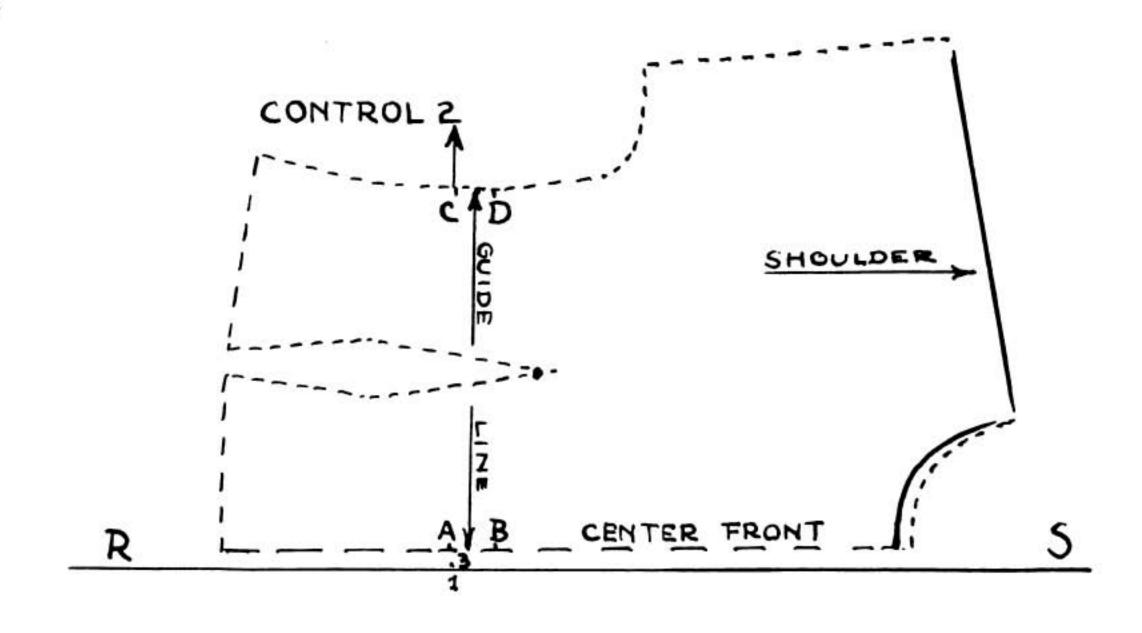
All points of importance needed for grading the front are clearly shown above. Points A and B and C and D are one-eighth inch on either side of the guide line of the pattern. These points, as before, function for raising and lowering the pattern evenly above and below the guide point 1 and control point 2 for a pattern grade from size to size.

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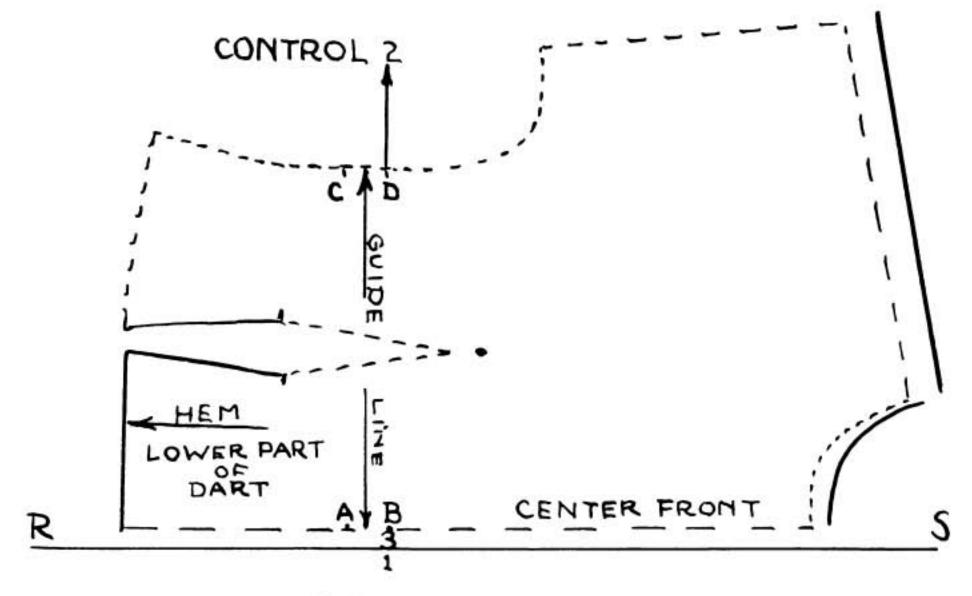


Place pattern so that the guide line of the center front touches point 3 and the guide line coincides with control 2. Mark front neck and point of bust.



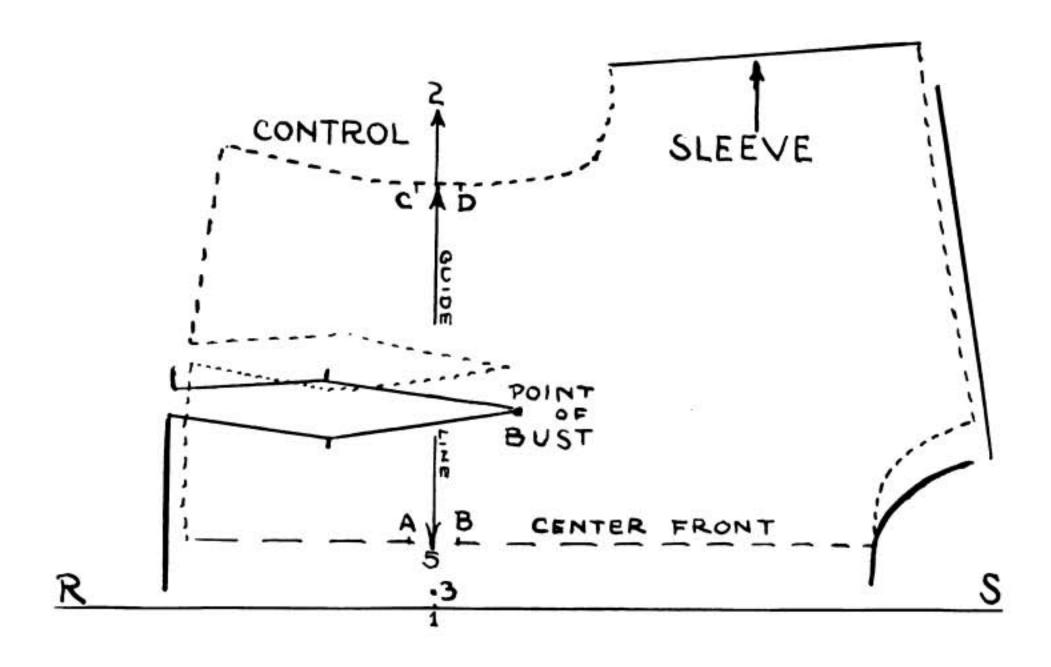
PART TWO

Move pattern so that point A on center front is on point 3, and point C at the underarm is on control 2. Mark the raise of the shoulder, which is one-eighth inch in this case.



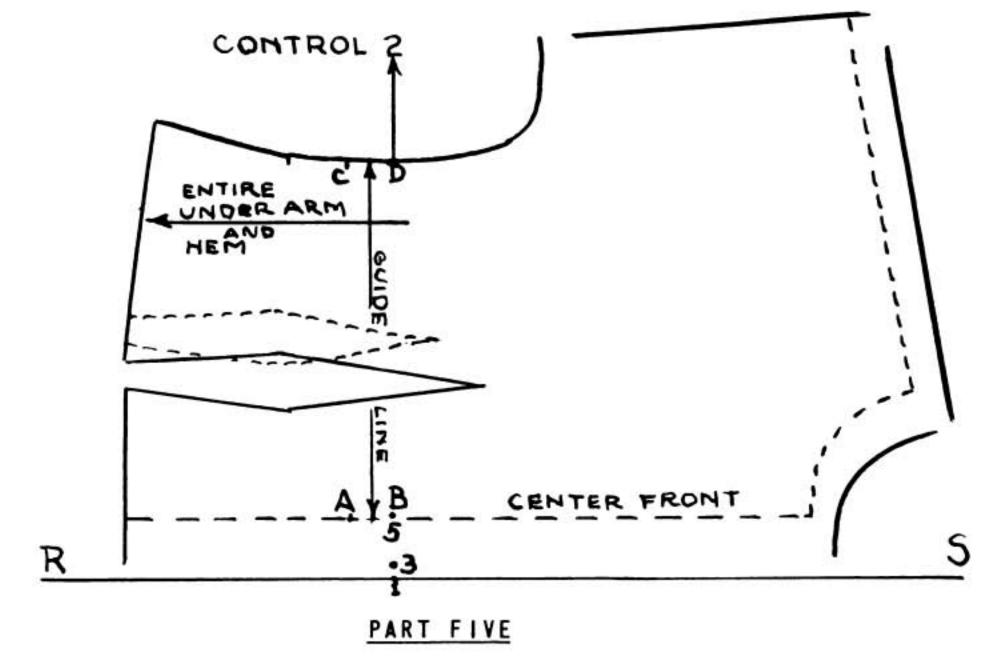
PART THREE

Move pattern so that point B on center front is on point 3, and point D at the underarm is on control 2. Mark the one-eight inch drop of the lower part of the bust dart at waist and front hem.

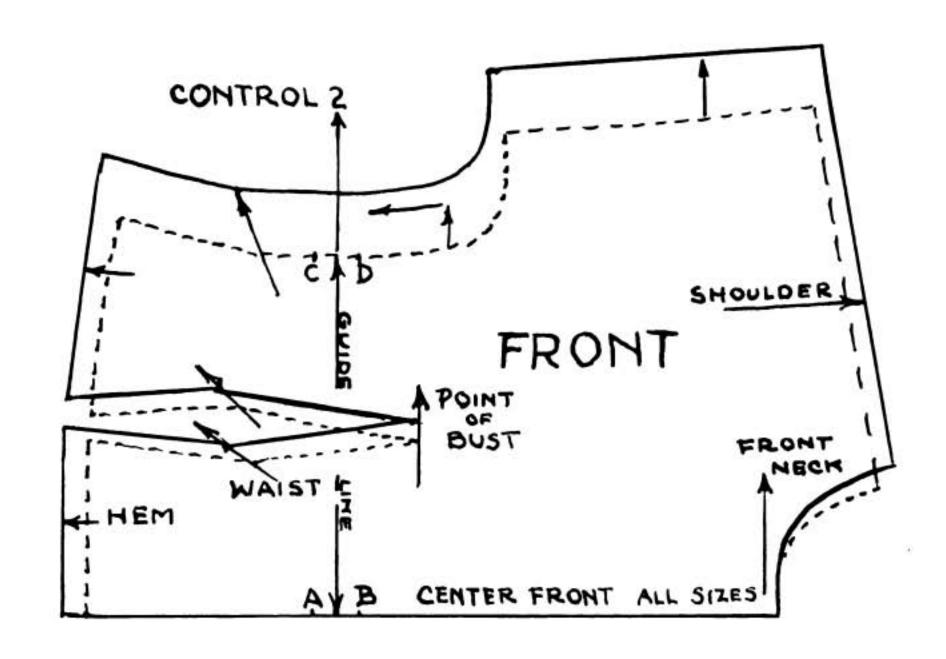


PART FOUR

Place guide line of the pattern so that it falls on point 5, and so that the guide line at the underarm is on control 2. This makes a three-eighths inch rise from line R-S. Mark out sleeve line.



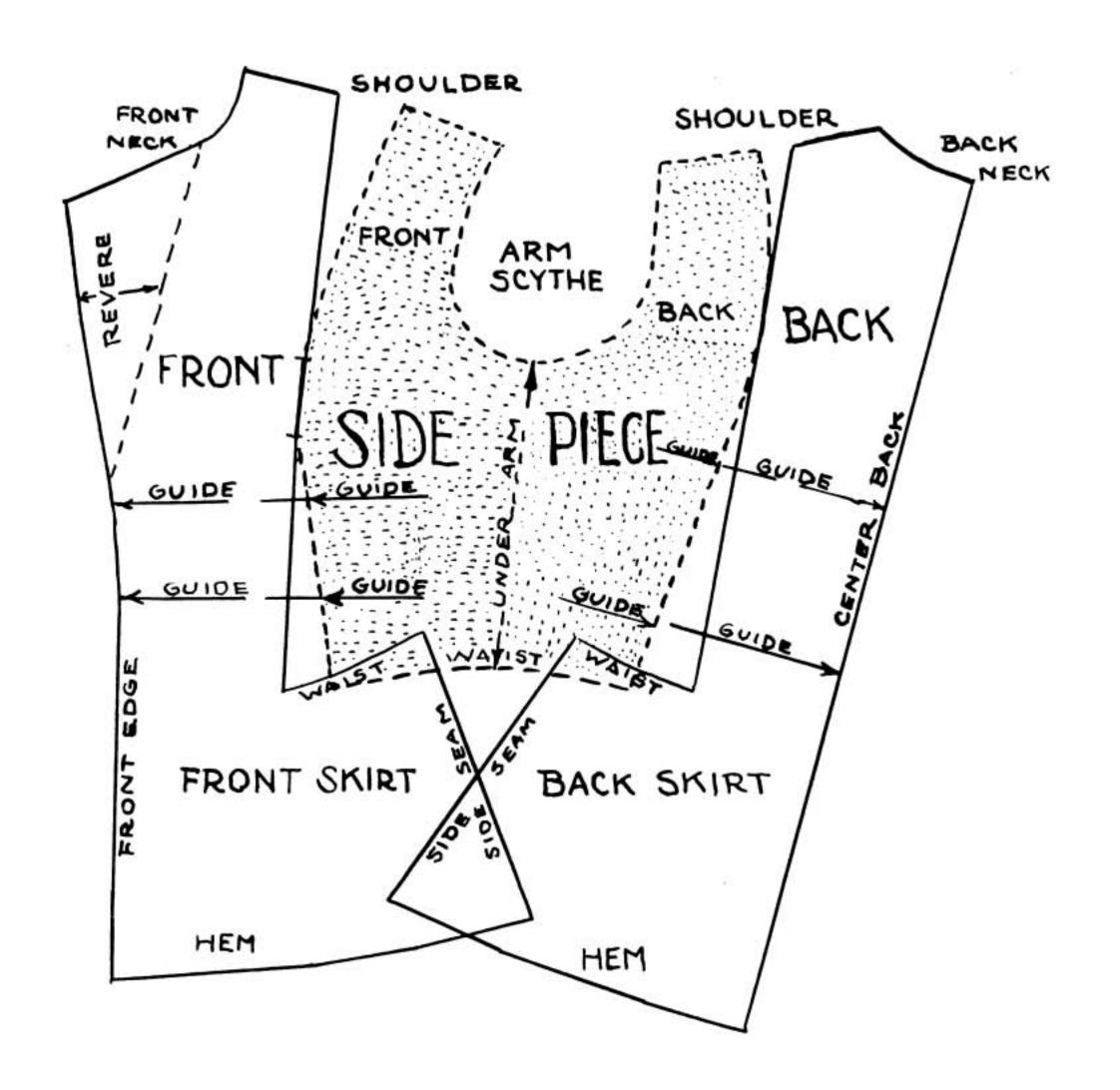
Move pattern so that point D of the underarm is on control 2, and point B of the center front is touching point 5. The waist, hem, and underarm drop one-eighth inch. underarm and complete dart.



PART SIX

Placing the original pattern from which the grade was made upon the graded pattern with the guide lines coinciding will make the proportionate grade increase apparent.

Hip-Length Pattern Grade with Side Piece

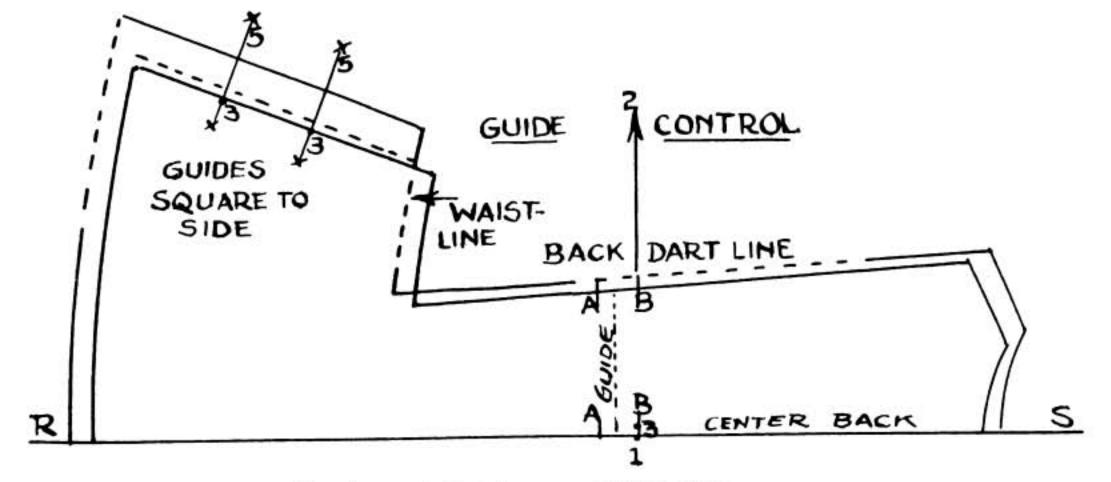


Analysis:

All points of importance have been marked for ease in comparing and associating them with each other.

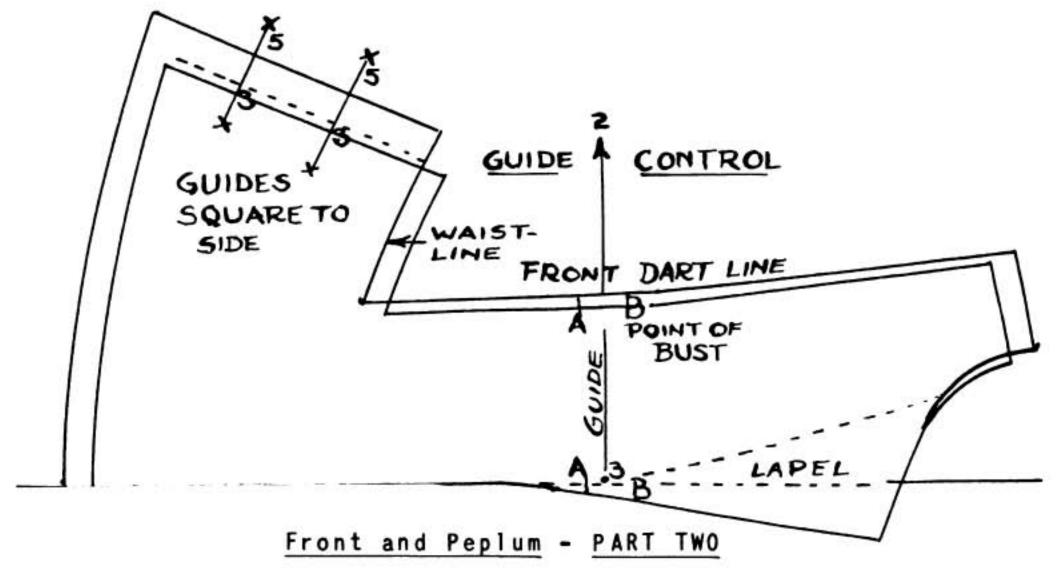
Collate the pattern by setting the points of joining together. Draw double guide lines from center front and center back through front and back and onto the side piece, With the guide lines properly set and the increases or decreases noted at points of grade, it will be relatively easy to carry out a true grade of a pattern somewhat off the normal.

In the succeeding detailed descriptions of the grade, it will be noted that, basically, all grading has followed the same normal increases and decreases in the proper proportions.

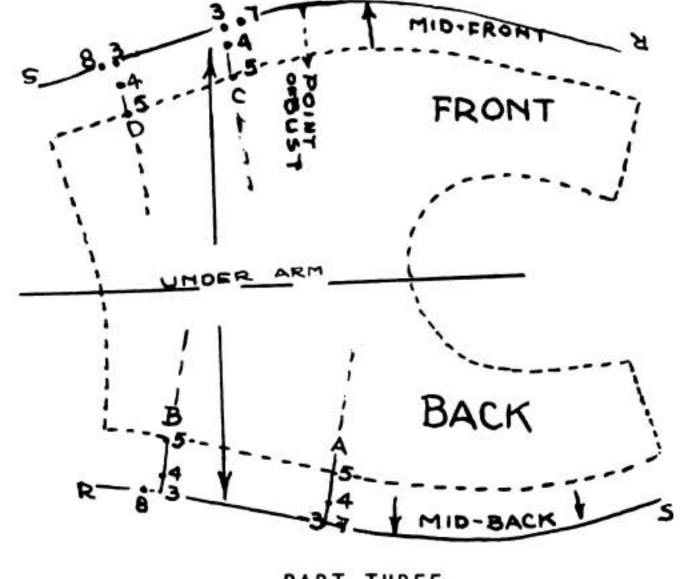


Back and Peplum - PART ONE

To grade the back or front of this type of garment, set up Guide Control 2 from R-S, as indicated, at point 1. Measure in one-sixteenth inch to point 3 for grading the upper part of the back panel. On point 3, which is the dart increase line, the pattern is raised for the neck and shoulder and is dropped for the waistline. While in position of point 3, at the waist drop, continue the guide lines perpendicular to the side seam, and move the

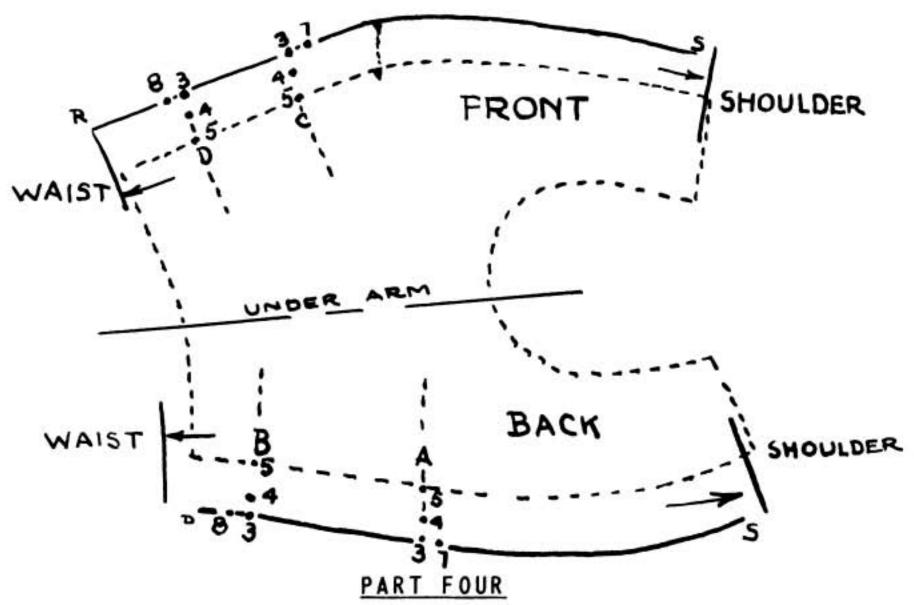


balance of the peplum part of the pattern out the additional increase needed to complete the total grade increase of the back or front, as the case may be. Where a peplum is attached to any part of the body above the waist, all grades must be treated in a similar manner to carry the skirt or sweep fullness, or else it may drop and the flare may fishtail in the wrong direction.



PART THREE

Weight or pin down side piece firmly. Continue underarm line out through arm curve and waist. Extend front guides C and D five-sixteenths inch to front R-S line and back guides A and B same distance to back R-S line. Draw midfront and mid-back lines and measure 3 to 4 two-sixteenths inch and 4 to 5 three-sixteenths inch. Do the same on front and back R-S lines.



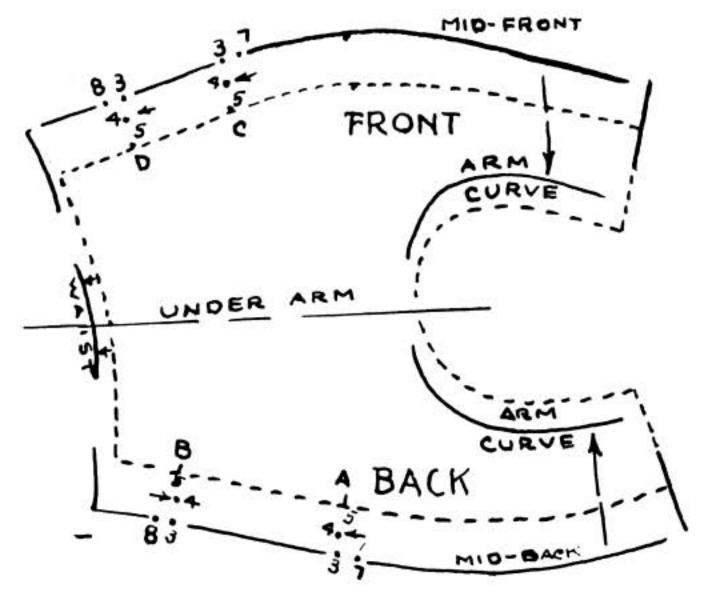
At Front: Place guide line C, mid-front, on point 7, one-eighth inch above point 3, for shoulder raise. Mark this. Place guide line D, mid-front, on point 8, one eighth inch below point 3, for waist drop. Mark this.

