DESIGNING AND CUTTING LADIES' GARMENTS

by

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PREFACE

This book makes a departure from the many other works on the same subject that have been published at different times during the last half-century. It concerns itself with the basic principles involved in the designing and cutting of patterns for ladies’ tailor-made garments, rather than with one particular system of cutting. Instead of containing a large number of drafts depicting a wide range of styles, it features certain aspects of garment design and pattern drafting, relating these to basic rules which apply to all the systems or methods of cutting employed today.

It seems to me that students of garment cutting should know as much as possible about the basic structure of patterns, the relation of this structure to the human figure, and the application of it to the designing and cutting of any style of garment that may be dictated by the fashion ideas of any given period. This book has been planned to give students—and experienced cutters and designers—a basis of working which includes these features and which is adaptable to any requirements of fashion in the ladies’ tailoring world.

In the early chapters I have set out exhaustive studies of anatomy, figure observation, measurement, pattern structure and style lines. In the later chapters I have explained, in clear detail, principles involved in the actual drafting of patterns for what are described as tailor-made garments. I do not deal with the cutting of gowns, dresses, frocks and other similar garments worn by women; these belong to another sphere and are not part of my subject. However, those readers who are concerned with that sphere of ladies’ outer garments will find much to interest and help them in the book. Many of the principles expressed here are applicable to the cutting of certain gowns and dresses.

A knowledge of foundation garments is essential to the ladies’ cutter. I have dealt at some length with the various types of these and with the effect they have on the natural figure. This is an important consideration, for the modification of figure shapes that results from the different types of corsetry is remarkably extensive and variable.

I have endeavoured to make explanations as concise and clear as possible—by means of the written word, photographs, drawings and diagrams. In connection with the last two, I must express my thanks to Miss E. A. Payton, who prepared the line and wash drawings, and to Mr. Arthur T. Murray (of the Tailor and Cutter), who prepared the large number of diagrams.

This book is to be regarded as Part One of a composite work in two volumes. Part Two, already in preparation, will contain further basic drafts of various garments—jackets, coats, skirts, slacks, etc.—and will deal at length with pattern manipulation, styling and adaptations for figure abnormalities.

A final observation. Fashions in ladies’ garments—under and outer—change with such remarkable rapidity that the author of a book of this kind cannot possibly be “up-to-the-minute” when his work is published. Some of the illustrations of corsetry and of outer garments may appear to be a little behind the time; hair styles, too, may not be absolutely contemporary. These things are unavoidable and should be spared animadversion. One thing can be truthfully said—the principles expressed (and it is with these that the book is chiefly concerned) are not anything like as evanescent as feminine fashion.

A. A. W.
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CHAPTER I

Anatomical Considerations

Although it is not necessary for the garment cutter to have a comprehensive knowledge of human anatomy, it is certainly essential for him to know something about it. After all, the human figure is really his basic model—he is called upon to measure it, fit it and clothe it with various garments. It is logical, then, that this opening chapter of a work on garment cutting should take account of the basic model—in this instance, the human female figure.

The kind of anatomy we shall be considering here is that which deals with the surface shapes and contours of the figure. This is called anthropometry, derived from the Greek anthropos (man). Its study comprises the assessment of surface measurements and shapes, relative proportions and factors of stance.

We must first consider the nude figure, for in this we can see the many conformations and can relate them to the coverings we shall later design for them. The cutter or designer is not likely to have the opportunity of seeing his lady customers in the nude, though he may well see them clad only in their foundation garments. However, without some idea of the natural character of the female figure the student of garment designing and cutting will be at a great disadvantage.

I can say, with assurance, that however many measures a cutter may take and however carefully they may be applied to his draft, they will not of themselves give him a guarantee that all the garments he cuts by them will be perfect in fit. Neither will his measures release him altogether from the necessity of careful observation of the basic figure.

Of course, measures are important—they are dealt with at considerable length later in this book. But the fact remains that in the production of tailored clothes for women measures are not the complete answer to, or solution of, the technical problems of the cutter.