At Back: Place guide line A, mid-back, on point 7, one-eighth inch above point 3, for shoulder raise. Mark this. Place guide line B, mid-back, on point 8, one-eighth inch below point 3, for waist drop. Mark thous.

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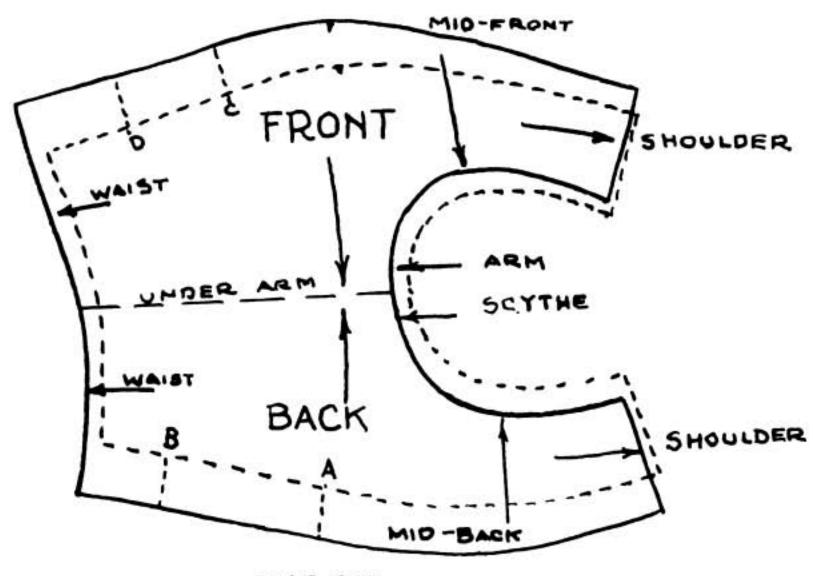
DETAILED SIZE CHARTS

```
9 to 11 to 13 to 15 to 17-----JUNIOR SIZES
                       ----- Difference Around BUST and HIPS
      - 16 - 16 - 16
  1
                       ----- Difference in Length: SHOULDER
                                    to WAIST. FRONT and BACK
                      36
                            38
10 to 12 to 14 to 16 to 18 to 20----MISSES' SIZES
                            ----Difference Around BUST and HIPS
                         14
              14
                    11
        14
                          1 ---- Difference in Length: SHOULDER
         ł
                    ł
  ł
                                    to WAIST. FRONT and BACK
2
                           ----- Difference around BUST and HIPS
    2
          2
    ł
                        -----Difference in Length:
          +
                                                        SHOULDER
                                    to WAIST. FRONT and BACK
32 to 34 to 36 to 38 to 40 to 42 to 44 to 46 to 48---WOMEN'S SIZES
                          2
                                2
                                     2
                                           2 ----Regular
   2
         2
               2
                    2
                               1/8
                                    1/8
                                         1/8 ---- Difference,
         4
               #
                    #
                          #
   #
                                                   Length of WAIST
                                                   in BACK
                                #
                                           1 ---- Difference,
                                                   Length of WAIST
                                                   in FRONT
40 to 42 to 44 to 46 to 48 to 50----WOMEN'S SIZES - STOUTS
                            ----Difference around BUST and HIPS
   2
         2
               2
                    2
       1/8 1/8 1/8 ----Difference, Length of WAIST in
                                     BACK
                          1 ---- Difference, Length of WAIST in
         ł
   ŧ
                                     FRONT
             3/8
  3/8
        3/8
                   3/8
                         3/8 ---- Difference, Across BACK at
                                     BLADE
             5/8
        5/8
                   5/8
                         5/8 ---- Difference, Across CHEST above
  5/8
                                     point of BUST
```



PART FIVE

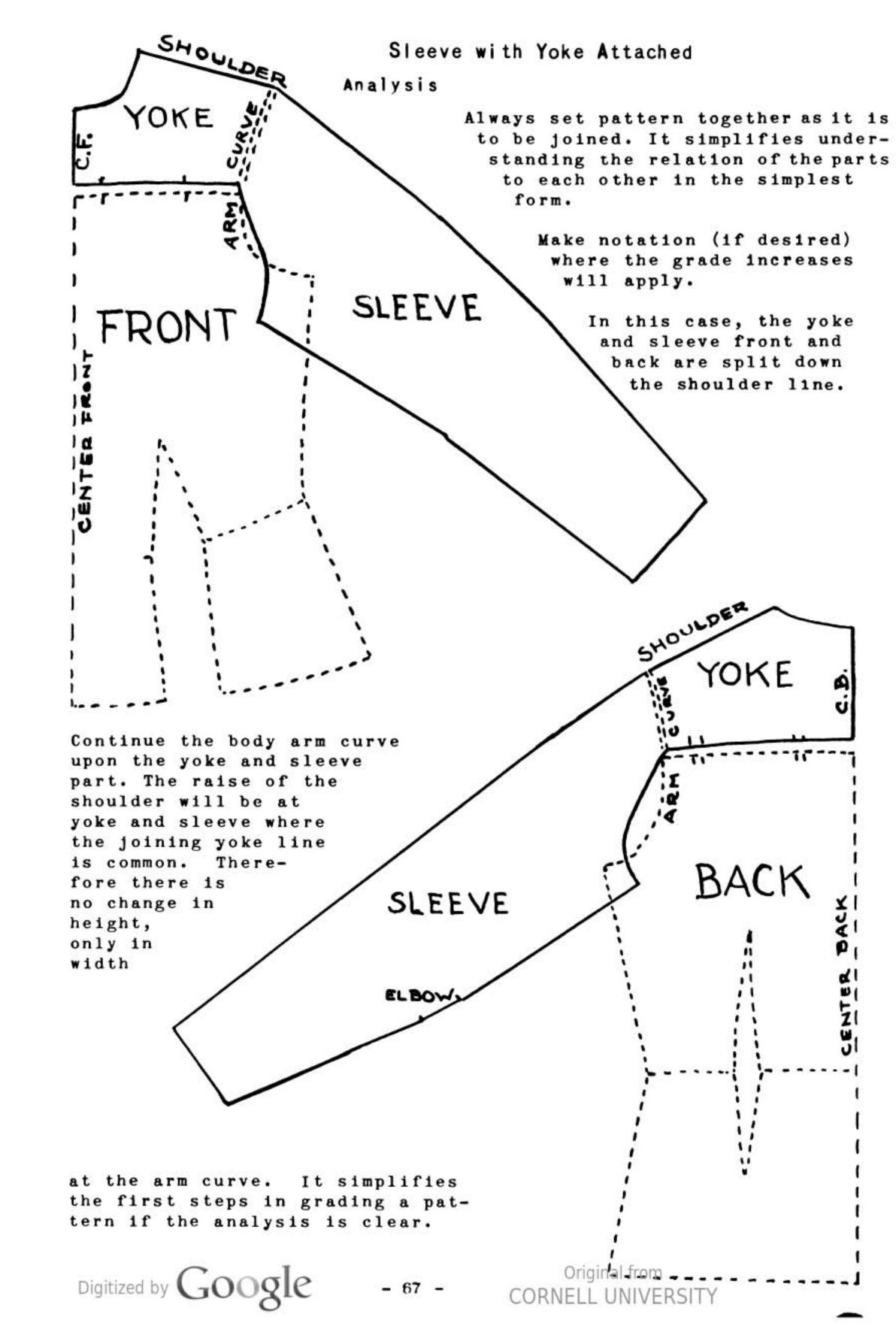
Move mid-front of side piece so that guides C and D are on both points 4. This gives a one-eighth inch increase in width at front. Mark the arm curve. Move the mid-back of the side piece so that guides A and B are on both points 4. This gives a one-eighth inch increase in width at back. Mark arm curve.

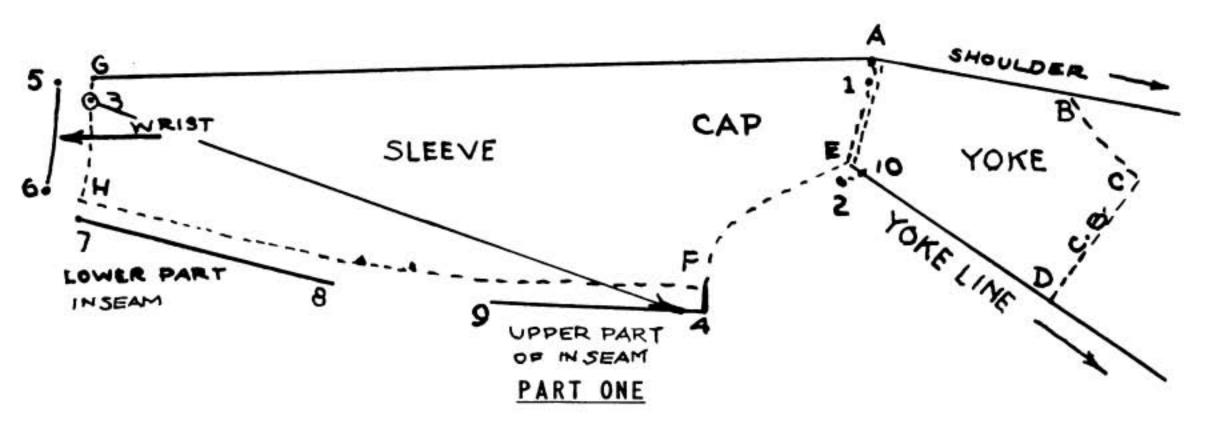


PART SIX

The relative increases are shown by placing one pattern upon the other using the common underarm line as a base. The measured increases at front and back are shown as five-sixteenths inch plus the one-sixteenth inch increase of the front and back with the skirt attached, giving a total of three-eighths inch increase.

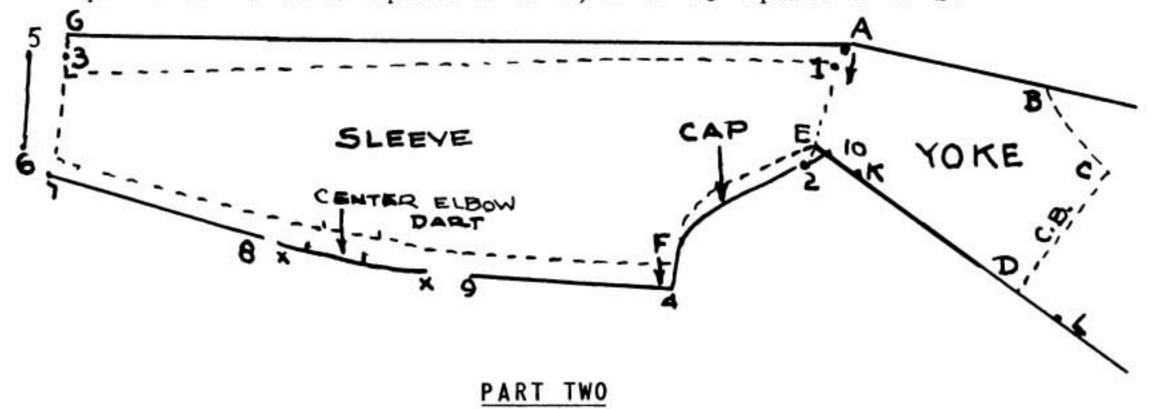




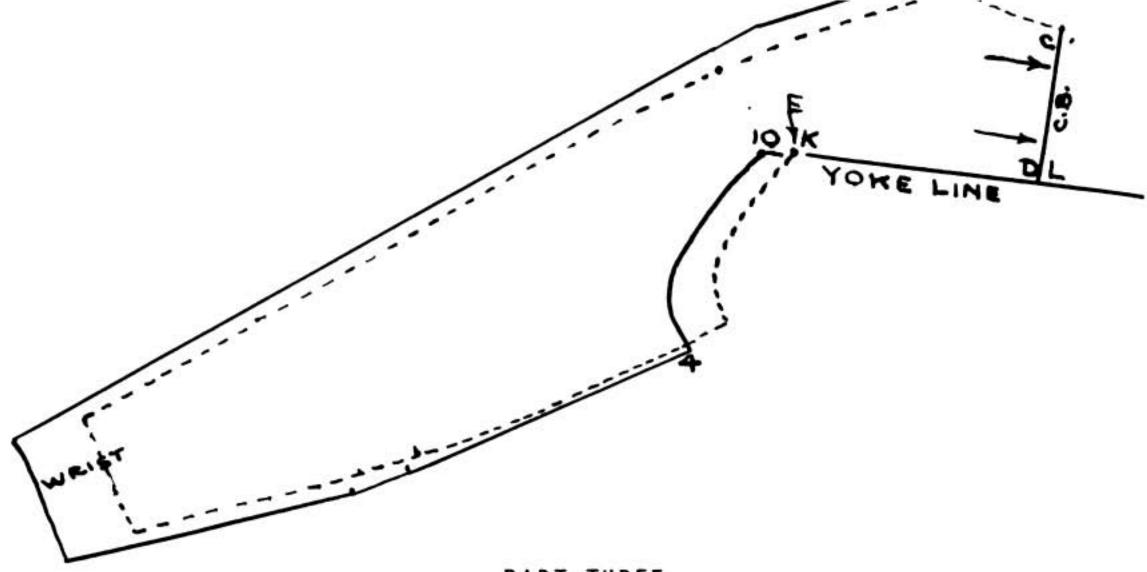


Weight or pin back part of sleeve with yoke attached firmly upon the paper to be used for the grade. Continue shoulder line at yoke, A-B, in direction of arrow. Continue yoke line as indicated.

A-E is connecting line between yoke and sleeve. A to 1 is one-eighth inch (shoulder raise and sleeve cap increase); G to 3 is one-eighth inch (increase in width of half the sleeve at wrist); F-H is increase in width of sleeve at base of cap (equal to increase at pit of arm curve). 5 to 6 is three-eighths inch (increase in length of sleeve); H to 7 is one-eighth inch. Join 5 and 6. Place H-F on sleeve back and mark out upper 4 to 9 and lower 7 to 8. Use point G of sleeve on point 3 as a pivot to move F to point 4. 1 to 2 equals A to E; E to 10 equals E to 2.

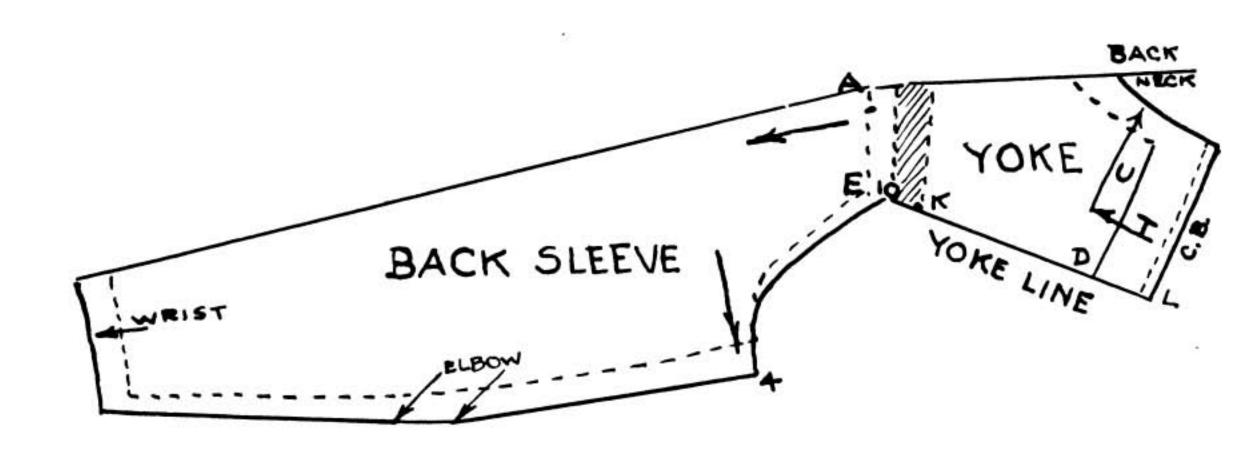


Place point A of sleeve at yoke shoulder and point F of base of cap on point 4. Draw cap line, 4 to 2, and continue to point 10. Center the elbow at back of sleeve between points 6 and 4. From point 10 to point K is the cross back increase of three-sixteenths inch along the yoke line. K to L is equal to the width of the yoke (E to D). 10 to L is the graded yoke distance.



PART THREE

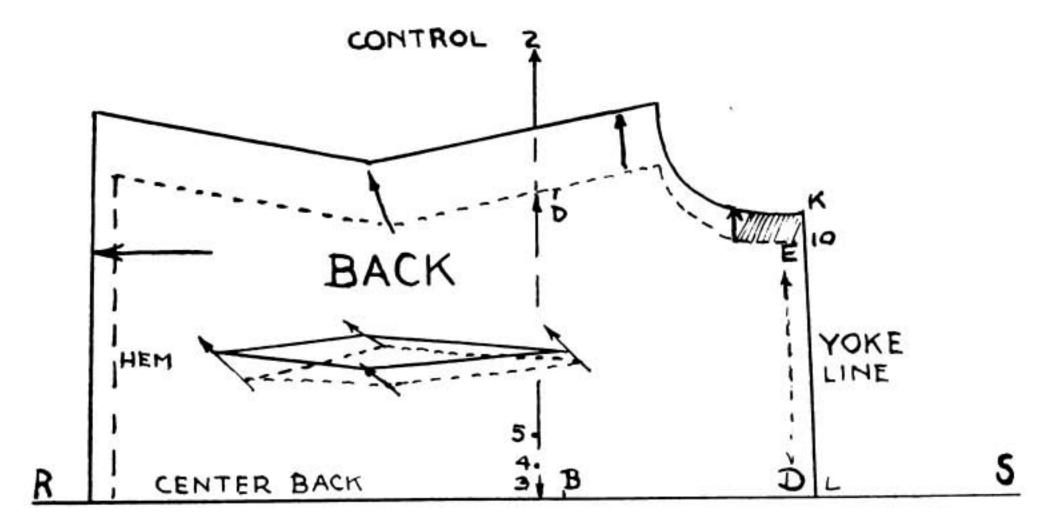
Move pattern by placing point E on point K with both the pattern yoke line and the grade yoke line coinciding. Draw center back D-C at point L.



PART FOUR

Keeping the center back of the yoke on the new center back line (D-C), move the pattern forward at center back one-sixteenth inch, as indicated by dotted line, and raise it one-eighth inch. Draw new neck. The new neck will touch the extended shoulder line as laid out in part one.

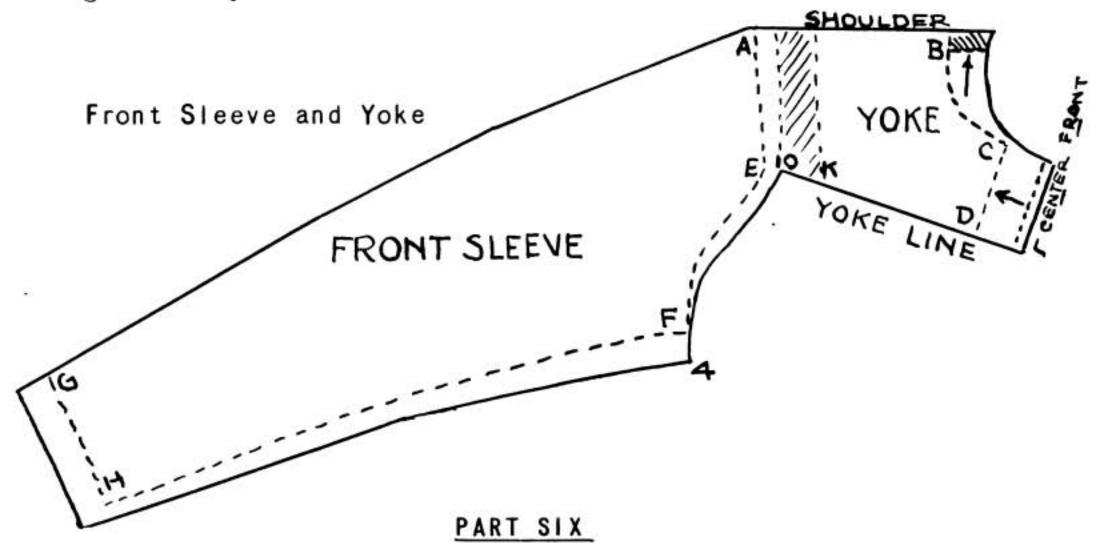
Arrow lines T and U show the move made by yoke. Shaded area, 10 to K, shows where the increase actually took place in yoke across the back, 10 to L.



PART FIVE

The body of the pattern is graded normally in all respects, except that there is no shoulder raise. That is taken care of automatically by grading the sleeve with the attached yoke as shown in parts 1, 2, 3, and 4.

K to 10 is the increase in the back across the yoke line. Therefore, K-L of body yoke line is equal to K-L of the grade in part 4.

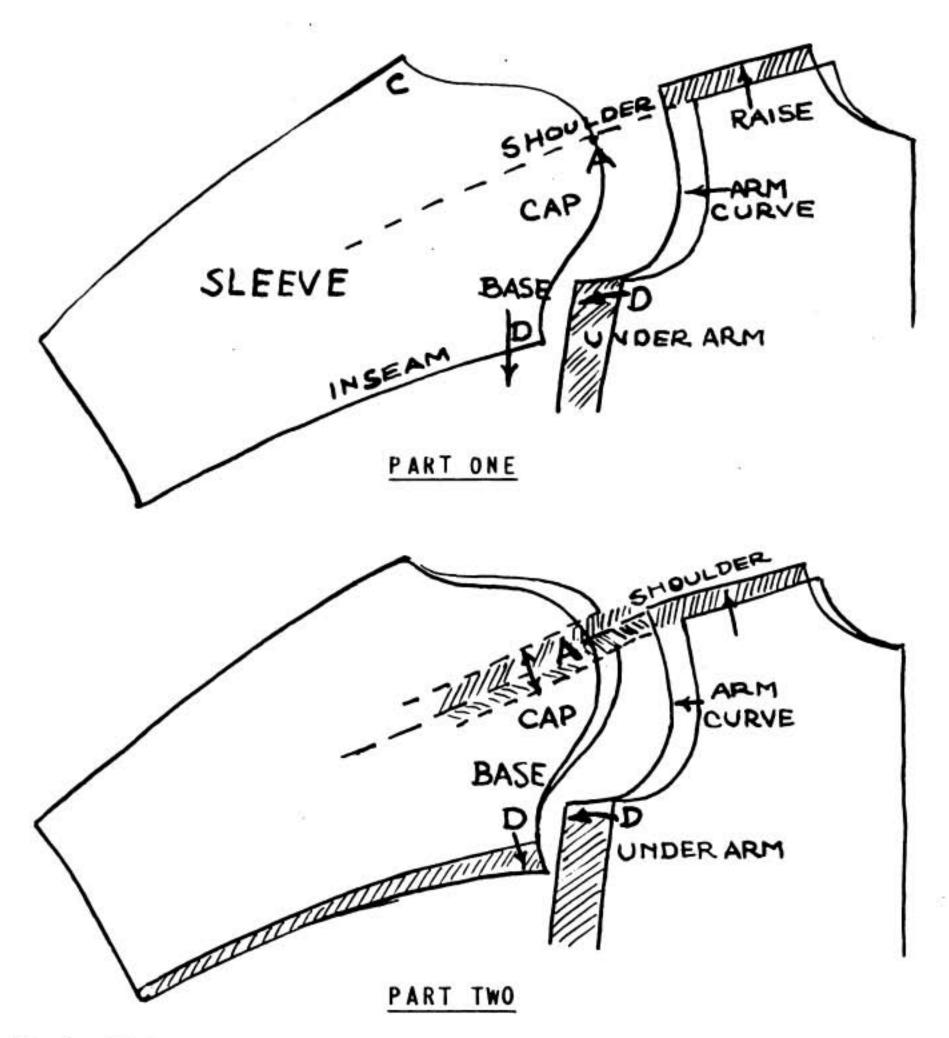


Grading of the front sleeve with yoke attached is carried out similarly to the grade of the back sleeve and yoke. (Parts 1, 2, 3, and 4.) The prime difference, as noted here, is the treatment of the center front.

Pattern is moved in direction of pointing arrow one-six-teenth inch. Mark the neck and then raise one-eighth inch to reach the extended shoulds. line. This gives a two step front neck increase. The grading of the front body is normal without the shoulder raise which is taken care of above.

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Analysis:

PART ONE: Shows the graded front denoting in height at the shoulder and in width at the arm curve, and its relation to the notch (point A) of the sleeve cap.

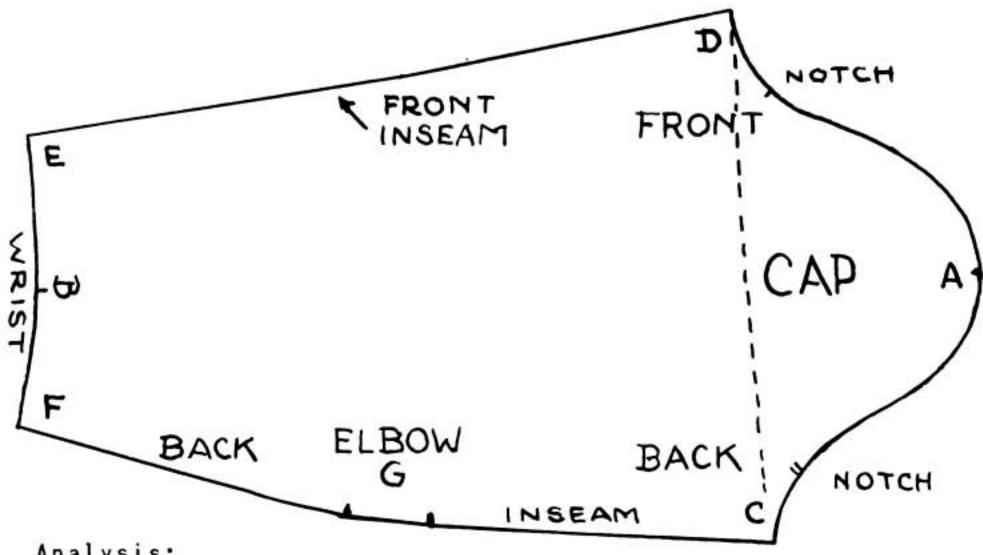
The underarm grade is shown in its relation to the base of the sleeve cap (D).

PART TWO: Shows how the sleeve, when given the proper grade at the points of joining (A and D) of the cap into the arm curve, requires a relative grade at point A (sleeve cap) and point D (base of the sleeve cap).

In the succeeding descriptive diagrams, the increase and decrease is shown step by step. Its relation to the grade can be noted easily by comparing it with all previous diagrams of the body grades.

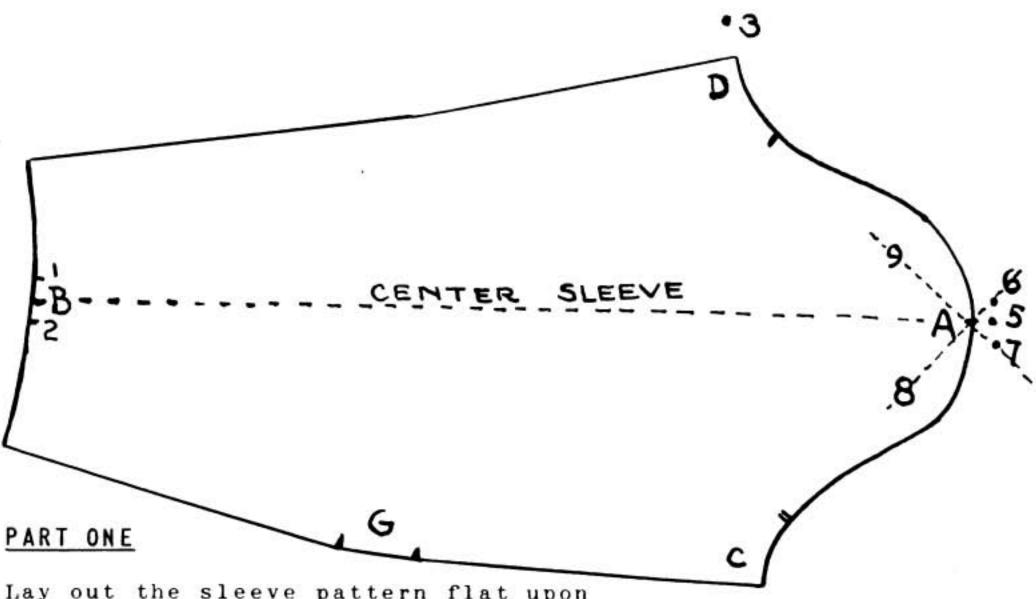


I. Simple One-Piece Sleeve One and One-Half Inch Grade

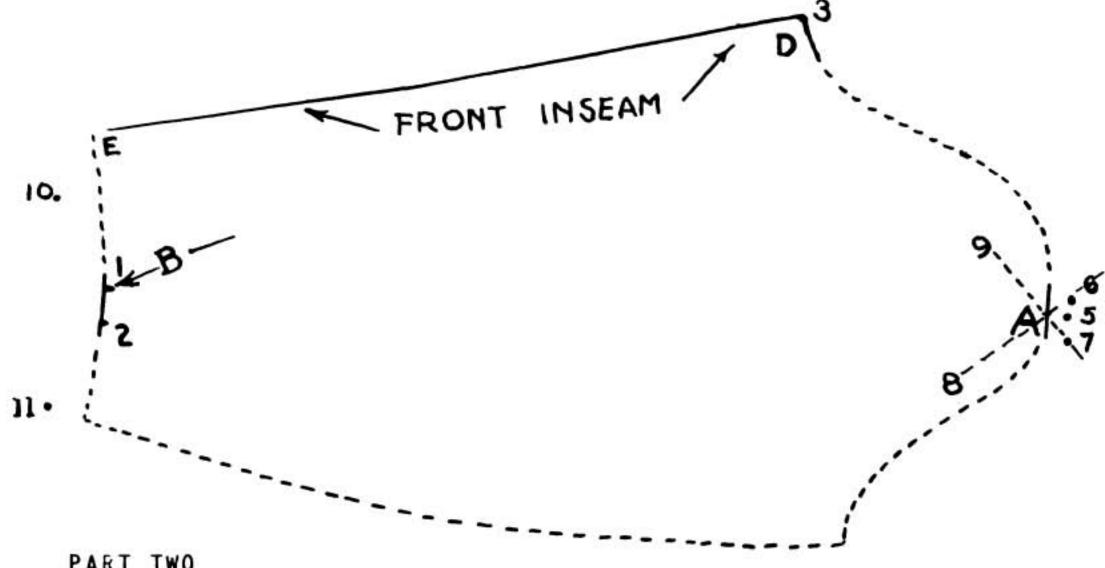


Analysis:

For ease in following the several focal points used in grading the one-piece sleeve note the dotted line from cap (point A) to wrist (point B). The grade will be by halves (front and back) to simplify the method of procedure.

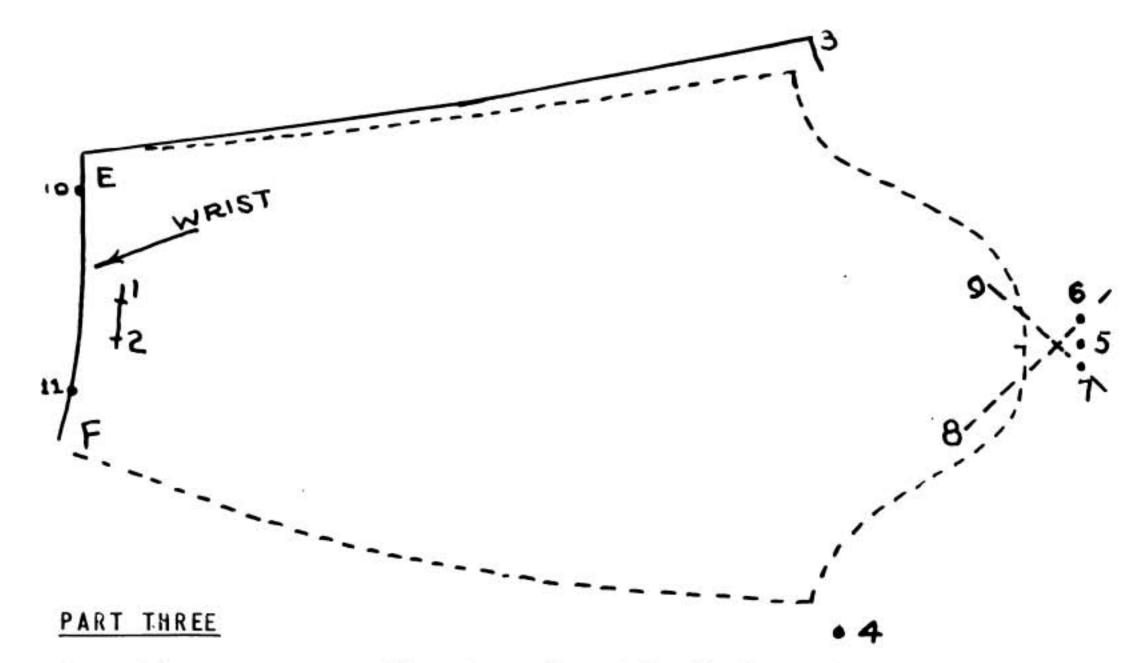


Lay out the sleeve pattern flat upon a sheet of paper and place a weight upon it. On wrist line B measure 1/8 inch to points 1 and 2. D to 3 at front inseam is 3/16 inch, and C to 4 (back inseam) is also 3/16 inch. From point A at cap to point 5 is 1/8 inch. From point 5 to points 6 and 7 is also 1/8 inch. Draw cross lines through point A -- point 6 to point 8 and point 7 to point 9. CORNELL UNIVERSITY

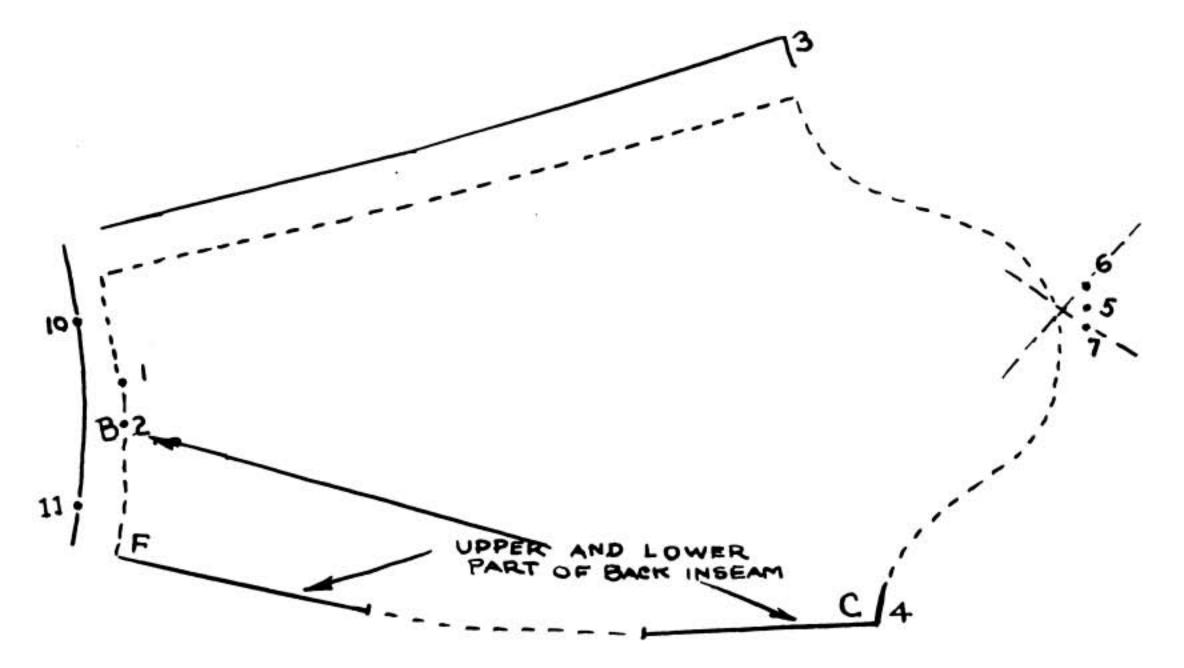


PART TWO

Place point B of the wrist on Guide Point 1, and pivot the pattern until point D of the front inseam touches point 3. Mark out the front inseam and the small part of the base of the cap.

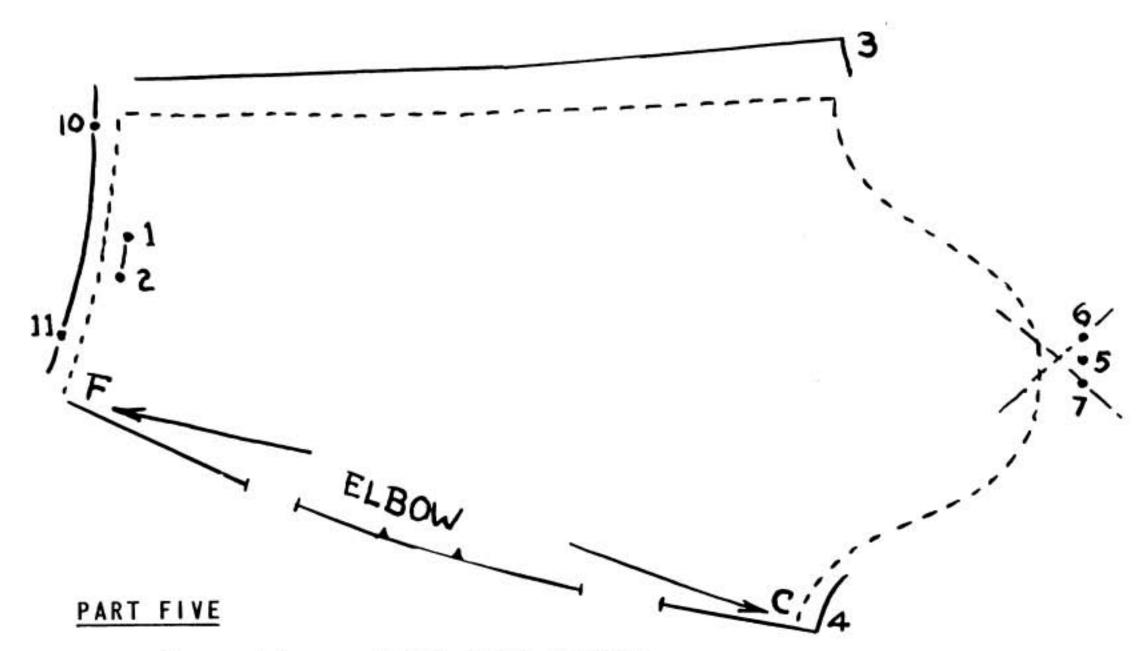


Move the pattern until points E and F of the wrist touch points 10 and 11. Mark out the new wrist line. There will be a 4-inch drop in length.



PART FOUR

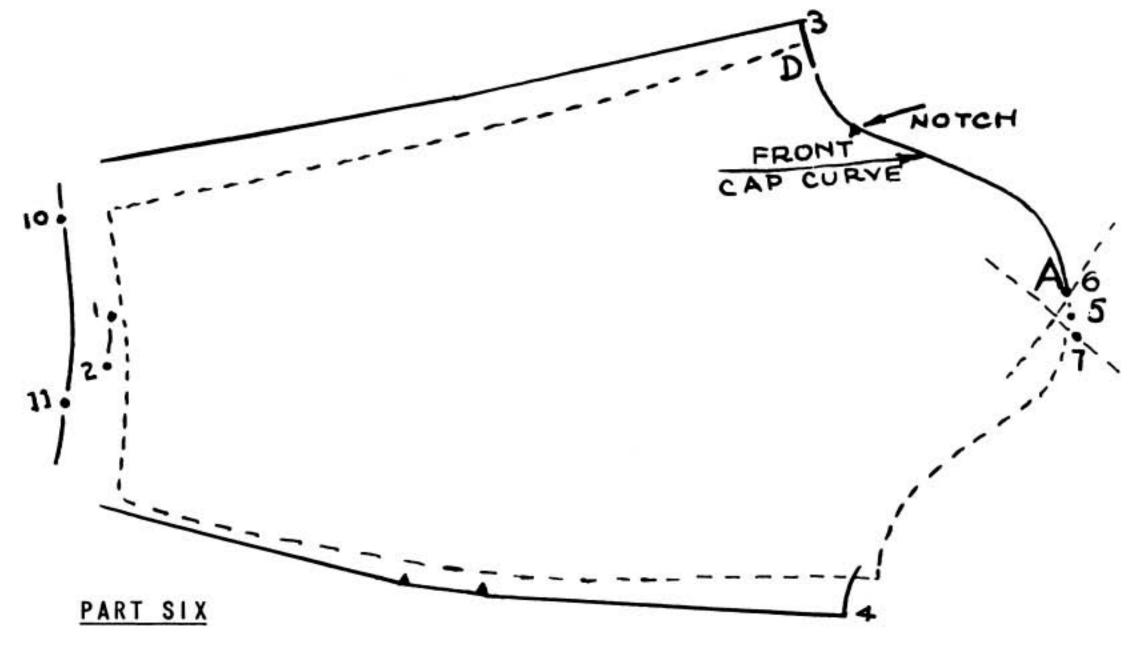
Place the sleeve pattern so that point B of the wrist is on point 2. Pivot the sleeve until point C of the back inseam touches, or is in line with, point 4 of the grade increase. Mark out the upper and lower part of the back inseam as indicated by points F and C.



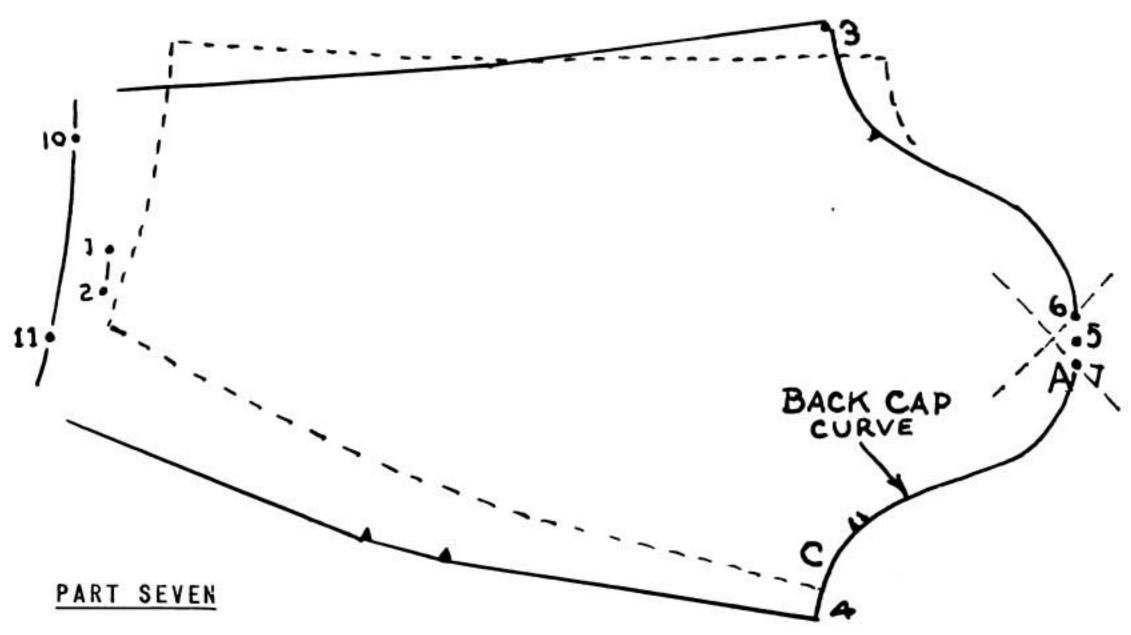
Move the pattern of the back inseam along between the new wrist line (10 and 11) and point 4 until the elbow is centered. Mark the elbow notches and the dart, if shown.

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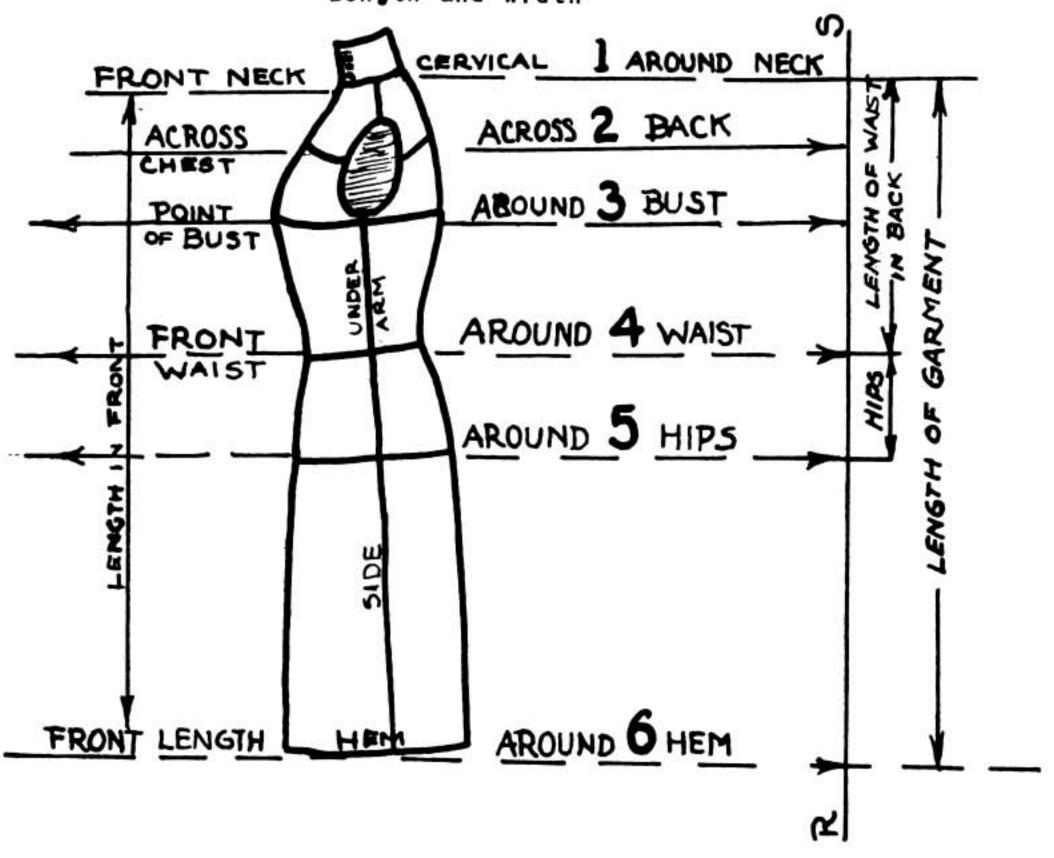
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Move the sleeve pattern by placing point A of the sleeve cap on point 6 -- 1/8-inch up and out from the normal point of the cap. Place point D at the base of the cap on the little line at point 3 of the front inseam. Mark out the front cap curve and notch.

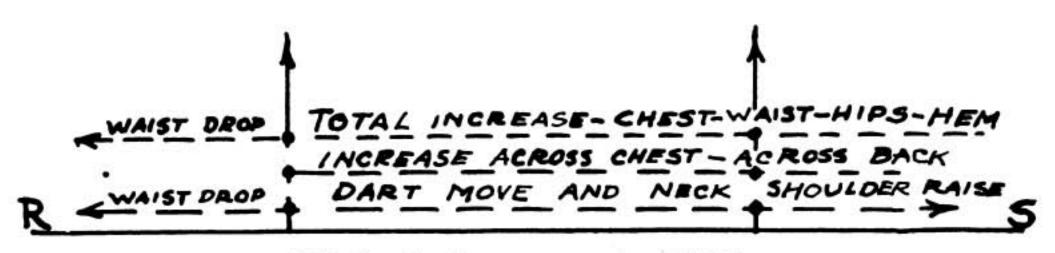


Place point A of the cap curve of the sleeve pattern and point C at the base of the cap curve on extension point 4 of the back inseam. Mark out the back cap curve and notch.