Figure Observation

The terms “observation” and “judgement” have been used by cutters for a very long time. They have fallen into a low state in recent years, for they have often been used as synonyms for “rock-of-eye” or “guessing.” This is a great pity.

Observation and judgement are very real things—and they should be held as important by every cutter. In their true meaning they are very valuable. Any cutter interested in his work should make efforts to train his observation and to develop his judgement; he will need both in almost every moment of his daily work. It must be pointed out, however, that this does not mean that he will not require to use his inch-tape!

At the outset of any attempt to assess the characteristics of the female figure, one is confronted by a major problem—the consideration of every possible type. To take note of all the many variations in women's figures is a task far beyond the scope of this work; indeed, it is outside the scope of the most erudite writer on the subject of anatomy. Nature has been so prodigal in her “designing” that she has created an almost numberless variety of figure types.

Nevertheless, it is possible to take certain types that are encountered from day to day and to regard them as basic, then to make observations and calculations upon them. The principles that are to be discussed are applicable to all shapes and sizes of female figure—and they are definitely related to the business of drafting and cutting patterns.

The two illustrations of the nude figure that will be found on the next page have been drawn from
These drawings convey an excellent impression of the female figure. They reveal typical characteristics that should be studied in connection with the explanatory details given on the facing page. Note the positions of the breasts, the shapes at hips and seat and the widths at shoulder, bust, waist and hip levels. Consideration of these features is involved in garment pattern designing.
life and may be regarded as reliable indications of the typical young woman's figure at the present time. The line drawings which follow in this chapter are drawn on the basis of the so-called "eight-heads" theory of proportion. It will be noticed that there are certain small departures from this theory.

The latter is used by artists and is derived from a computation of the proportions of an "ideal" figure, rather than from those of a figure we might describe as normal, standard or average. In fact, the spacing of horizontal lines on certain of the line diagrammatic drawings has been calculated in accordance with observations which were made on a number of female figures of average height—proportions being regarded from the point of view of the garment designer.

The Nude Figure

On the facing page (Plate i) we see the front and back aspects of a typical female figure. In examination of them we shall be concerned mainly with what I have usually termed salient points in the figure with which the garment designer and cutter must become familiar. These points are denoted by letters.

Letter A denotes the neck column (known in anthropometry as the columnial section); B indicates the shoulder level (acromial section); this has to be taken, in relation to A, as an indicator of shoulder slope; C denotes the chest-bust area of the figure, one subject to a number of form variations, many of which are influenced by foundation garments (this is known anthropometrically as the thoracial section); E draws attention to the waist—side aspect in particular—and is known as the ilial section; F is also in the waist region, in the centre back; often, this waist hollow is appreciably lower than that of the side waist; G shows the hip prominence and H the seat (or buttocks) prominence, known as the gluteal section of the figure.

Mention of the location of letter D has been left purposely until now, for the area of the figure it denotes (rear part between acromial and thoracial sections) is that of the scapulae—the shoulder-blades. The form of these varies to a great extent with different women; but in a wide variety of examples it will be found that the lateral situation of the blade is about 1 in. or 1\(\frac{1}{2}\) ins. from a vertical line drawn down from the side neck (A), marking the direction of the position towards the side of the figure.

The girth measurements that are normally taken—chest, bust, waist, hips and seat—will give indication of size; they will not take account of the varying shapes and contours within the girths. Careful study should therefore be made of these front and back illustrations of the nude female figure; and they should be studied in relation to the notes set out below them as well as to the diagrammatic figures which follow.

The Side Dimension

Other writers on cutting technique have often referred to what they term a third dimension of the human figure—sometimes spoken of by cutters as "thickness through." The assessment of this dimension is necessarily bound up with surface measurement. It is not possible, nor practically necessary, to know the actual thickness through of a figure; but it is necessary to know the distances at various points along the sides of the figure.

So far, I have not discussed this aspect of figure observation. I will do so now, making reference to the three diagrammatic drawings on Plate II.

**Figure A** shows the back, with the chest, bust, waist and hips-seat lines indicated by letters C, B, W and HS respectively. The quasi-vertical lines passing down the figure indicate the positions at which the back proper ends and the sides of the figure begin.

(I will explain here that I use the term hips-seat to indicate that the line is taken through the most prominent part of the buttocks. It is the custom of many ladies' garment cutters to take one measure at this region and to regard it as the hips measure. Actually, the hips are higher on the figure, as I have already hinted, but the single girth as usually taken will suffice in many cases. I think it should always be termed the hips-seat measure.)
Figure B, which shows the side of the same figure, has similar indications of chest, bust, waist and hips-seat lines; it also has quasi-vertical lines to indicate the boundaries of the side dimensions towards back and front. I want to draw attention to the short dash line, WX, on this figure. This marks the most hollow part of the back waist, as it is on quite a number of figures—slightly below the level of the side waist. This divergency did not occur in the figure of the model for whom I cut the experimental jacket to be described later, but it is by no means uncommon. In fact, many a figure I have encountered has this characteristic.

An interesting example of this is to be seen on the photograph given to me by Kayser Bondor Ltd. (see page 5), displaying two of the firm's foundation garments. The dip of the under-skirt waistline at the centre back of the young lady photographed is quite marked.

Figure C depicts the front of the figure, with similar lines set out on it. The quasi-verticals mark the extent of the front proper dimension at the four levels noted.

To make the three anatomical dimensions clear I have shaded the figures in the areas concerned. Placement of the quasi-vertical lines which mark the boundaries of the dimensions is somewhat arbitrary. In general, the back-side dimensions are divided at the shoulder-blade prominences and the front-side ones are divided just clear of the nipples of the breasts.

Here, we have to make a reservation with regard to foundation garments. In the natural (matured) figure the breast nipples tend towards the side, but the various types of bras available today are likely to alter the shape and the placement of the breast. Similarly, the variety of girdles and step-ins will, according to their type and fit, modify the contours and shapes in the hip and buttocks regions—indeed, that is precisely what they are intended to do.

Girth Widths and Shapes

I will enlarge here on an aspect of the side dimension—what I have mentioned as "thickness through"—and its relation to lateral distances in the figure. What follows relates to Plate III.

In this plate I have endeavoured to illustrate certain parts of the figure as they would be after the very drastic surgical procedure of cutting them through. The parts are represented as they would appear if we could look down upon them. From this point of view we are looking at the chest, bust, waist and hips-seat sections of three female figures. The circumferences of—or perhaps I should say
It will be realised that such marked differences in shape are well worth taking into account by the cutter of women's clothes. In fact, it is essential that he should take them into account—if he wishes to be successful in his vocation.

A Confirmation
An interesting confirmation of the comparisons made so far, and of the facts they reveal, will be found in the two accompanying anatomical drawings of female torsos in profile, Plate IV. These drawings are taken from ‘Life’ studies. There are two or three things to notice on them.

PLATE IV

The chest line is marked by C in each case, and the bust line by B, the latter line being that usually taken (though not always) by the tape when the figure is being measured. Note the difference in the altitude and shape of the breast.

On the left-hand figure the dash line marked by 1 indicates the physiological armpit; the dot-dash line marked by 2 gives the approximate position of the sartorial scye base.

Now compare the front shapes of the figures by reference to the line O-P on each. There is a noticeable difference in the profile outline. The left-hand figure shows a fleshy development between the base of the breast and the waist line (W); the right-hand figure has quite a different aspect between the same two positions.

In each figure the line O-P is struck upwards from the most prominent part of the abdomen. Notice the relation of figure outline to the straight line—it indicates a difference in both shape and stance.

Finally, compare the outline of the back from 3 to 4 on the left-hand figure with that from 5 to 6 on the right-hand one. The former might be described as a long-waisted type, the latter as a short-waisted type.