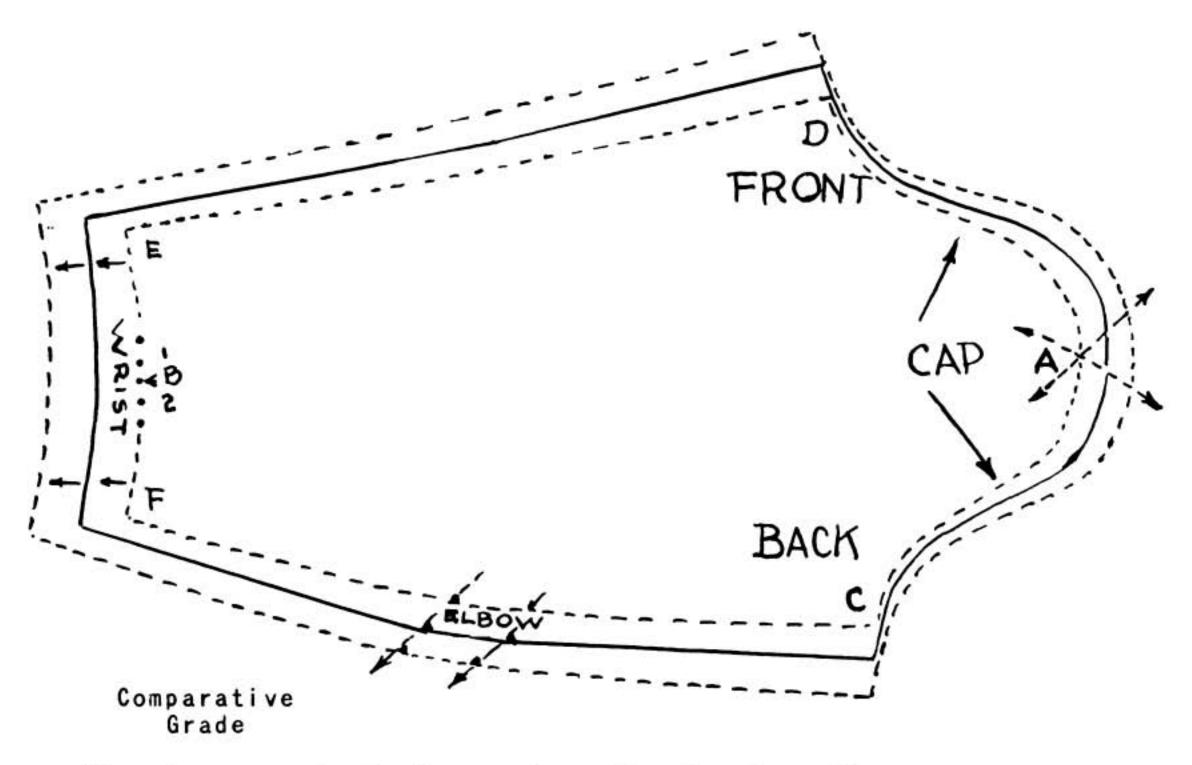


Analysis:

The position of the various Points of Change in the Human Form, and how they relate to the Points of Grade. Perpendicular to the floor for increases or decreases in length and on lines parallel to the floor. At right angles to the length changes, for all increases around (or in Pattern width).



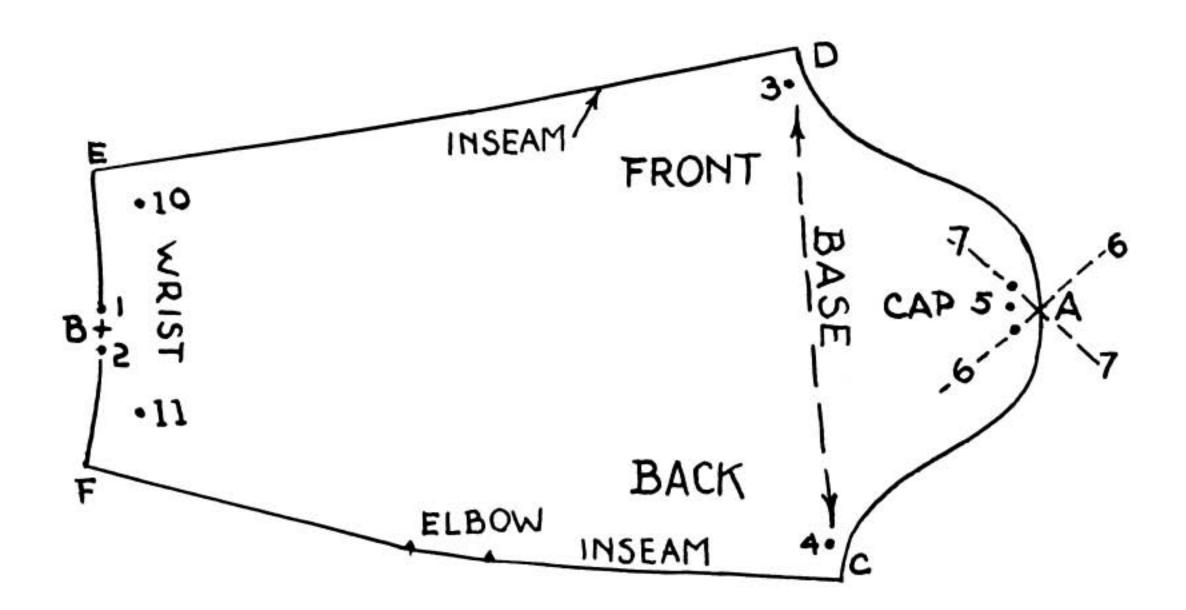
All Grade Increases in Width



The sleeve grade in three sizes clearly shows the proportionate increase from size to size; and how the curve of the cap increases and arches so as to bring the base and inseam down at the proper 5° angle, allowing for the underarm increase in the normal grade. The drop in length at the wrist, although logically correct, is optional.

The usual procedure is to increase in length up to size 40 and, thereafter, to continue the same length.

As simple as this grade of sleeve may appear, great care must be taken to pivot point B at the wrist from points 1 and 2 before drawing the front and back inseam lines. It is by doing this correctly, as diagrammed, that the proper and uniform drop of points D and C (the base of the sleeve cap curve) takes place.



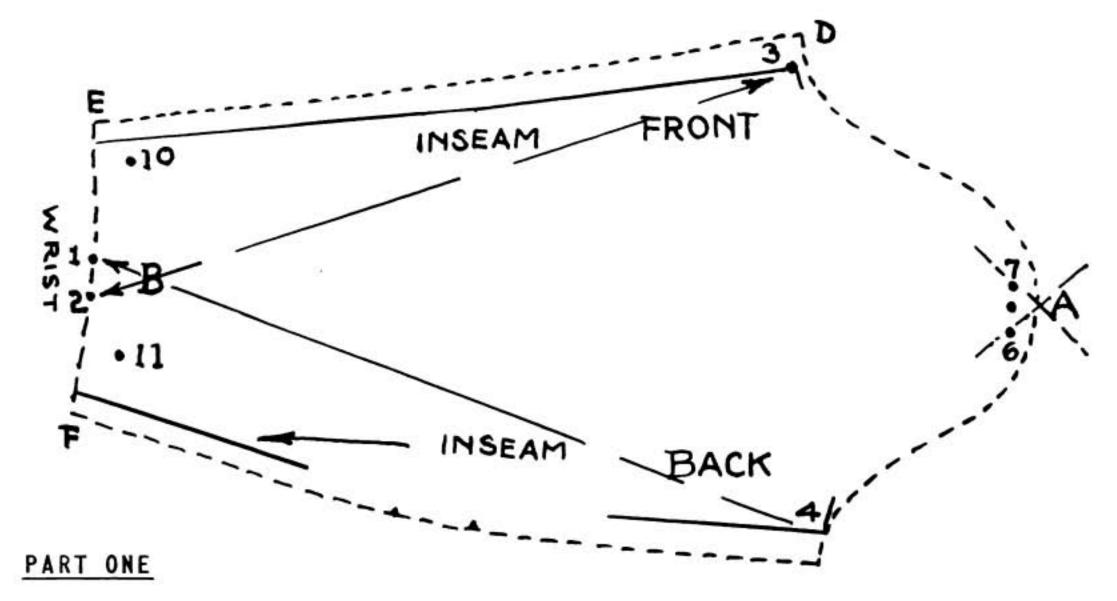
Analysis:

In the decrease (or de-grade) of the simple sleeve, the procedure is the direct opposite of the sleeve increase grade.

As will be noted at the sleeve cap, point A to point 5 is 1/8 inch, and points 6 and 7 are 1/8 inch on either side. Draw a cross line through point A. The cross at point A is the same as is used in grading up points 6 and 7. Note carefully how points 6 and 7 cross over to the opposite side below the sleeve cap curve.

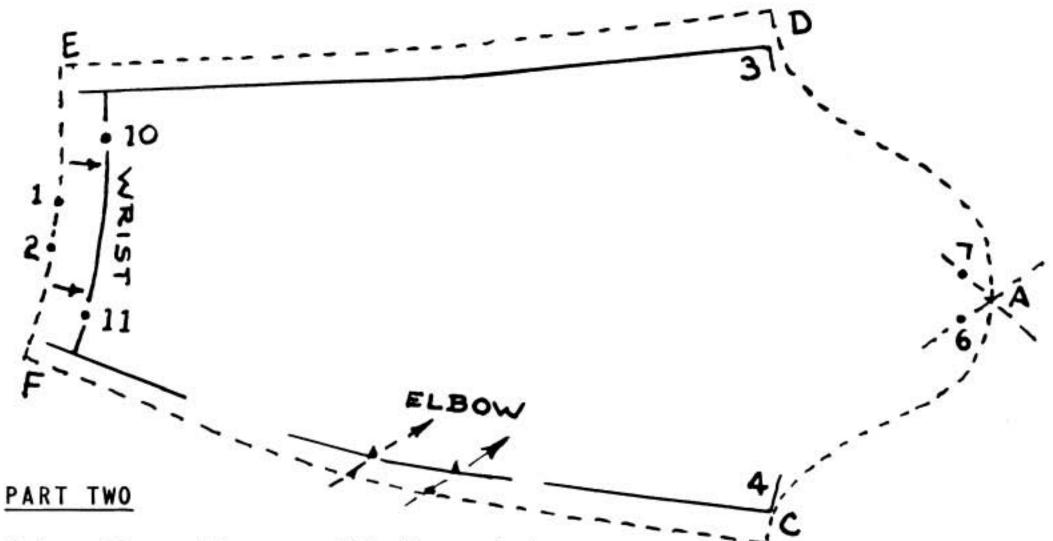
At points D and C, 3/16 inch is measured inside the front and back inseams (points 3 and 4). At the wrist (point B) measure 1/8 inch from B to 1 and from B to 2. 1-inch raise from the wrist line to points 10 and 11 which shortens the sleeve length.

As the detailed diagram explanation is carried through, step by step, it will be noted that the entire procedure is exactly opposite, in every detail, from the sleeve increase grade.

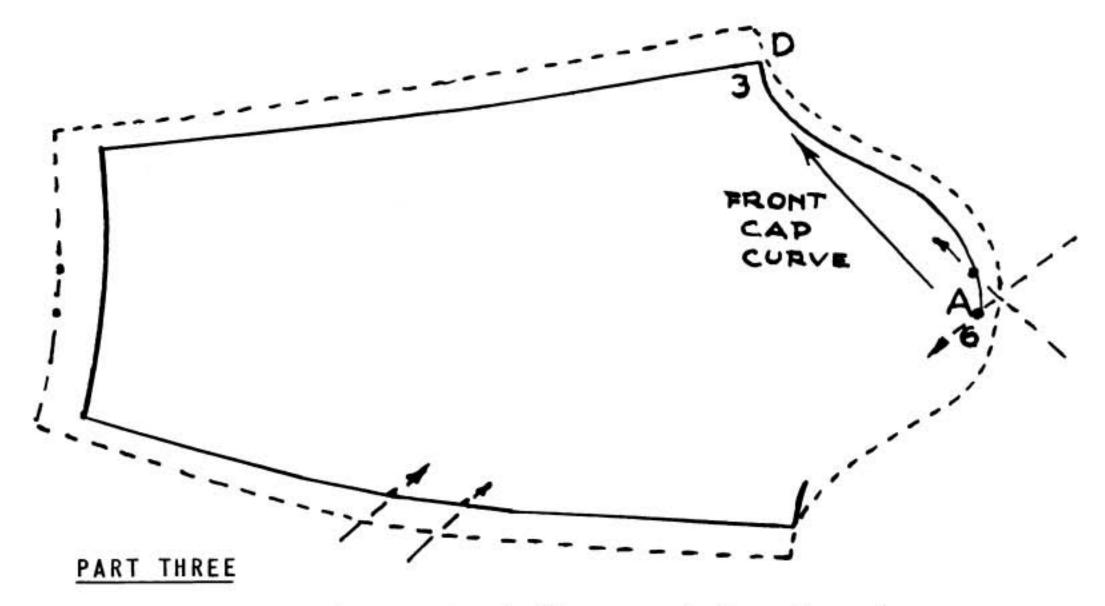


Place point B at the wrist of the pattern on point 2.

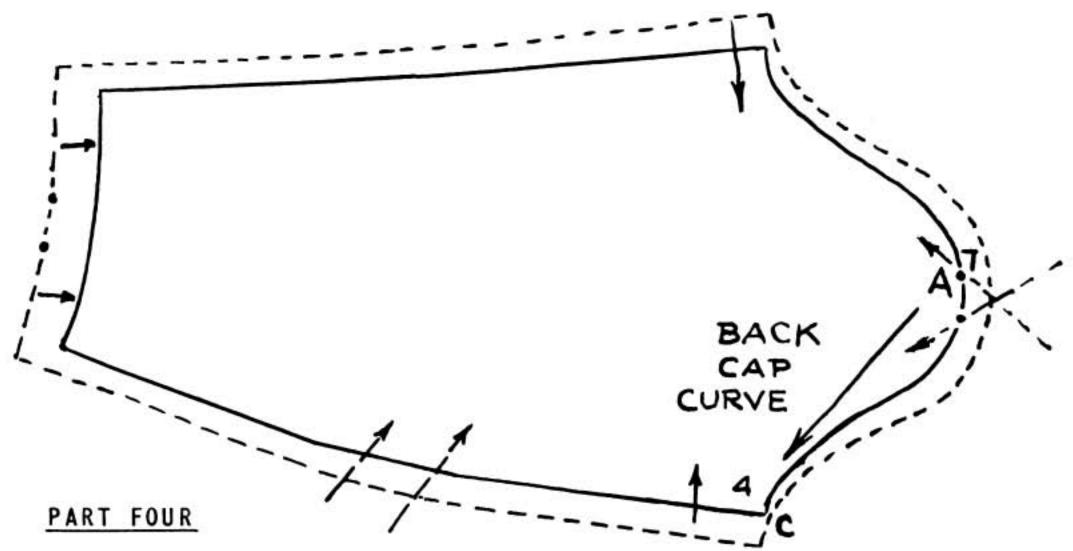
Move the pattern until point D (the base of the cap curve) touches point 3. Draw the front inseam plus the hook at point 3. Place point B of the pattern on point 1 and move the pattern until point C (the base of the cap curve) touches point 4. Draw the top and bottom of the back inseam and the hook at 4.



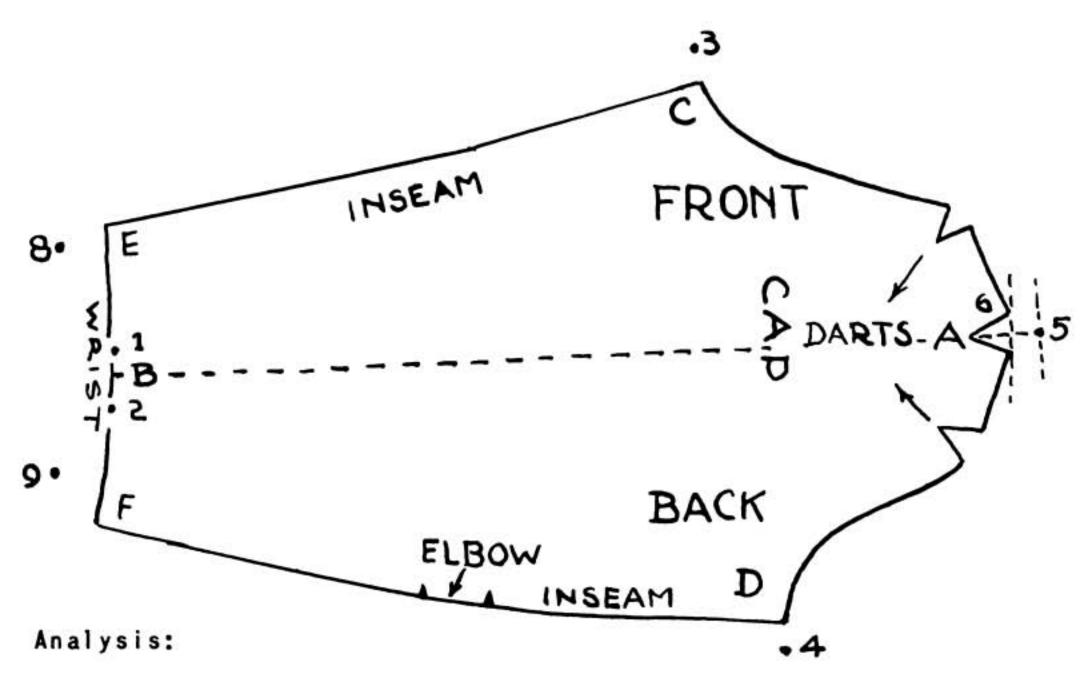
Raise the pattern until the wrist touches points 10 and 11. Mark the wrist. Place the back inseam of the pattern in position so that the elbow notches are centered between the new wrist line and the hook at point 4. Draw the elbow and the notches.



Place point A (the notch at the cap of the sleeve) on point 6 of the cross and move the pattern until the front cap curve at point D is across the hook at point 3 of the inseam. Draw the front cap curve.



Place point A (the notch at the cap of the sleeve) on point 7 of the cross and move the pattern until the back cap curve at point C is across the hook at point 4 of the inseam. Draw the back cap curve. Note how the sleeve pattern has been uniformly reduced in this sleeve de-grade.



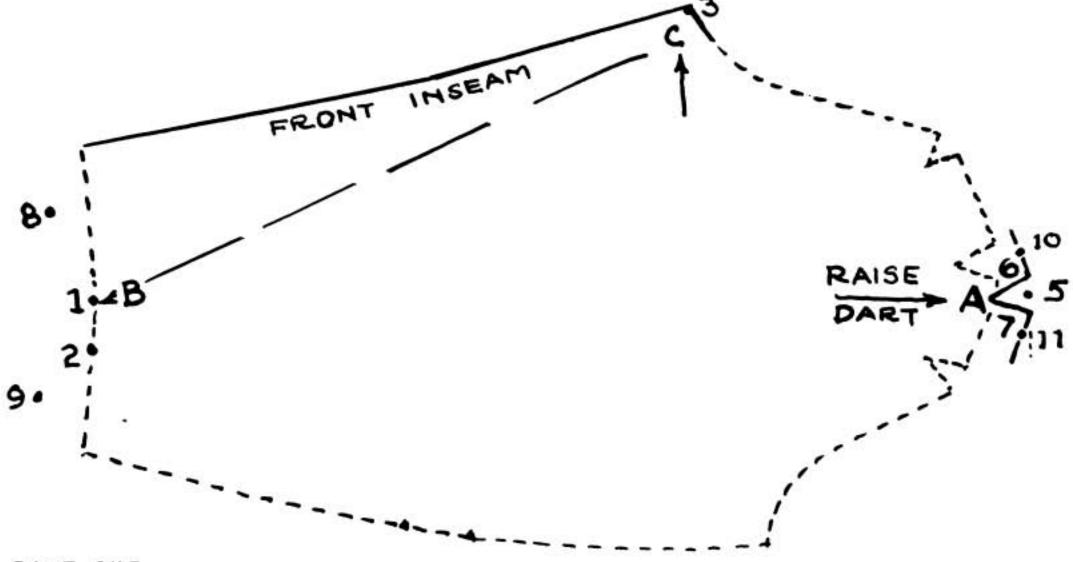
Mark out the sleeve as diagrammed. Divide the wrist of the pattern in half at point B. Run a line from the wrist (point B) through point A (the base of the center dart).

Draw a line to join points 6 and 7 to the top of the center dart and measure up 1/8 inch from this line (which joins the top of the dart) to point 5.

Measure 1/4 inch to points 8 and 9 below the wrist line of the sleeve. Measure 1/8 inch at the wrist from point B to point 1, and the same distance from point B to point 2.

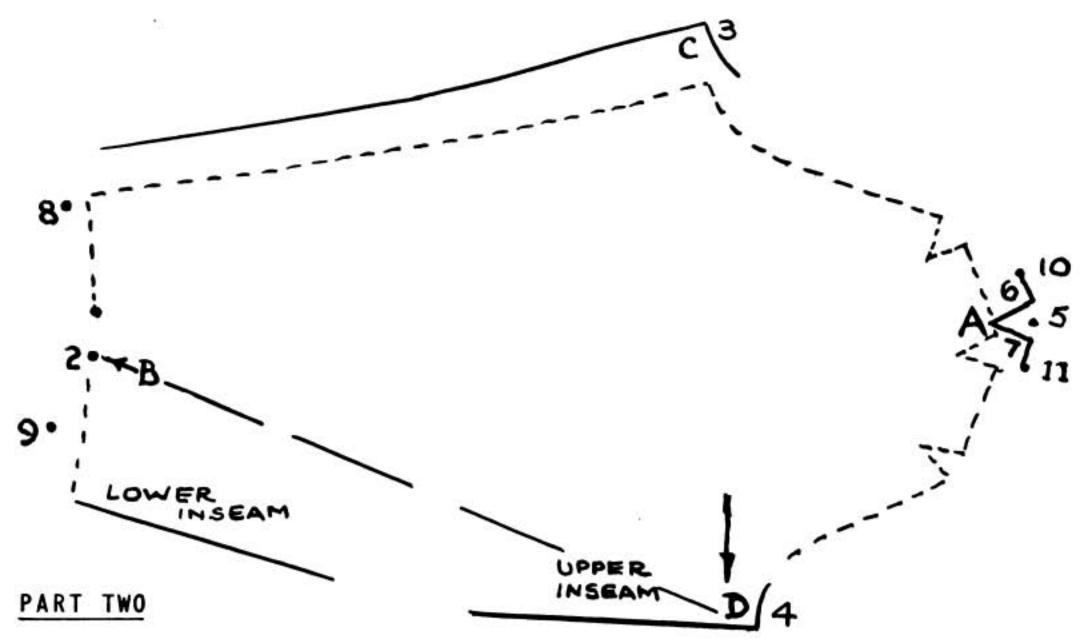
Measure 3/16 inch from point C at the base of the cap to point 3 (increase to coincide with the increase 1½-inch body grade at the underarm, and do the same from point D to point 4 at the base of the cap at the back of the sleeve.

Having pointed off all of the grade measurements required at the various points of the sleeve to be graded, check all points for accuracy. Simple as the grade of the sleeve may be, inaccurate measurement will not give a true pattern grade, and it may be impossible to adjust the armhole of the pattern to the body arm curve into which it is to be joined.

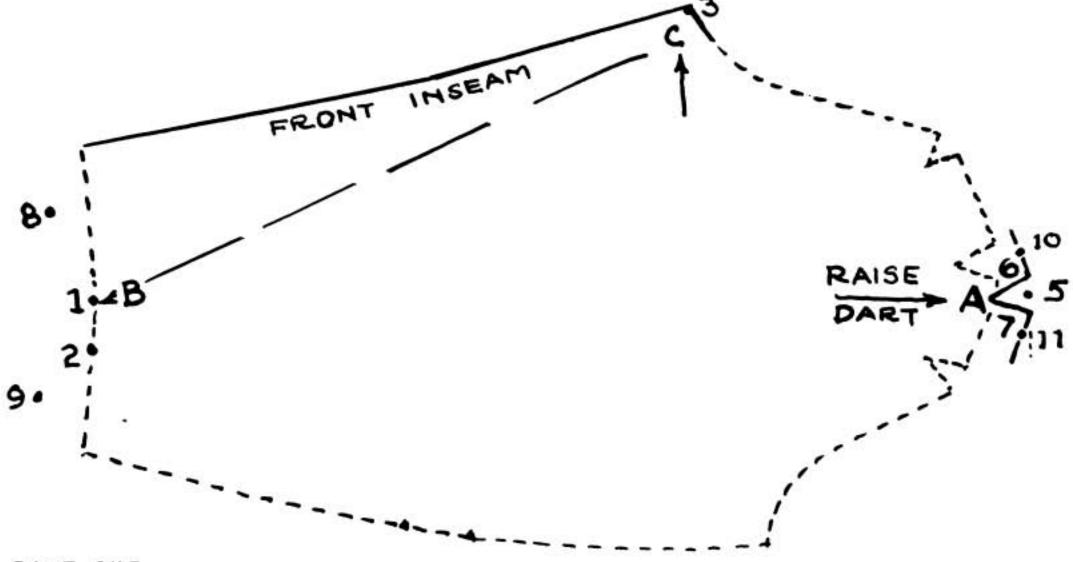


PART ONE

Draw a line through point 5. Raise the sleeve until points 6 and 7 of dart A touch the line at point 5, and mark out dart A. Measure 1/8 inch from point 6 to point 10 and 1/8 inch from point 7 to point 11. Place point B of the pattern (at the wrist) on point 1 and pivot until point C at the base of the cap touches point 3. Mark the front inseam and the small hook.