And now for the bombshell—the figures are identical in waist girth measurement. Here is a complete endorsement of my earlier statement that the tape-measure does not tell the cutter everything about the figures he measures.

Diagrammatic Figures
I now pass on to consideration of a number of diagrammatic illustrations of the female figure, taking front, side and back views. As stated earlier, these drawings have been based on the “eight heads” theory—one which takes the length of the head, from crown to chin, and computes eight of these to make up a complete figure. There is a school of thought among artists today which takes eight heads for the height of a male figure and seven-and-a-half heads for the height of the female.

Obviously, computations of this kind cannot be taken as absolutely infallible. The human figure is a very variable entity and is never completely subject to mathematical formulae. However, as far as the theoretical “normal” is concerned, the “eight heads” will always serve a very useful purpose.

Now let us examine the three figures on Plate V. In each case the top of the head is marked by the line X and the head depths (or lengths) are indicated in order by the lines 1, 2, 3, 4, 5, 6, 7, and 8. Of these lines, 2 approximates the chest line, 3 the waist line and 4 the hips-seat line.

Figure 1 is what can be regarded as “normal” from the average cutter’s point of view. Its measures might be: 34 ins. chest; 36 ins. bust, 24 ins. waist; 38 ins. seat (or hips).

Figure 2 is of the same chest measurement, but has a smaller waist—say, 23 ins.

Figure 3 is also of 34 ins. chest girth, but has a larger waist—26 ins.

The seat measures of Figures 1 and 2 are the same; the seat of Figure 3 is about 2½ ins. greater than these.

For purposes of indication, lines 2, 3 and 4 (chest, waist and seat) are also marked C, W., and S. The bust line is marked by B.

An important dimension quoted in the measures above is that of the bust, the line of which would
pass through the most prominent part of the breasts of the figure. On the type shown by Figure 1 this line will pass 1 in. or 1½ ins. below the chest line. Most cutters engaged in the cutting of women’s clothes would take 1½ ins. or 2 ins. as the usual amount that the breasts are situated below the chest line.

Figure 2 may be taken as that of a young woman or a senior girl. It will be observed that the breasts of this figure are situated almost on the chest line—a situation very frequently found in this particular type of figure.

Figure 3 shows a considerably greater distance between the chest line and the situation of the breasts. Further, the latter are much larger, extending well to the sides of the figure.

It has been stated that these three figures have exactly the same chest girth. It is possible that they can have the same bust girth also. Figures 1 and 2 are quite likely to have such a similarity, though Figure 3 may not have it. The latter figure, however, may be relatively flat at the back, so that the distance from right to left across the back area at the breast prominence level may be smaller than that of either Figure 1 or Figure 2, in spite of the extra development in the breasts.

The majority of cutters will take a chest measure, allowing the tape to pass round the figure fairly close up to the armpits. The position occupied by the tape at the back of the figure will be the starting point for the taking of the bust measure. Therefore the direction of the tape from the back to the most prominent part of the breasts will be
on a slanting line, the slant being greater or lesser according to the altitude of the breasts. This fact, however, need not necessarily discount the observation that has been made with regard to the width across the back at bust level.

Further, the makers of foundation garments (to be discussed later in the book) take the bust measure horizontally, at the bust level. I have a preference for this method of taking the bust girth.

Enough has already been said to emphasise the third fact that chest and bust girths are not in themselves indicators of chest and bust shapes. It might also be said that even a number of sectional measures will not reveal every one of the shape factors that it is necessary for the cutter to assess.

There are other things to be observed here. In each figure there is a short line running vertically from the base of the right side neck (marked by N in each case) to the nipple of the right breast. The length of this line differs with each figure. It will also be noticed that the distance from the base of the breasts to the waist line differs considerably.

Now take the lines marked O, running down each side of the three figures and touching the side waist in each case. The amount of figure beyond these lines at a position just below the breast, at the hips and at the lower thigh is different in each figure.

The Back View
On Plate VI we have the same three figures this time viewed from the back. The “eight-heads” lines, as well as others, are repeated. The line marked B indicates the bust line, level with the most prominent part of the bust (see front view on Plate V).

It will be noticed that, in addition to the
chest, bust, waist and seat lines, there are other lateral lines marked on the figures. Let us take first the one which is situated above the seat line at a position a little below what would be midway between the seat and waist lines. This line is marked by G-H, points G and H being placed at the part where the figure curves from the hip prominence into the waist hollow.

The line O is a repeat of a similar line on each of the figures shown on Plate V. It is drawn down from the side waist hollow in each case. This line, which appears on each side of the figures, serves to indicate the differences in the outer shape of them. Comparison can be made between the run from the waist hollow to the beginning of the hip round on Figure 1 with that of Figure 3, for instance. Again, it can be seen that in this particular Figure 2 differs from both.

Note can also be taken of the relative distances between points G and H of the figures. There is only a slight difference between Figures 1 and 2 in this dimension; but Figure 3 shows a considerable increase in the distance G-H. This is mainly due, of course, to the fact that the seat measure of Figure 3 is, as was stated in the first instance, over 2 ins. greater than that of either of the other two figures. But the marked difference in the length of line G-H need not necessarily be the result entirely of the larger seat girth.

There is another line to be considered, marked by R and T on each figure. This is actually on line 5, which goes across the figures at what we can describe as the mid-thigh position. The thing to be noticed here is the amount of figure on this line beyond the point at which it is crossed by line O in each case. There are some differences.

**Diagonals**

Now let us look at the diagonal dash lines which run from G to the waist hollow and from the same point to T. There are differences in the lengths of these lines—differences which require to be noted carefully.

There is an extra lateral line on Figure 3, and also a second diagonal line from G to the waist hollow. The first of these is marked by letter L, and it shows that the most hollow part of the waist of this particular figure is slightly lower than that of the other two. This was indicated on the front view of the same figure.

**All the lines that have been mentioned so far are represented as being on the flat surface of drawings. It will be realised, however, that on actual female figures those lines would be traversing non-flat surfaces. They would include, in their several directions, the different formations of the figures. A detailed analysis of all the various lines would reveal a number of interesting things—and it would endorse what has already been said about the break in the relationship between girth dimensions and shape dimensions.**

For instance, the formation of the figure in such directions as those shown by the lines G-H and G-T is a most variable quantity. Likewise, the shape of the back of a figure in the region of the so-called shoulder blades is subject to an astonishing number of variations. Again, the actual shape of the back waist hollow and the position of what cutters name the "natural waist" can vary on a dozen figures of similar waist girth. In fact, the "natural waist" hollow at the back, at which cutters record a measure from the nape of neck, is not always at exactly the same level as the side waist hollows of the figure.

It is sometimes assumed that the build of the front of the female figure is more likely to reveal variations in shapes than is the back. The assumption is not valid. True, the type of shapes in the front of the figure is different from that relating to the back shapes; but the difference is one of degree rather than one of number. In other words, there are as many shape variations in the back as there are in the front—though they may not be so great.

**The Side View**

*What has to be said about the three figures on Plate VII will form an enlargement on what has already been mentioned with regard to the side dimension of the female form.*

There is little difference in the actual size of the three side-view figures, but there is considerable difference in their shapes. One thing to note is the differences in breast altitude. In Figure 1 this is more or less normal, in Figure 2 the breasts are relatively high, in Figure 3 they are comparatively low.

Another thing that can be observed here is the difference in the distance from the back of the figure to the nipple of the breast. This distance in the case of Figures 1 and 2 is almost the same, but in Figure 3 it is considerably greater than either of the other two.

In each figure the line running from the front of the breasts (B) to A at the prominent part of the abdomen shows a particular distance. It will be seen that this distance differs considerably in the three figures. The differences are caused by the altitude of the breasts and the position of the
abdominal prominence. Point A, for instance, in Figure 1 is nearer the seat line (4-S) than its equivalents are in either of the other two figures. On Figure 2 it is relatively high; in Figure 3 it is very high.