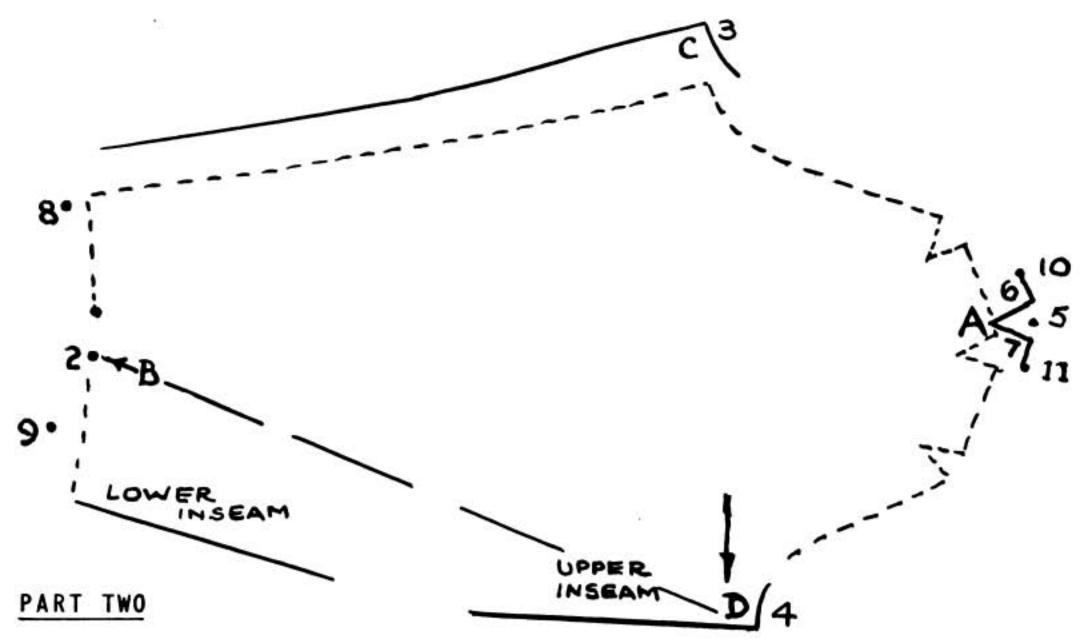


Place point B of the wrist on point 2. Pivot the pattern until point D at the base of the sleeve cap touches point 4. Mark out the lower and the upper parts of the back inseam, with a small hook at point 4.

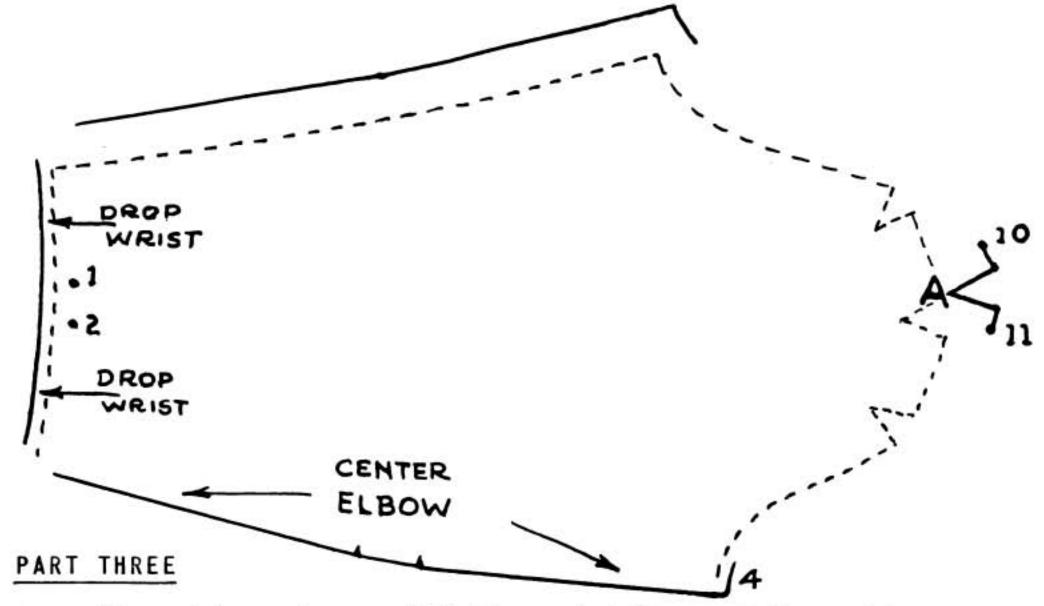


PART ONE

Draw a line through point 5. Raise the sleeve until points 6 and 7 of dart A touch the line at point 5, and mark out dart A. Measure 1/8 inch from point 6 to point 10 and 1/8 inch from point 7 to point 11. Place point B of the pattern (at the wrist) on point 1 and pivot until point C at the base of the cap touches point 3. Mark the front inseam and the small hook.

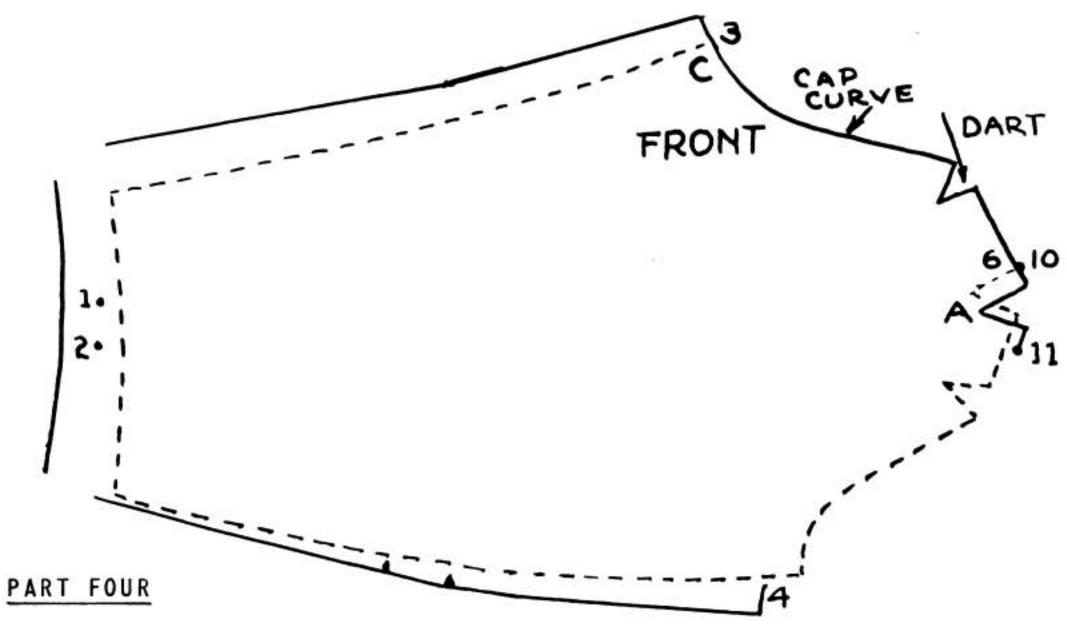


Place point B of the wrist on point 2. Pivot the pattern until point D at the base of the sleeve cap touches point 4. Mark out the lower and the upper parts of the back inseam, with a small hook at point 4.

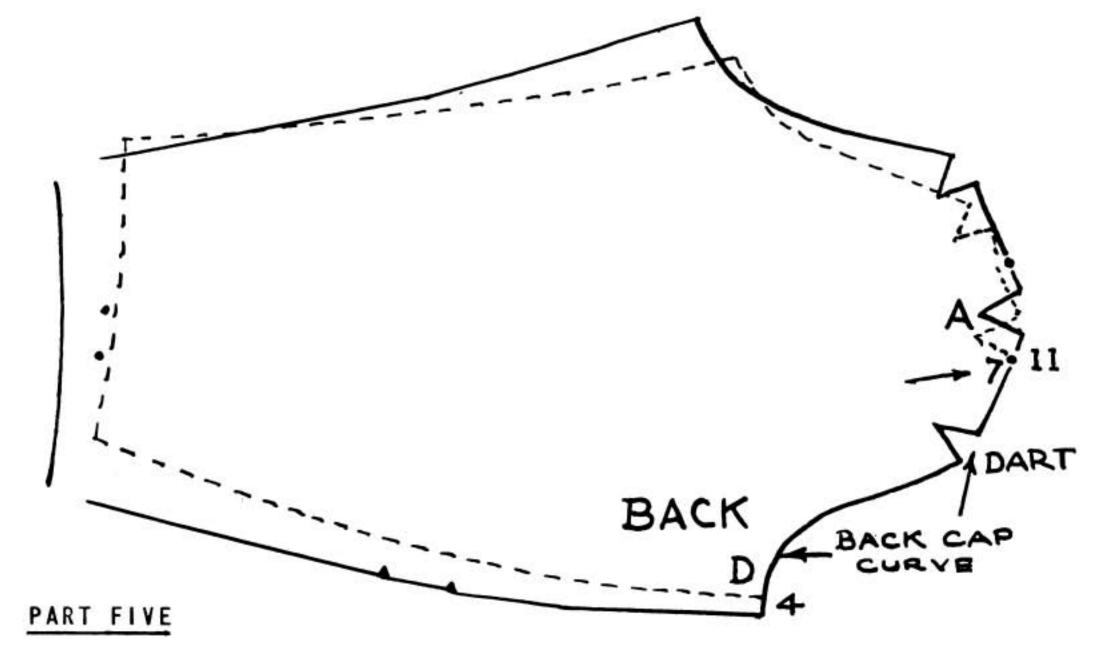


Move the pattern down until the wrist line of the pattern touches points 8 and 9. Mark the wrist line -- a drop of 1/4 inch.

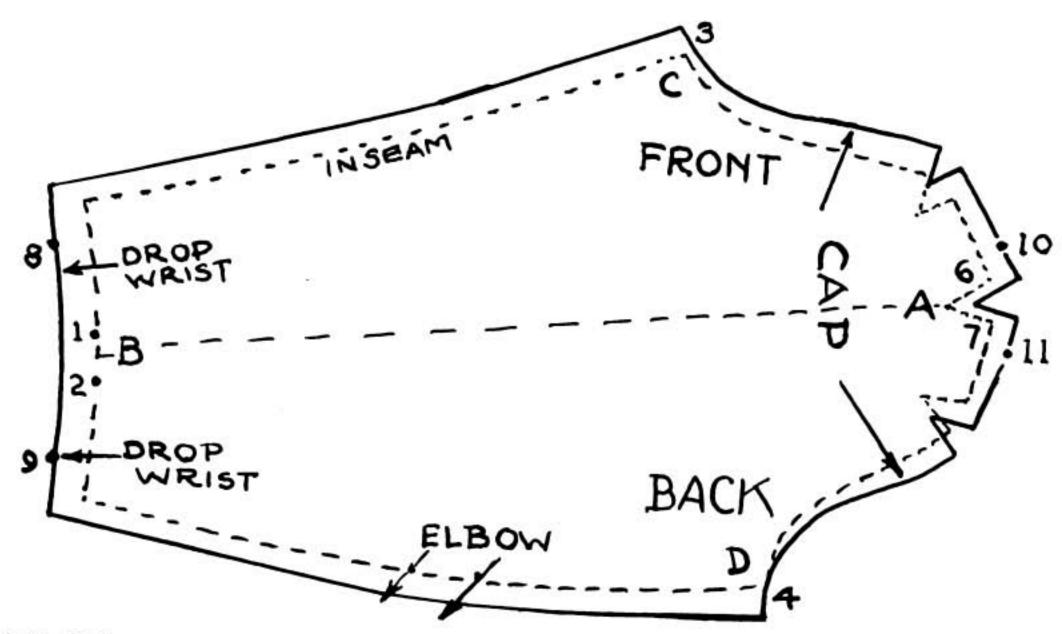
Move the pattern so that the elbow dart is centered between the new wrist line and the small hook at point 4. Draw the new elbow and the notches at the elbow.



Move the pattern by placing point 6 of cap dart A on point 10, and point C (the base of the sleeve cap) at the front on the hook at point 3. Mark out the front cap curve on the dart.

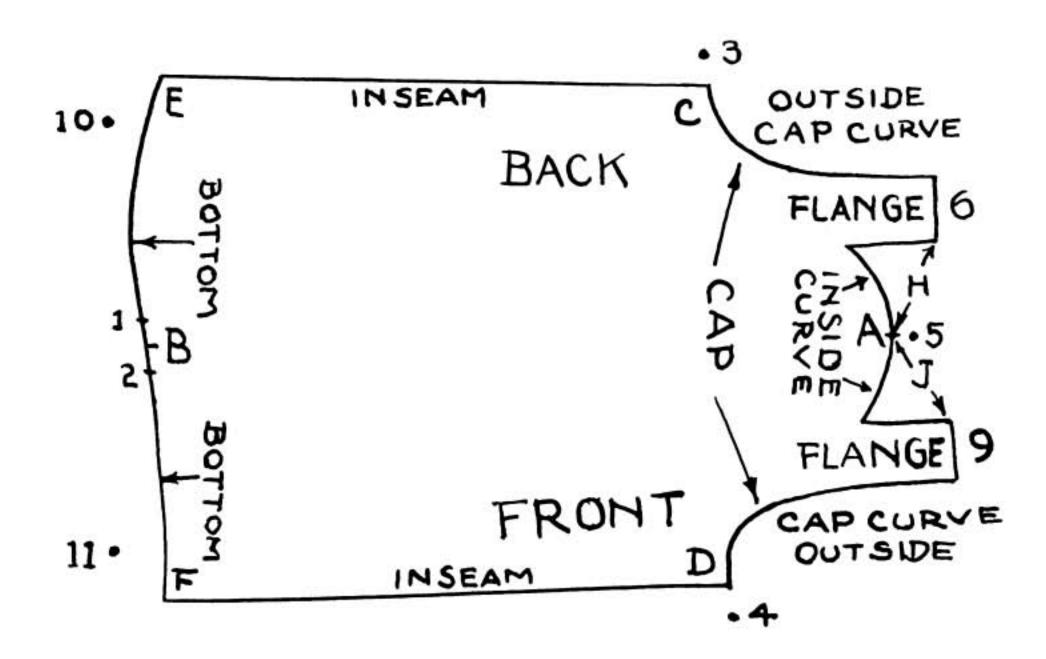


Move the pattern by placing point 7 on point 11 at the new cap, and point D on the hook at point 4. Mark out the back cap curve and the dart.



PART SIX

By placing the sleeve pattern within the graded outlines, the result will be as pictured above. The increases are at the prescribed points; all the other points of the sleeve grade are in the proper relationship.



Analysis

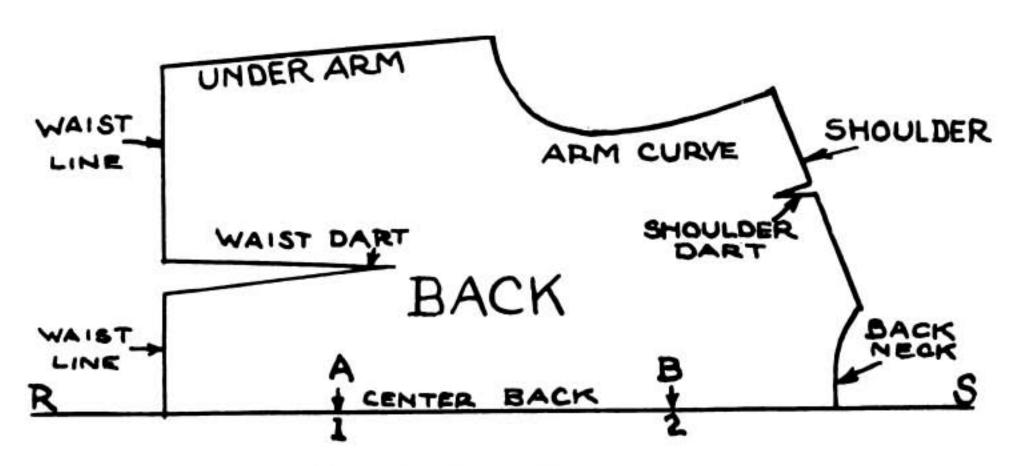
Note the cap of the vionette sleeve. The two flanges (6 and 9) jutting out of the sleeve cap curve, when joined (6 to 9, H to A and J to A), fold in half around the inside cap curve. This creates a pleat effect at the front and back of the sleeve when they are sewed into the garment armhole.

The part of a sleeve which is wider than the wrist is called the sleeve bottom. Divide the sleeve in half at bottom point B, and measure 1/8 inch from B to 1 and from B to 2. From C (the base of the sleeve cap) measure 3/16 inch to point 3. Increase the underarm of the body grade in a $1\frac{1}{2}$ -inch grade. From D to 4 is the same as from C to 3.

Measure 1/8 inch above point A (center notch of the sleeve cap) inside the curve for a normal increase in the height of the cap. Drop the sleeve bottom 1/4 inch to points 10 and 11.

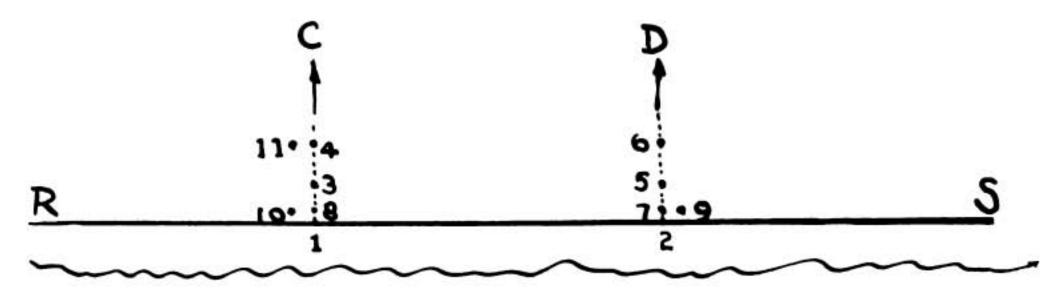


Simple Two-Guide Grade: Increase Back



Back Grade -- One

Draw a straight line, R-S, with a yardstick, or use the straight edge of the paper upon which the grade is to be made. Mark points A and B anywhere upon the center back of the pattern. Continue them on line R-S as points 1 and 2.

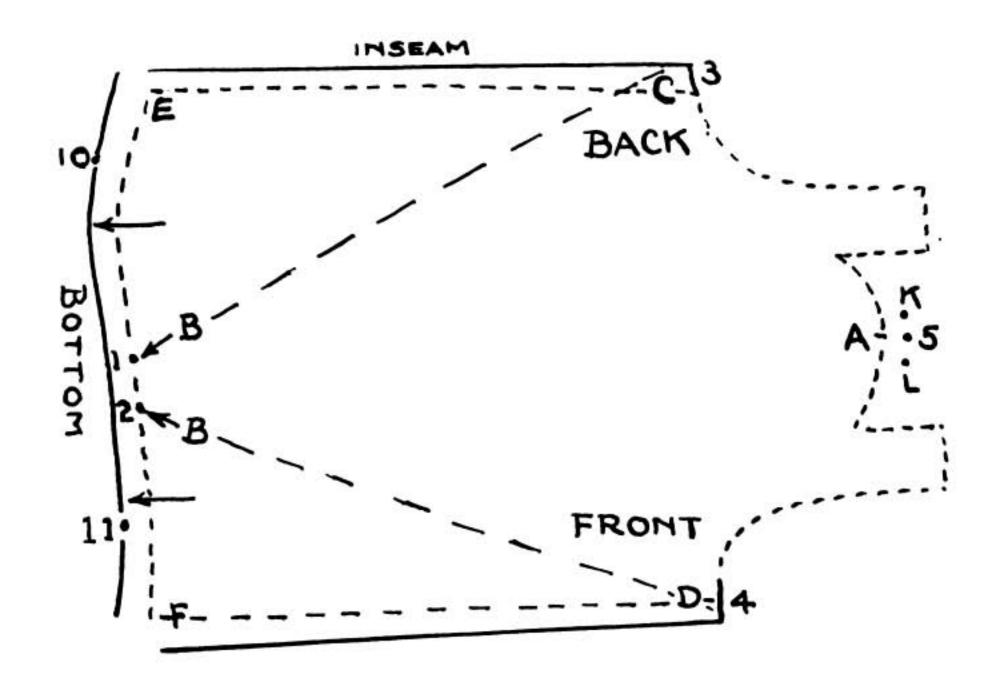


Back Grade -- Two

At points 1 and 2 on line R-S draw perpendiculars 1-C and 2-D. On line 2-D measure and point off 2 to 5 one-quarter inch, 5 to 6 one-quarter inch, 2 to 7 one-six-teenth inch. Point 9 is one-eighth inch directly to the right of point 7.

On line 1-C measure and point off from point 1 to 3 onequarter inch, 3 to 4 one-quarter inch, 1 to 8 one-sixteenth inch. Point 10 is one-eighth inch directly to the left of point 8; point 11 is one-eighth inch directly to the left of point 4.

Using a two inch Grade, the total measurements on lines, 1-C and 2-D are one-half inch, which is one quarter of the entire increase.



PART ONE

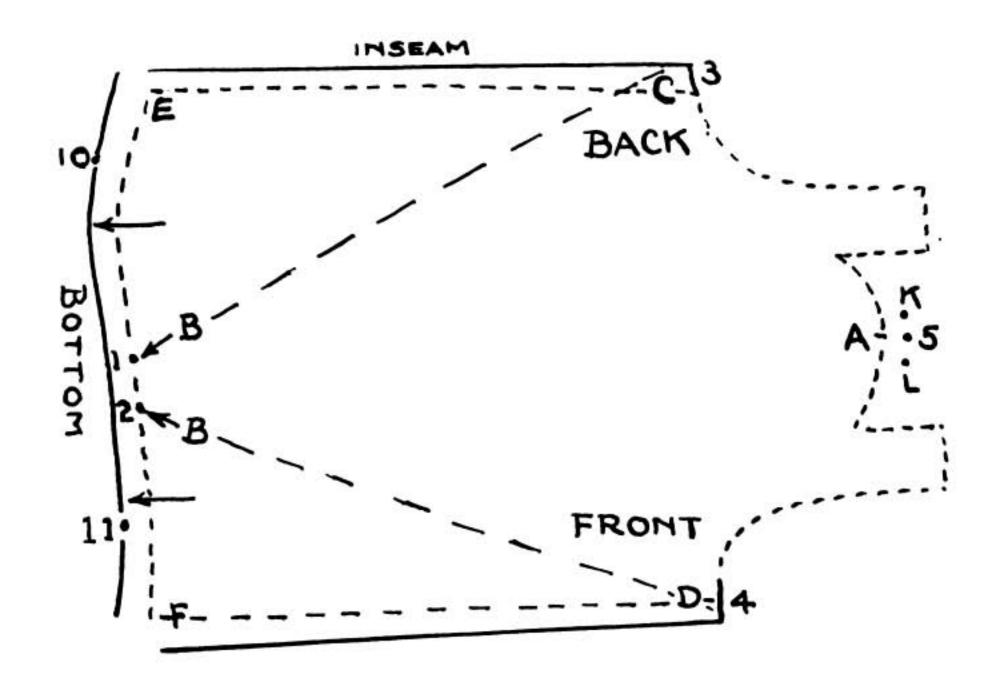
Move the bottom of the pattern down until it touches points 10 and 11. Draw the new sleeve bottom.

Place point B (the center of the sleeve bottom) on point 1 and point C (back) on point 3. Draw the inseam $(E \ to \ C)$.

Place the pattern with point B (the center of the sleeve bottom) on point 2. Swing the sleeve until point D of the sleeve (front) inseam touches point 4. Mark the front inseam line (F to 4) with a small hook at point 4.

Measure 1/8-inch from point 5 (above point A) to points K and L.

This is the basic procedure in all sleeve grades before making the grade adjustments for the increase or decrease of the sleeve cap.



PART ONE

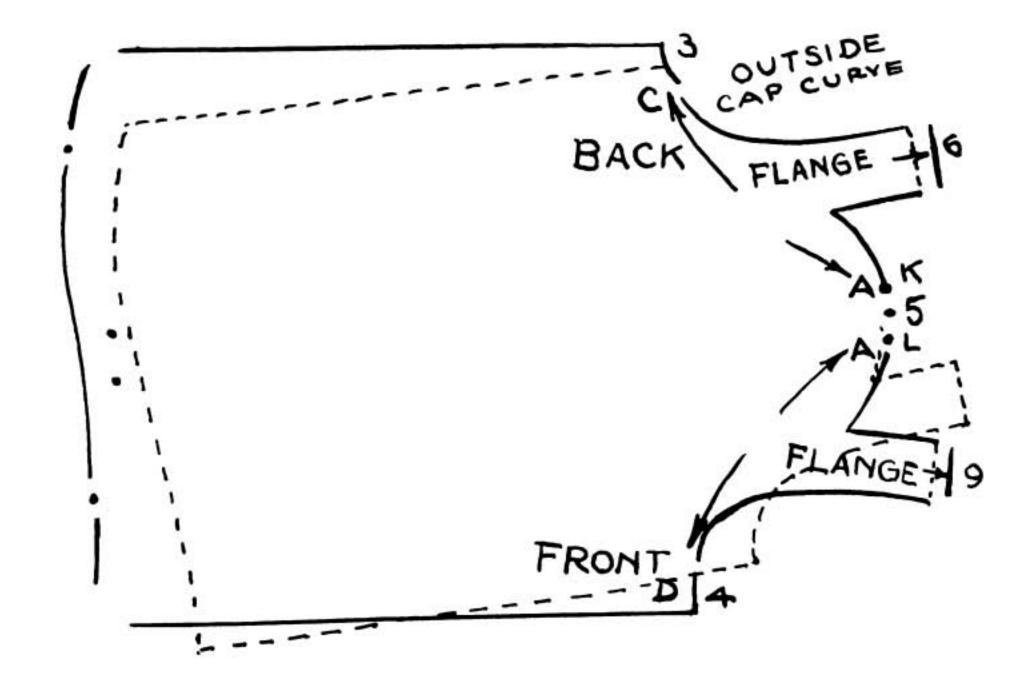
Move the bottom of the pattern down until it touches points 10 and 11. Draw the new sleeve bottom.

Place point B (the center of the sleeve bottom) on point 1 and point C (back) on point 3. Draw the inseam $(E \ to \ C)$.

Place the pattern with point B (the center of the sleeve bottom) on point 2. Swing the sleeve until point D of the sleeve (front) inseam touches point 4. Mark the front inseam line (F to 4) with a small hook at point 4.

Measure 1/8-inch from point 5 (above point A) to points K and L.

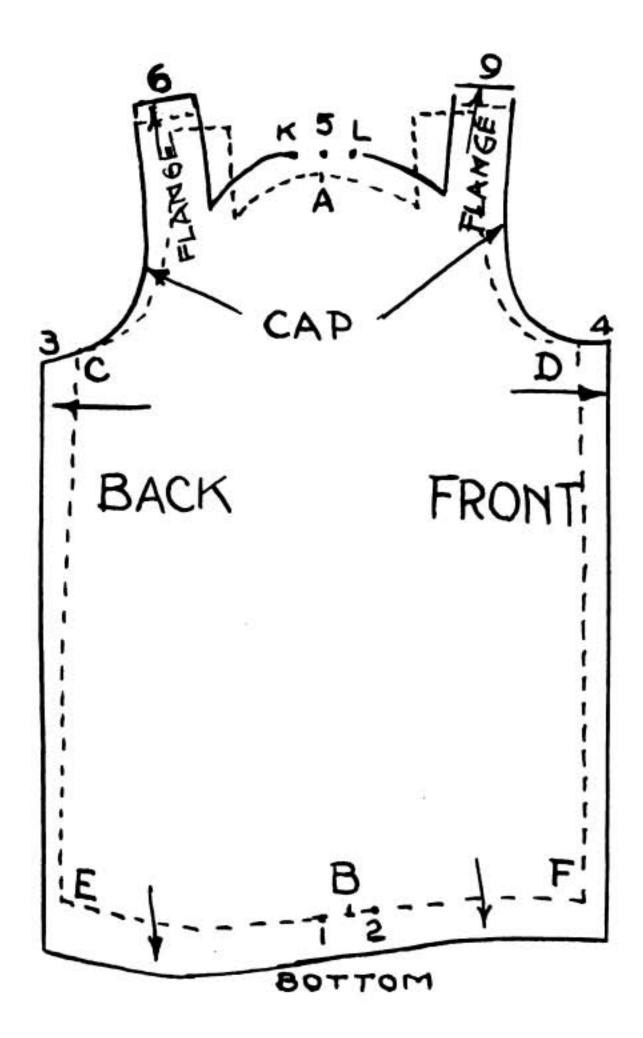
This is the basic procedure in all sleeve grades before making the grade adjustments for the increase or decrease of the sleeve cap.



PART TWO

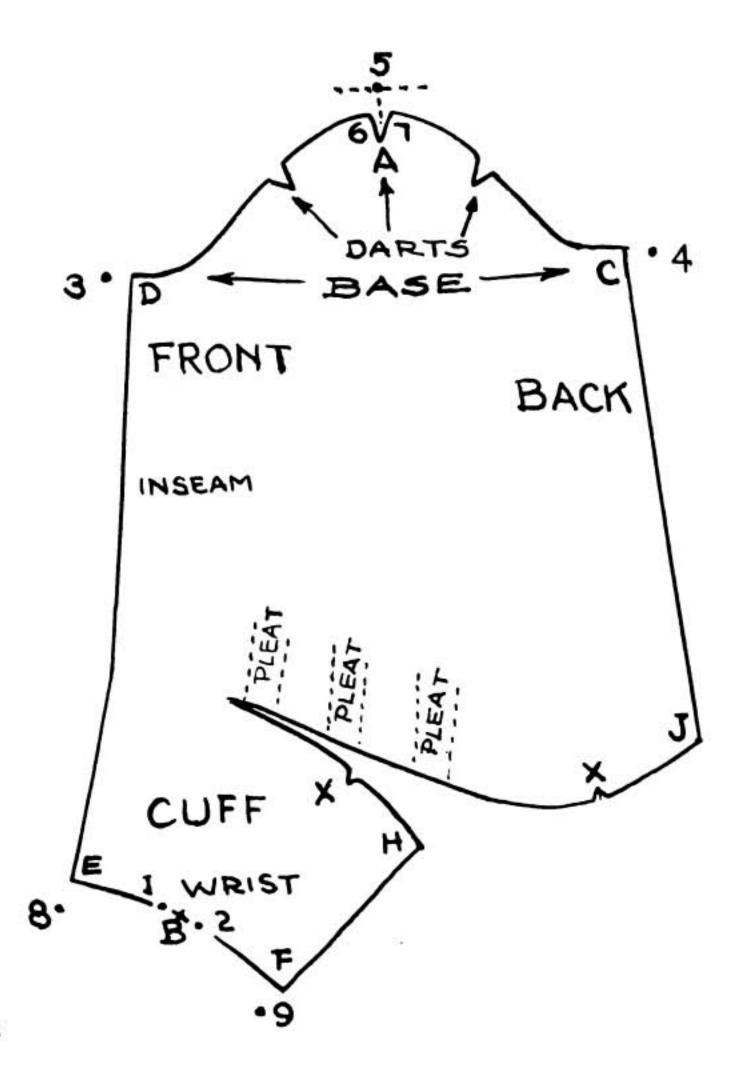
Move point A of the pattern cap to rest on point K, and move point C (at the base of the cap) to rest on the hook at point 3. Draw the outside cap curve flange outline and the inside curve to point K. Raise the end of the flange at point 6 1/8-inch to equal the 1/8-inch from 5 to K.

The procedure is the same for the other side of the sleeve cap. Place point A on point L and point D on the hook at point 4. Mark out the cap curve and the flange. Raise point 9 of the flange 1/8-inch to equal the 1/8-inch from 5 to L.



By placing the pattern within the border of the increase grade, it is quite simple to understand where the comparative increases appear, and how large these increases are. This can also be used as a check before cutting out the graded pattern.

Note the extra grade increases at the tops of the front and back flanges. They are equal to the increase on either side of the cap center (point 5 to point K and point 5 to point L above point A).

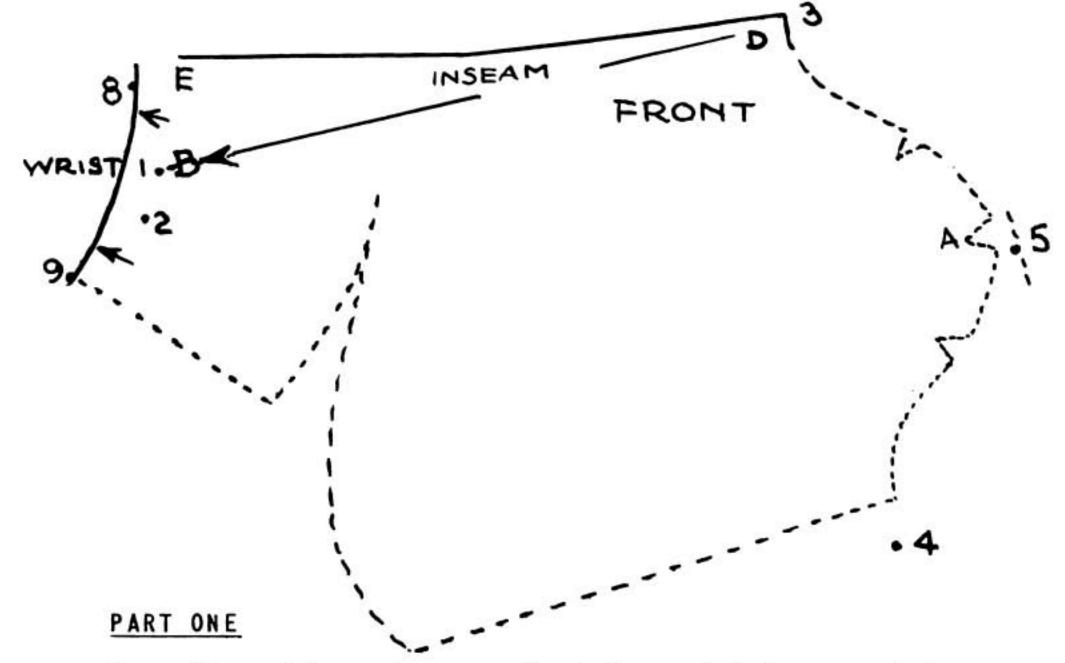


Analysis

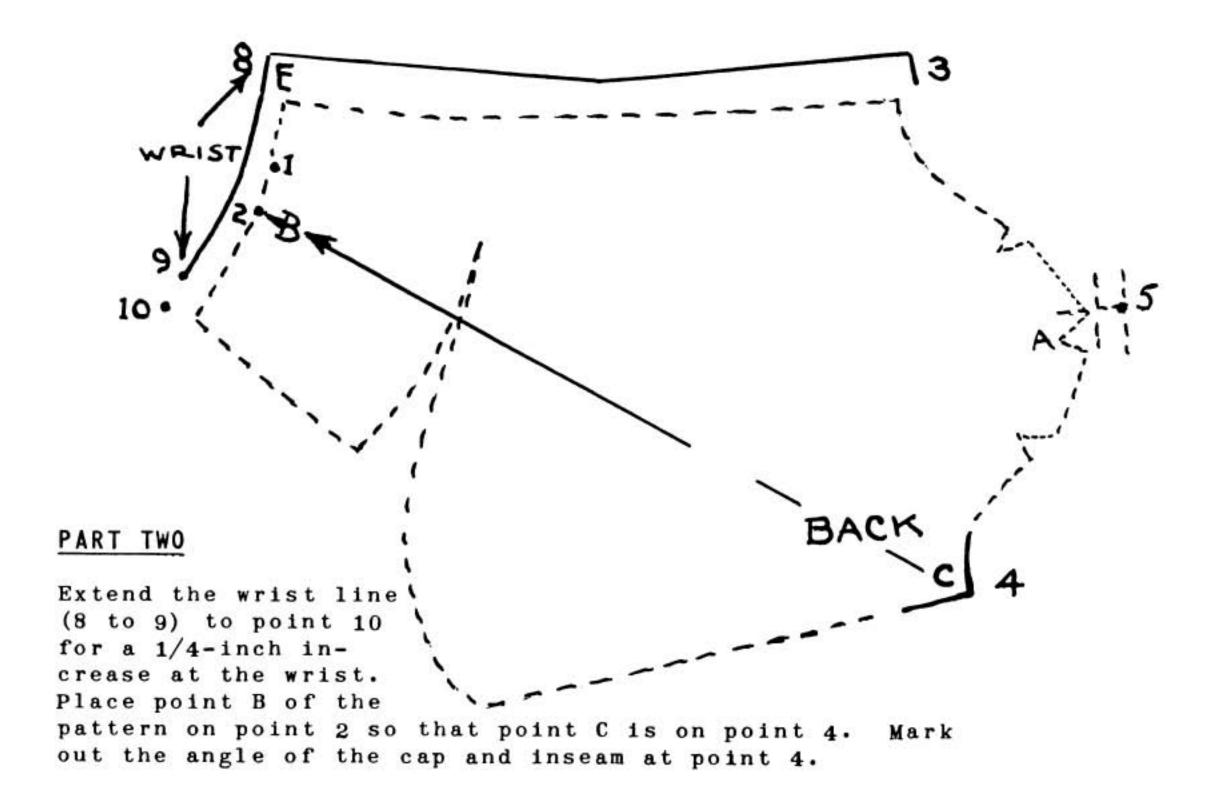
As will be noted, the body grade is carried out at points D and C only, the base of the cap -- the point which joins to the body side seam.

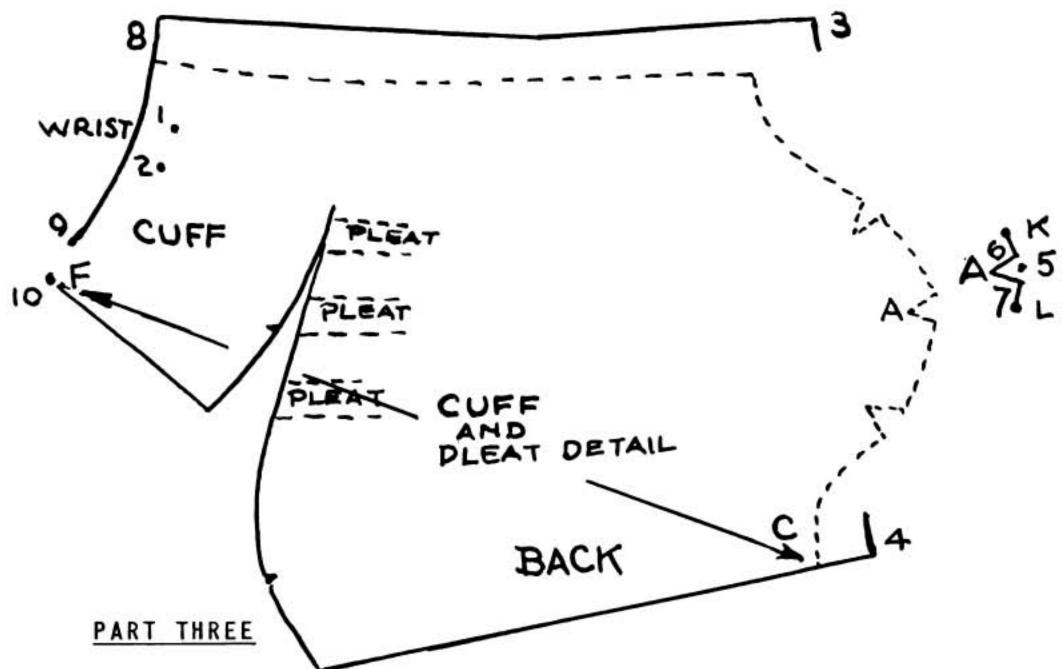
All other measurements, such as height and width at point A of the sleeve cap, and points 1 and 2 on either side of point B at the wrist, or bottom, of the sleeve, remains the same regardless of the size grade.

Therefore, it must be remembered that the variance is only in the distance between points D and C across the base of the sleeve cap. It will also be noted that there is a difference in treatment when there is a cuff attached to the main body of the sleeve.

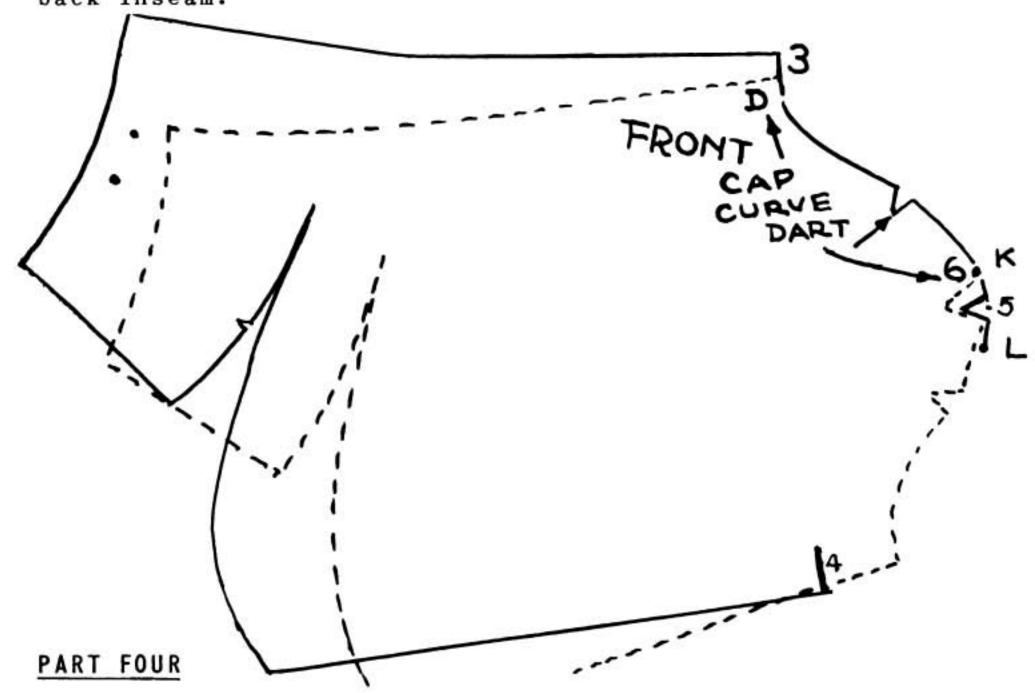


Move the pattern down so that the wrist is on points 8 and 9. Mark the new wrist line. Place point B of the pattern on the wrist (at point 1), and swing the pattern so that point D touches point 3. Mark out the inseam (front) and also a small hook at point 3.

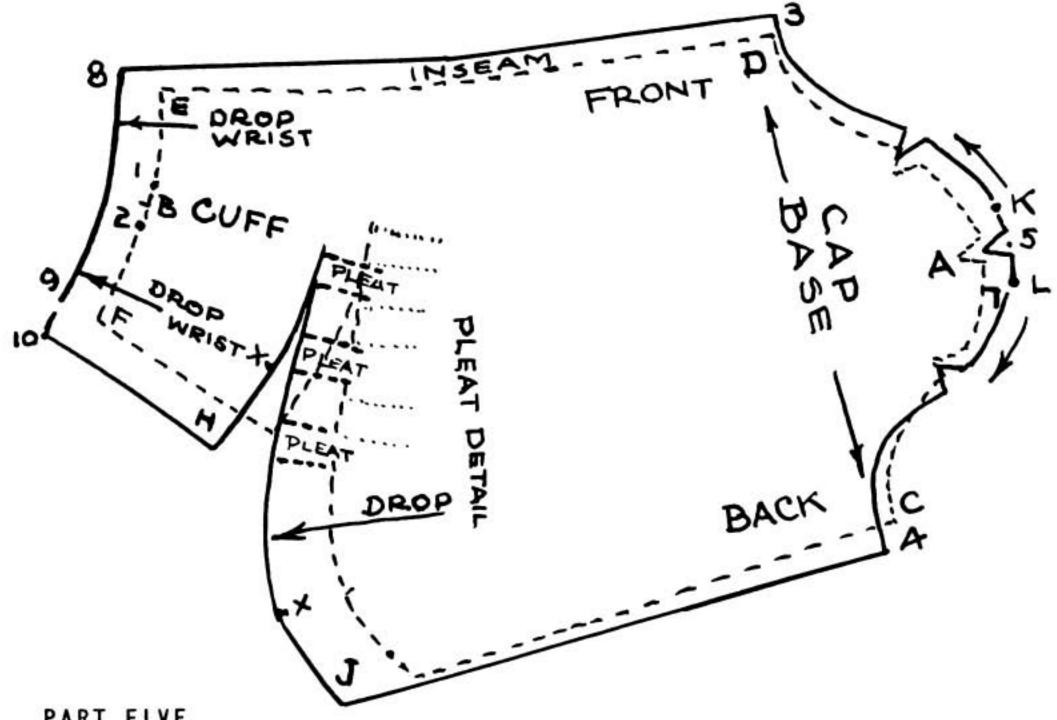




Raise the pattern so that center cap dart A is centered at point 5. Mark it out. Measure 1/8-inch on either side -- 6 to K and 7 to L. Place point F of the cuff on point 10 at the wrist, and point C at the back of the pattern at the base of the cap on the corner marked at point 4. Mark out the entire lower part -- cuff pleats back inseam.



Place point 6 of center cap dart A on point K and point D of the base of the cap (front). Mark out the cap curve and the dart.

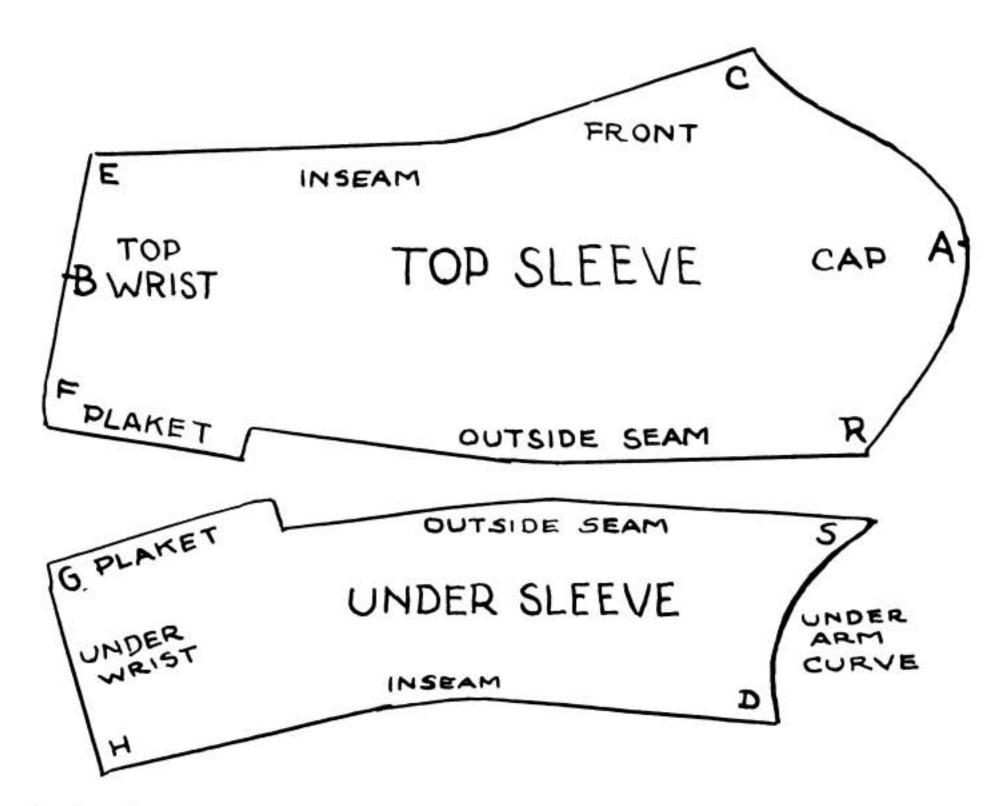


PART FIVE

Place point 7 of center cap dart A on point L and point C (at the base of the cap curve) on the hook at point 4. Mark out the back cap curve and the dart. Close up all the open points of the pattern grade by using comparable points of the original sleeve pattern.

By placing the pattern within the grade outline before cutting out, it can be noted what has occurred during the grading procedure. All the increases are proportionate to the one-inch grade.

Since the cuff width remains the same, the entire pleat detail of the Bishop Sleeve has dropped 1/4-inch due to the drop of the wrist line of the pattern.



Analysis:

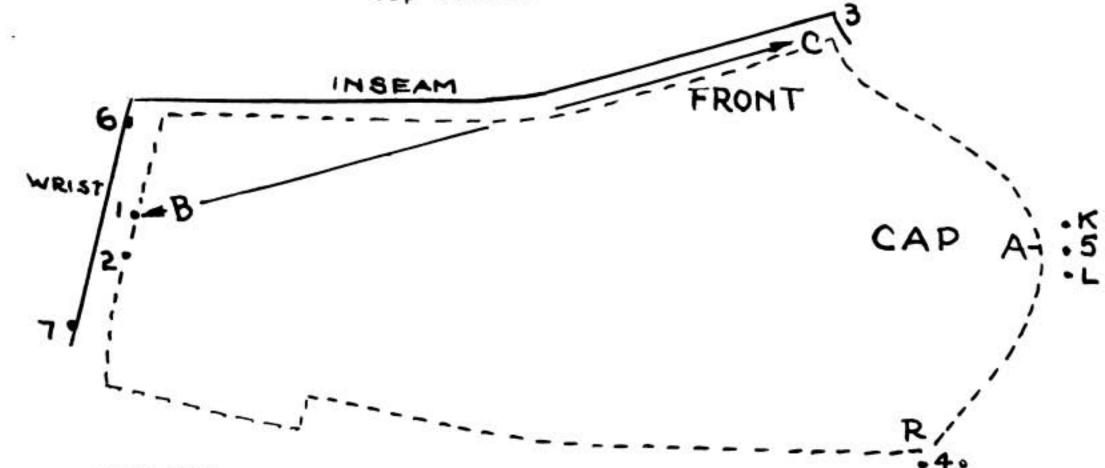
The tailored sleeve is in two parts -- the top sleeve and the under sleeve.

The front inseam, at point C, is increased 1/4-inch to coincide with the tailored garment increase at the side seam. There is another 1/4-inch increase at the inseam of the undersleeve (point D) at the base of the underarm curve.

The wrist of the top sleeve receives the full 1/4-inch increase in width while the undersleeve receives none.

There is a 1/8-inch increase at point R, the outside seam cap, and none at the outside seam cap of the undersleeve.

The placket, at points F and G, remains the same length, but drops with the increase of the sleeve length.

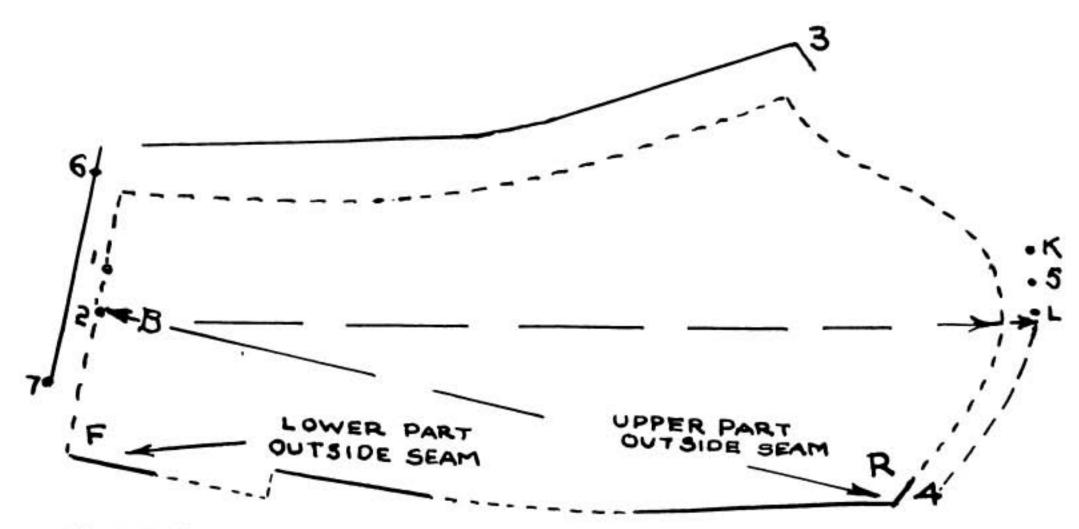


PART ONE

A to 5 at the cap of the top sleeve is 1/8-inch; 5 to K and 5 to L is also 1/8-inch. C to 3 is 1/4-inch and R to 4 is 1/8-inch.

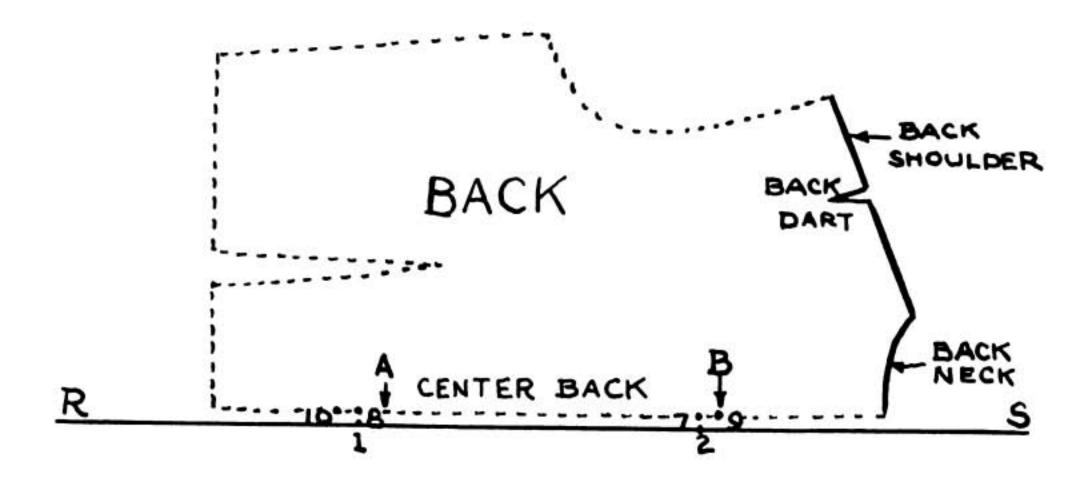
Measure 1/6-inch from the center of the wrist (point B) to point 1; and 1/8-inch to point 2. From the wrist to points 6 and 7 is a $\frac{1}{4}$ -inch drop. Move the top wrist line to rest on points 6 and 7. Draw the new wrist line.

Place point B of the wrist on point 1 and point C (front inseam) on point 3. Draw the new inseam line and a little hook at point 3.



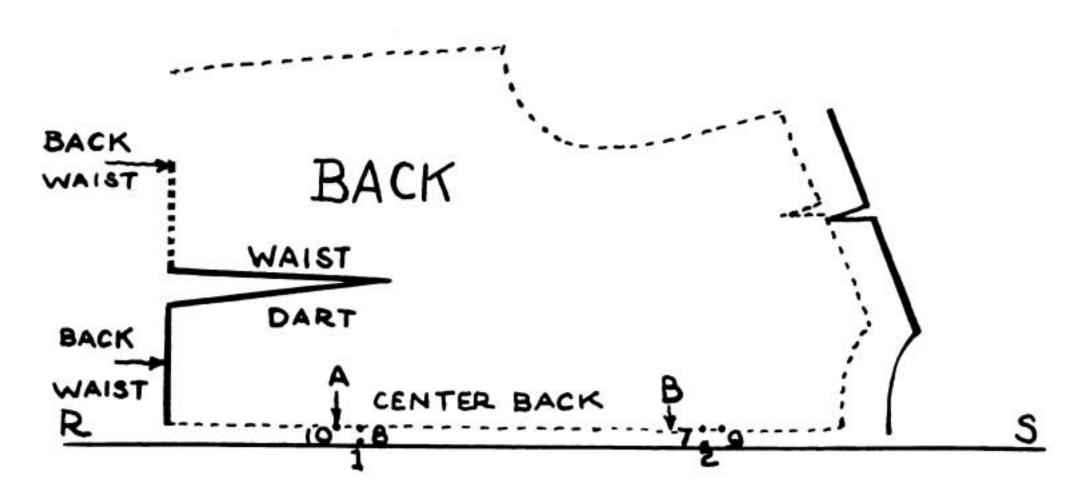
PART TWO

Place point B of the wrist line on point 2 and point R (outside seam at cap) on point 4. Draw the upper outside seam and a hook at point 4; also, the outside seam and a line at point F. Raise cap straight up above point 2 1/8" to point L. Mark cap L to 1/8 inch above point 4.



Back Grade -- Three

Place center back of back pattern with point B upon point 9 and touching points 7, 8, and 10. Hold firmly in this position. Outline the back neck, the back shoulder, and the entire back dart to raise shoulder and dart.

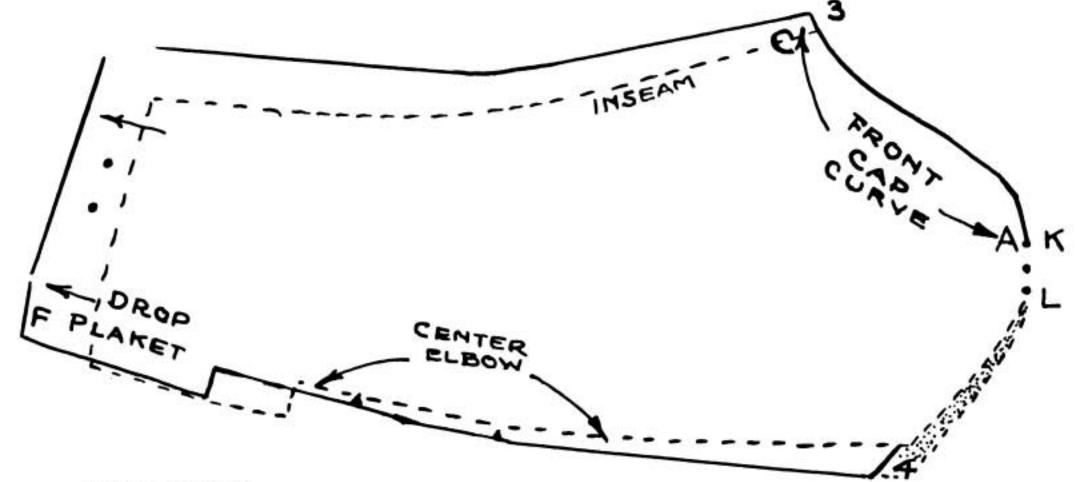


Back Grade -- Four

Place center back of back pattern with point A upon point 10, and touching points 8, 7, and 9. Mark the back waist and waist dart. This drops the waist and dart. With the previous raise of the shoulder and back neck, this increases the center back length by one-quarter inch.

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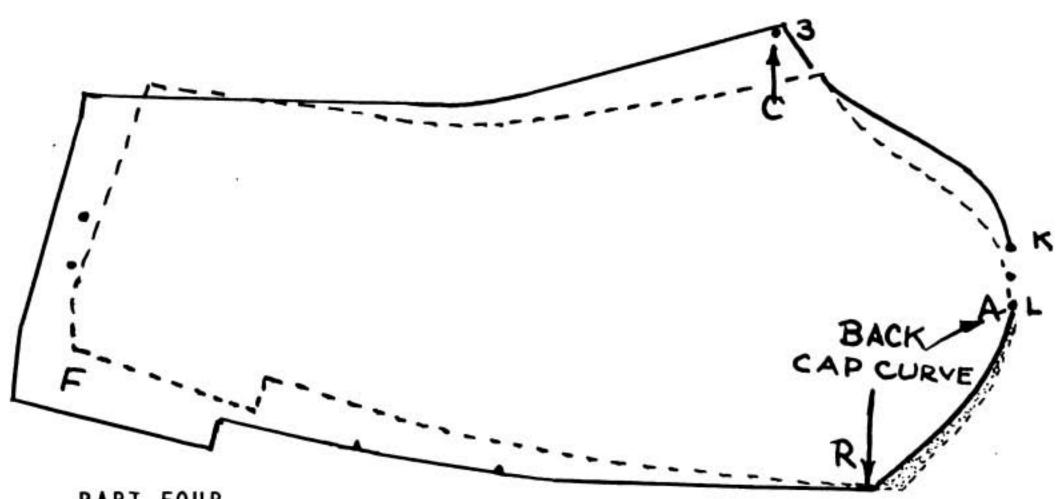
Original from CORNELL UNIVERSITY



PART THREE

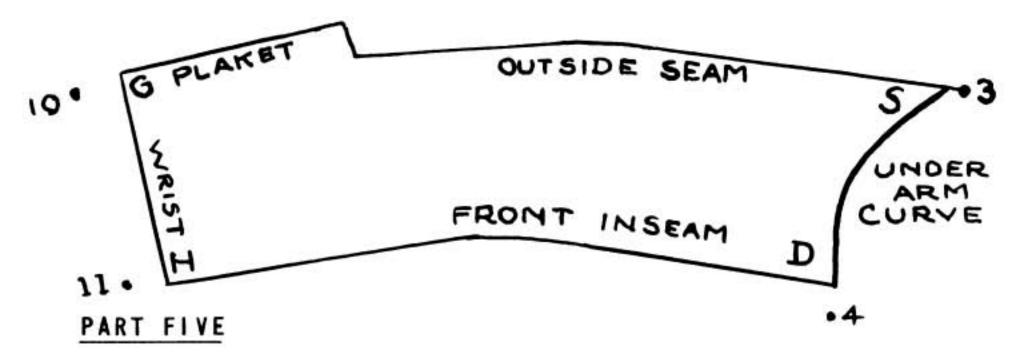
Place point A of the cap of the top sleeve pattern on point K and point C (front inseam) at the base of the cap on the hook at point 3. Draw the front cap curve.

Drop the sleeve placket to the wrist line and outline it fully. Then, move the pattern up and center the elbow dart between the wrist line at point F and point 4.

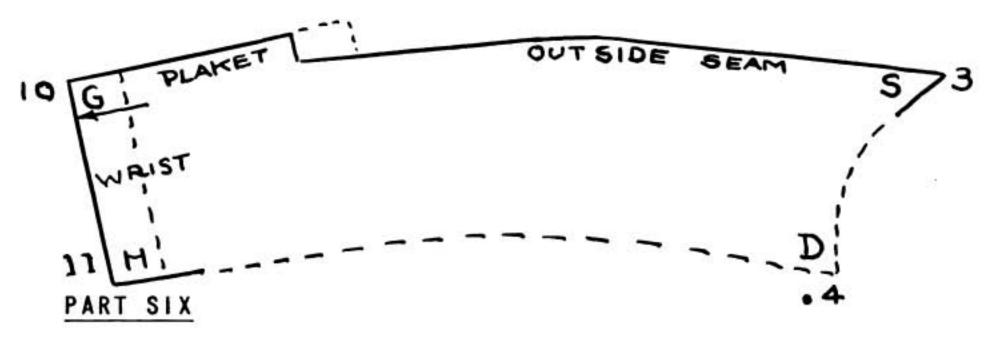


PART FOUR

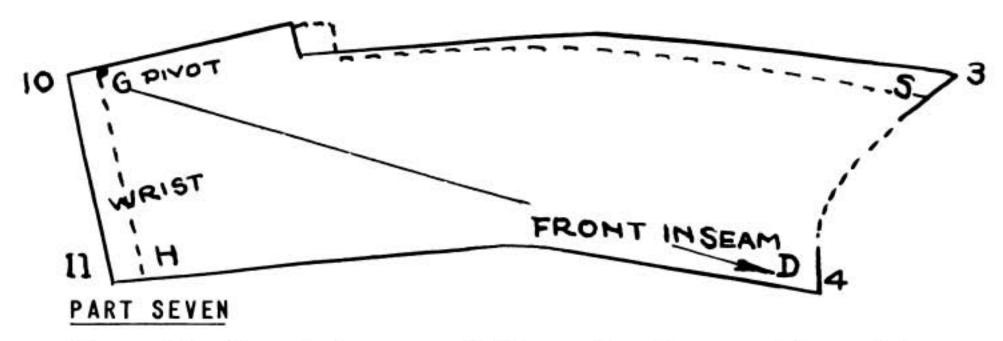
Move the pattern of the top sleeve (point R) at the cap of the outside seam so that it is on the hook at point 4 and point A (of the center of the cap) on point L. Mark the back cap curve.



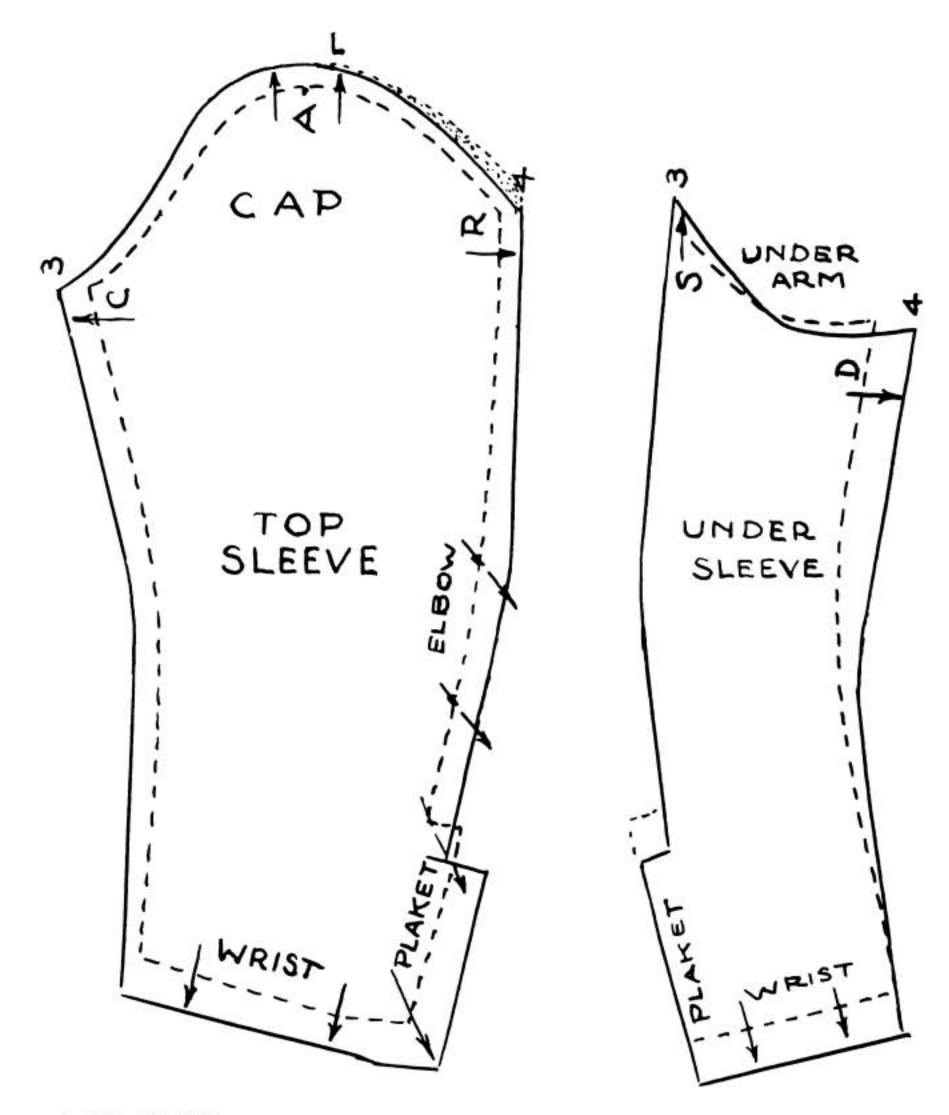
Measure 1/8-inch from point S to point 3 at the outside seam, and 1/4-inch from point D (inseam) to point 4. From point G to point 10 there is a 1/4-inch drop. Point H to point 11 marks a 1/4-inch wrist drop.



Move the undersleeve pattern wrist to points 10 and 11. Mark out the wrist line, the entire placket and about 1 inch of the front inseam. Then move the pattern until the outside seam (point S) touches points 3 and G along the placket. Mark out the entire outside seam and point S at point 3.



Place the front inseam of the undersleeve with point D touching point 4 and point H at the one-inch extension at point 11.



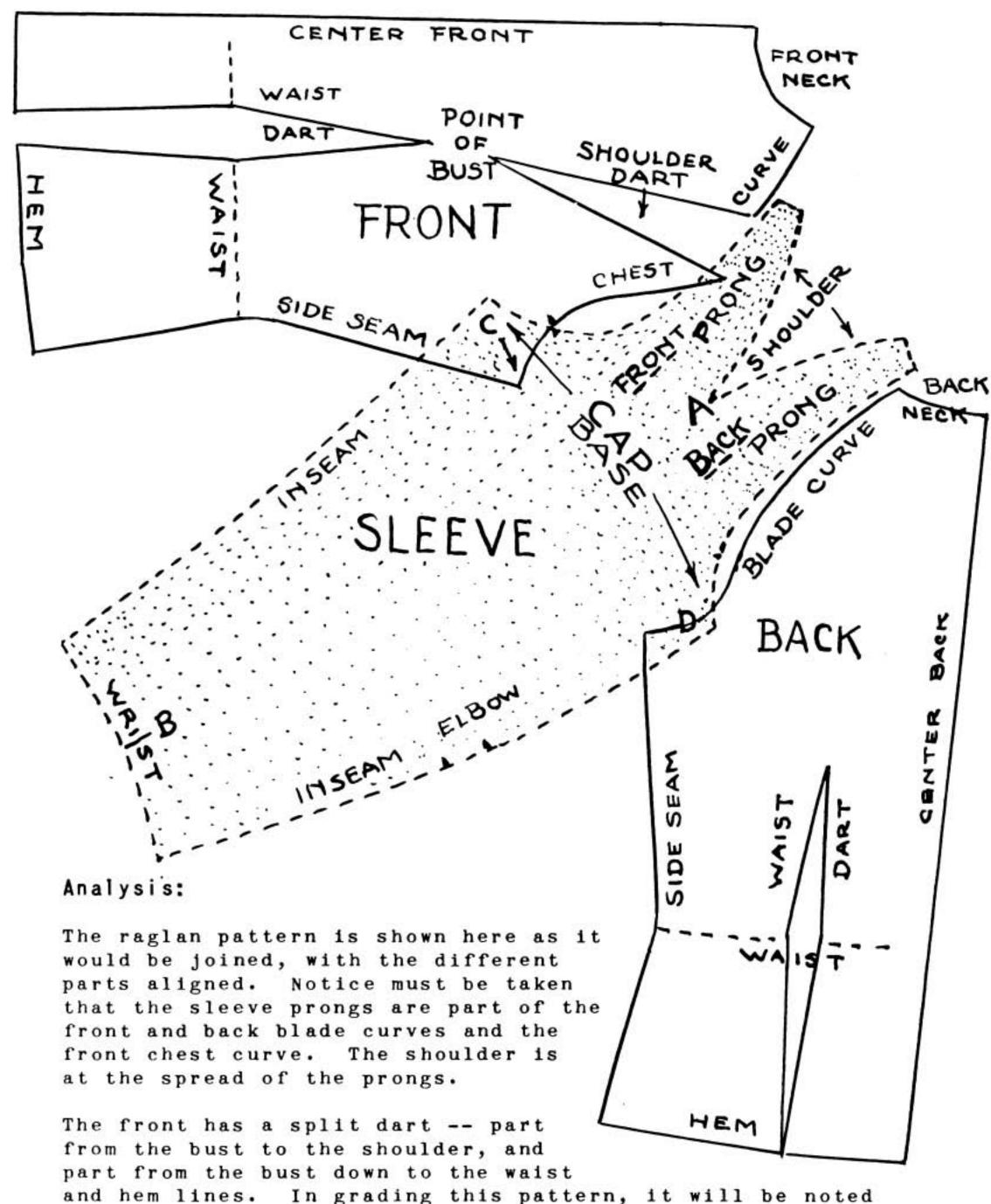
PART EIGHT

Note how the top and undersleeve increase proportionately. The increase at the undersleeve shows that the increase is at the undersleeve underarm in accordance with the body grade at the underarm.

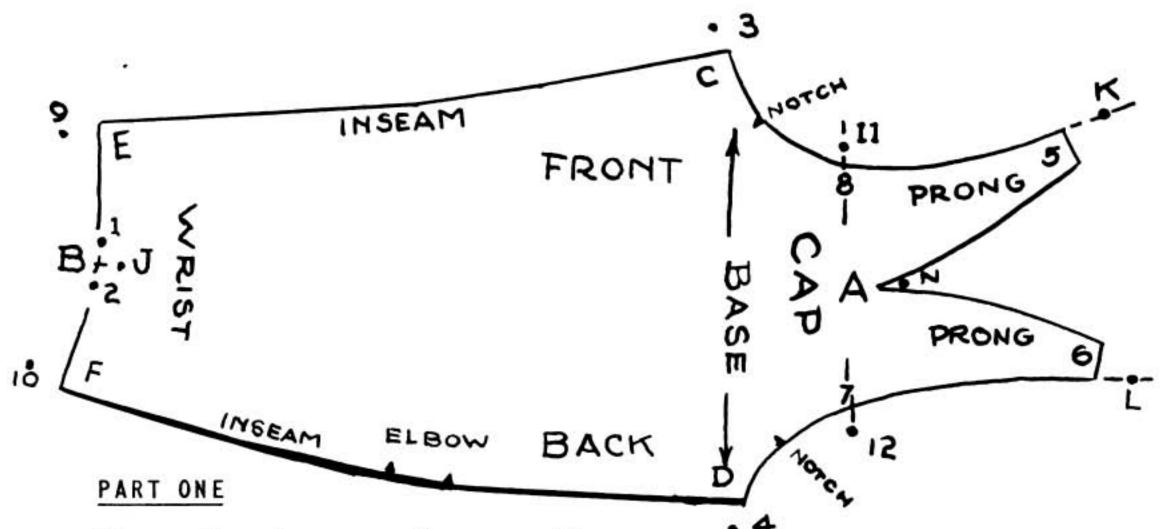
Note also that the grade is total at the top sleeve wrist and that there is none at the undersleeve wrist.

The shaded area at cap of top sleeve (Point L to 4) straightens out sleeve cap of top sleeve.

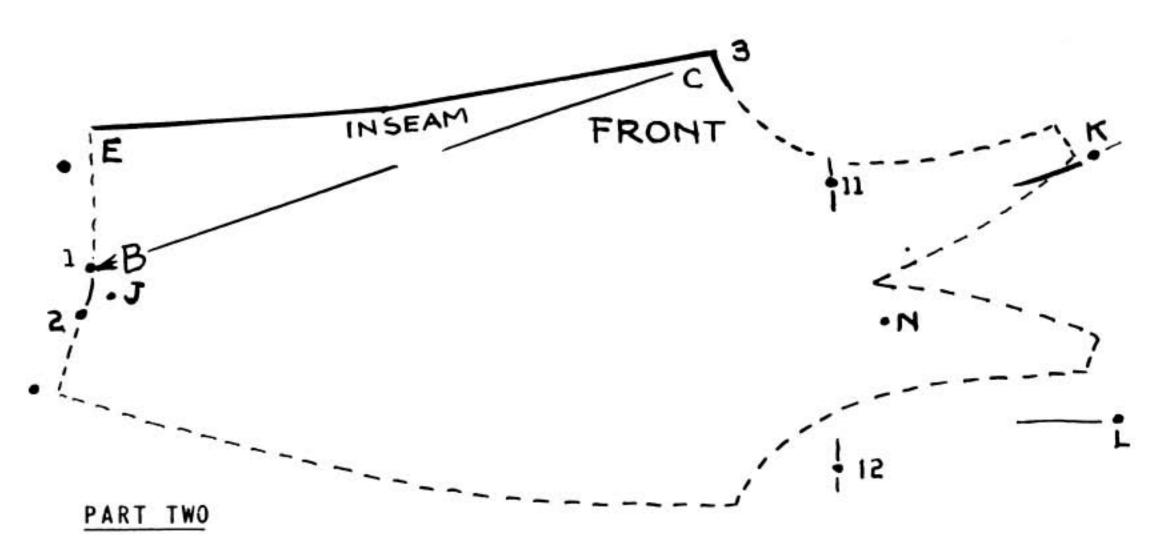
7. Ragian Sleeve and Body



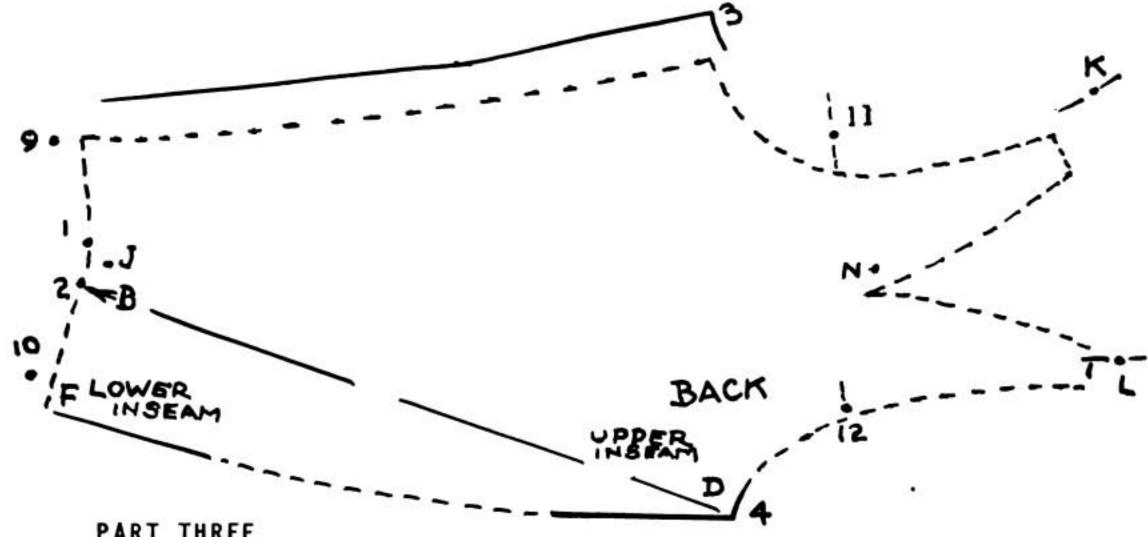
and hem lines. In grading this pattern, it will be noted that the sleeve prong will receive individual treatment.



Place the sleeve pattern on the paper for the grade. Continue the outside lines of prongs 5 and 6, and measure 1/4 inch from 5 to K. Also, measure 1/4 inch from 6 to L. A to N is 1/8 inch. Across the cap of the sleeve, draw lines 8 and 7. From the outside lines at points 7 and 8 measure 1/8 inch from 8 to 11 and 1/8 inch from 7 to 12. From C to 3, at the base, is 3/16 inch. D to 4 is also 3/16 inch. From point B, at the wrist line, measure 1/8 inch on either side. B to J is also 1/8 inch.

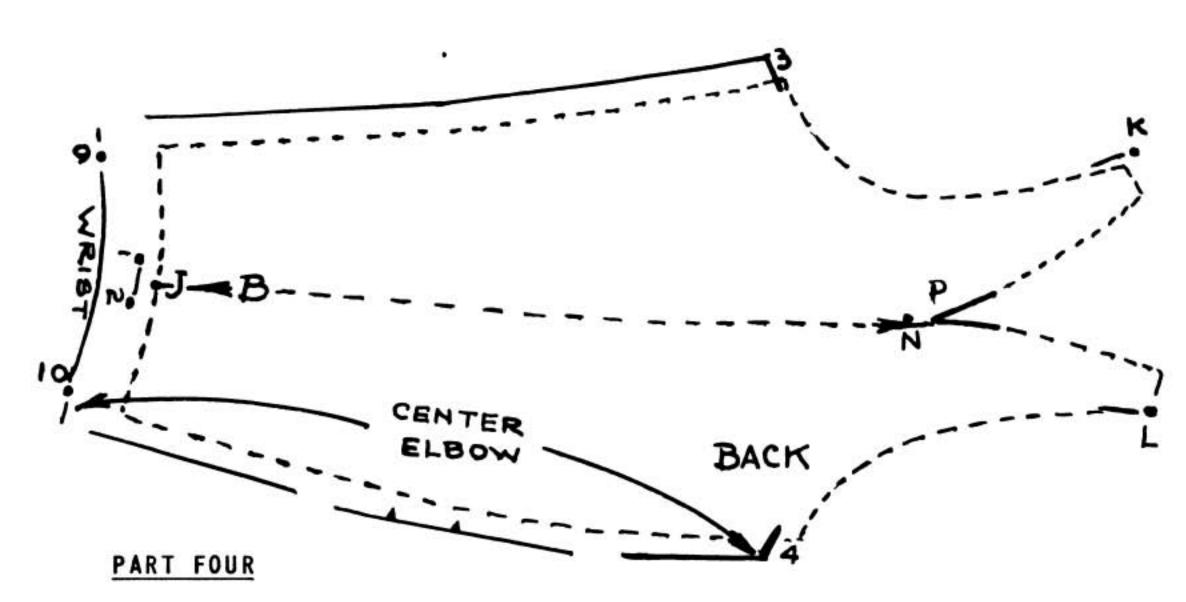


Place point B (at wrist) on point 1, and point C (front base of the sleeve) on point 3. Draw the inseam line (E to C) and a little hook at point 3.

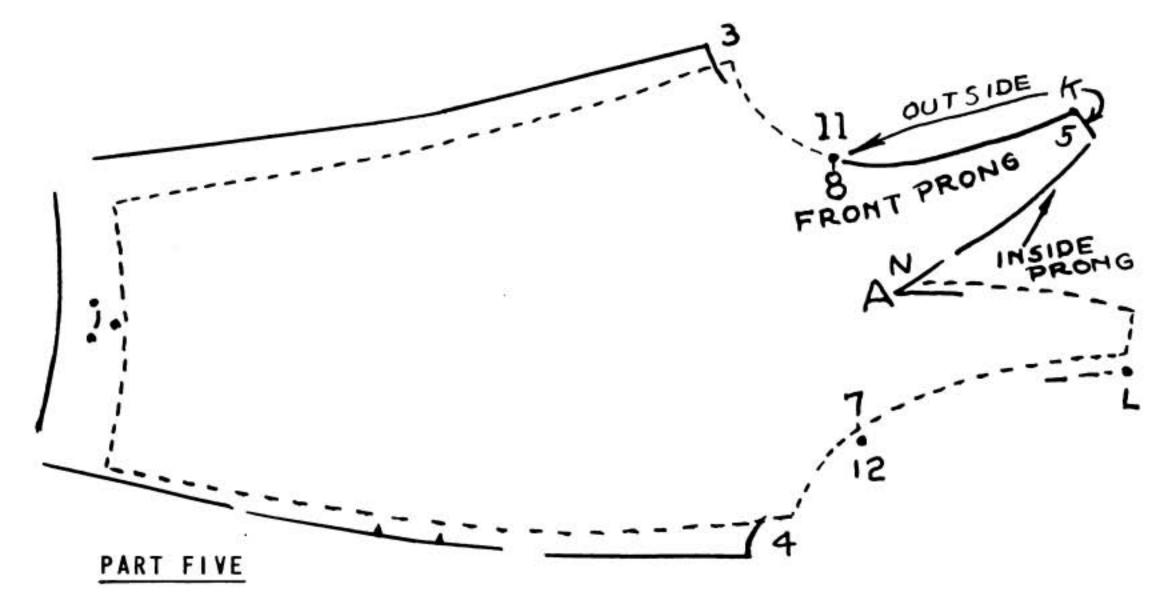


PART THREE

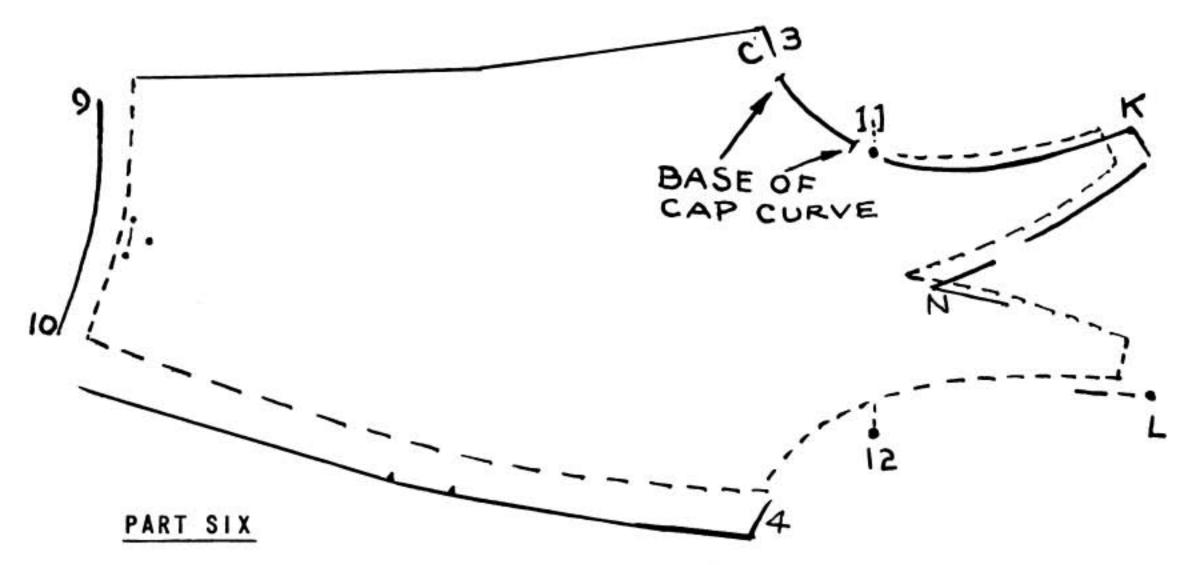
Place point B, at the wrist of the sleeve, on point 2. Move the pattern so that point D (at the base of the cap) is on point 4. Mark out the upper and lower inseams of the sleeve back.



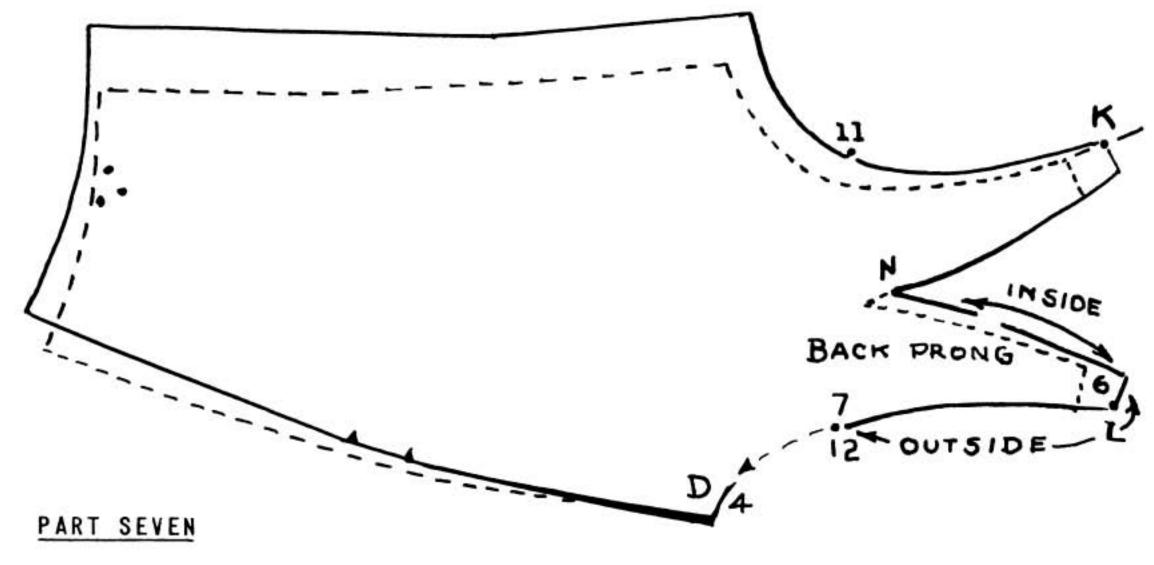
Place point B on point J and point A of the prong fork on point N (1/8 inch above point A). Mark out the fork line. Drop the wrist 1/4 inch to points 9 and 10 for the new wrist line. Center the elbow dart between the new wrist line and point 4.



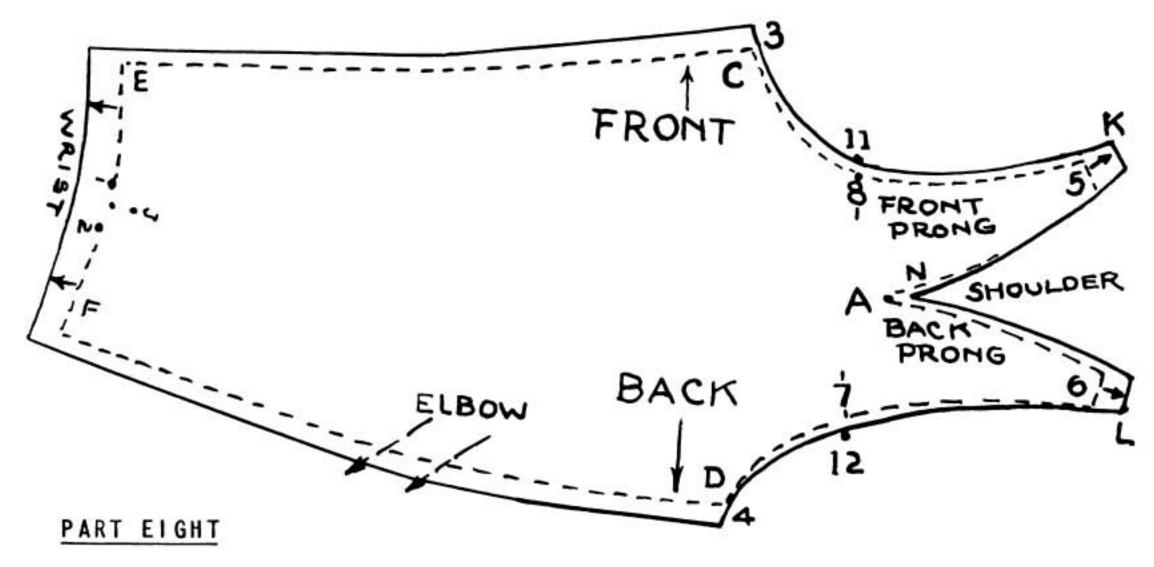
Place point 5 of the front prong on point K and point 8 of the front prong on point 11. Mark the prong outline from point 11 to point K, and also the square prong end. Place point A of the fork on point N and mark out the new fork line. Finish the inside line of the fork (5) to point N.



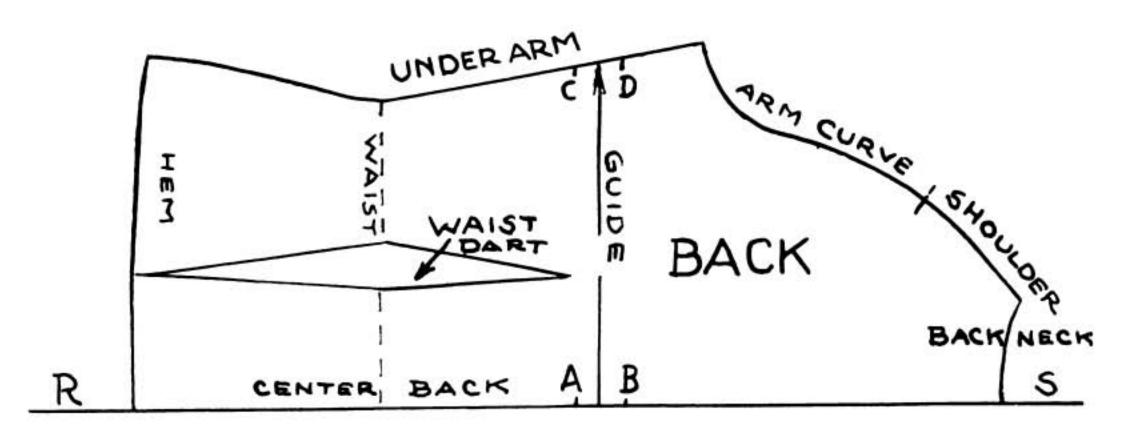
Move the pattern down so that point C lies on the hook at point 3. The base of the cap curve below the prong touches point 11. Draw the cap curve (3 to 11).



Place the end of prong point 6 on point L with point 7 (outside of the prong) touching point 12. Mark out the end of the prong, and the outside, to point 12. Join the inside of the prong (6 to N). Join point 4 to point 12 by using D to 7 of the pattern.



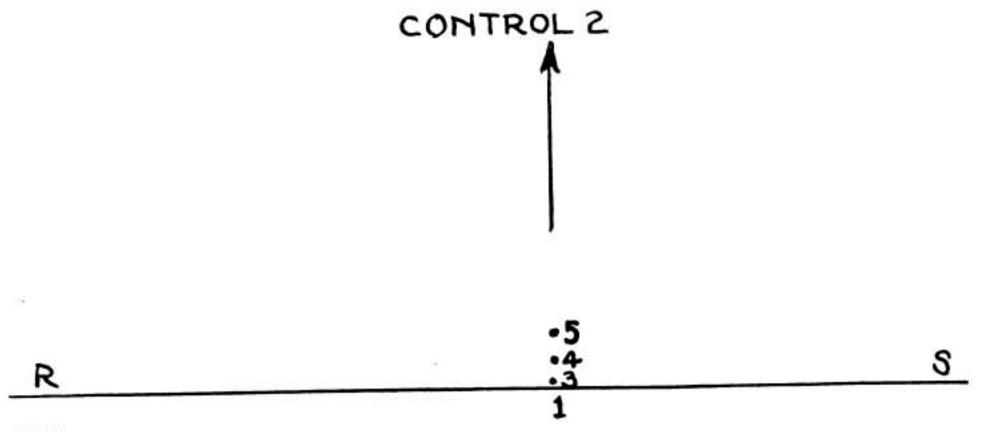
By placing the original pattern of the raglan sleeve on the grade, the increases can be very easily seen. Note that the shoulder line of the prong has increased only 1/8 inch. This allows for proportionate gradation all around.



Analysis:

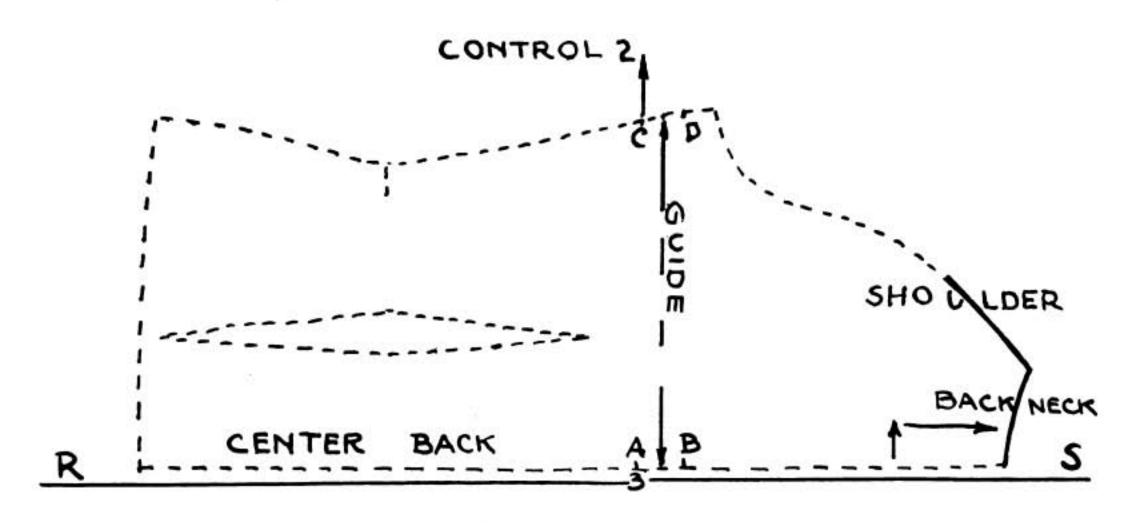
The back pattern of the raglan body (diagrammed above) shows, by all the part-name labelling, the relation-ship of the parts of the pattern. Analyzing and collating a pattern before the grade is started facilitates the procedure of raising and lowering, and all moves and proper place addition to complete the grade from size to size.

The grade procedure will be by the single grade method.



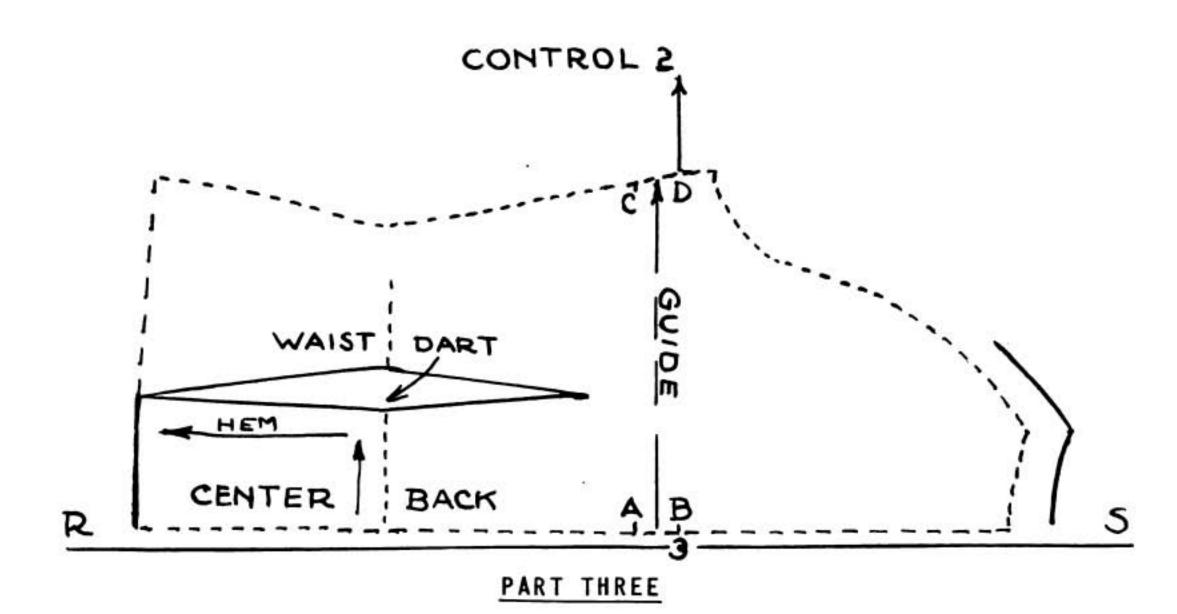
PART ONE

Since the grade is $1\frac{1}{2}$ inches, start by placing the center back of the pattern on line R-S. Continue the guide of pattern back to R-S as point 1, and forward as guide control 2. From 1 measure 3/16 inch to 4 and 1/16 to 3 for the dart. 1 to 5 is 3/8 inch, the full width increase of the back.



PART TWO

Move the back pattern 1/16 inch from line R-S and 1/8 inch to the right. Place point A of the pattern on point 3 of the grade, and point C of the pattern on control 2. Mark out the shoulder and the back of the neck.



Move the back pattern center back so that point B rests on point 3 of the grade, and guide D of the pattern on guide control 2. Mark out the entire waist dart and part of the hem -- a drop of 1/8 inch of the waist.

PATTERN GRADING Simplified

PATTERN GRADING, SIMPLIFIED

A Manual for Grading
Women's, Misses', Juniors' and Children's
Dresses, Suits and Coats