The shape of the figure below the position of A, in each case, is markedly different.

Other observations may now be made in relation to the line P-P which appears at the back of each figure. This is part of an imaginary straight line drawn perpendicularly from the floor and touching the buttock, the most prominent part of the so-called seat. Notice the relative distances from this line to the back at chest level and to the waist hollow. Also, compare the shapes of the back from S through W upwards to the shoulder and neck levels.

The line which runs from the most prominent part of the breasts to that of the seat, on each figure, is one which varies in both length and direction. This line is rendered absolutely straight on the drawings (as are all the other lines), but if it were marked on an actual figure it would be anything but straight—except in theoretic direction. It would traverse a number of rounds and hollows, all of which could have an important
bearing upon the cutting of garments designed to fit the figure with relative closeness.

We have to consider, further, the “through” distance from front to back in each figure on lines 2, B, 3, A and 4. An imaginary line struck through the figure, skewer fashion, would record a certain dimension in each case. More important, a line drawn from back to front (or vice versa) round either half of each figure would record the surface dimension which would form part of the girths of chest, bust, waist and seat; it would also indicate something of the shape of those portions of the figure.

The diagonal line from W to A shows some interesting differences in the figures being discussed. Its direction and its length vary to some extent. Again, the position of W on line 3, the so-called natural waist line, is not necessarily a final indication of the extent of the actual waist hollow. Comparison of the latter by reference to the three figures here is sufficient to make this point clear.

**Some Abnormalities**

The three figures depicted on Plate VIII (page 12) have been prepared for the purpose of showing marked deviations from the normal or standard in the female form.

These figures may be said to represent three types of abnormality in something of a basic form. Each of them is subject to a considerable number of variations—the shape features in each can be greater or less, though retaining the same form. Certain of these features have been exaggerated a little on the figures so that attention may be directed to them.

**In Figure 1** we have the large, fleshy type of development found frequently enough in women of so-called middle age. Such a development may occur in figures of relatively large frame; and it can be present in figures whose frame is not far removed from what could be described as normal. In the latter case there is a greater amount of adipose tissue.

Chest, bust, waist and seat lines are again marked by the letters C, B, W and S. It will be seen that there is a considerable distance between lines C and B—much greater than the customary 1½ ins., 2 ins. or 2½ ins., calculated by most cutters as standard amounts between chest and bust levels. The very full breasts of this figure have dropped considerably and consequently there is a long contour from the front of the neck over the chest wall and down to the nipple. If a straight measure could be taken from the nape of neck (N) to the most prominent part of the breast, it would record a large difference from anything like normal. A measure often taken by ladies’ cutters is one from the nape of neck, over the shoulder and down to the breast prominence. This, too, would indicate a considerable departure from the normal.

If the curve of the abdomen (1) is observed in relation to the vertical line M-M, its extent will be better assessed. This curve begins at the base of the breast, some little distance above the waist line which has been struck from the hollow at the back. One important thing to note here is the distance along the line K-L, from abdomen curve to buttocks. Such a line taken through the figure, if this were practicable, would be of considerable length.

A measure taken from centre front (K) to the centre of one buttock (L), which would include the hip area, would give a remarkable indication of surface contour at that part.

**A Variant**

There is a type of figure, not very unlike Figure 1, in which the front shape from just above chest level to the base of the abdomen would be as indicated by the dash outline from X to Y. In this type the breasts would be much firmer, relatively smaller when viewed in profile, but having a slightly larger front area. The abdomen curve would be much slighter, as shown by 2. This type of figure is sometimes found in women who practise physical culture and swimming. A similar shape might also be produced by means of corsetry, on which subject I write later.

The line O-O in Figure 1 is drawn down through the front of scye position. It does not coincide with the front of the arm because the latter has an amount of fleshy development which will make what I might call an “overlap.” The line O-O gives some indication of the figure’s size and shape at front and back; it also gives some assessment of stance. This line to indicate the front of scye is often used in the basic structure of a draft for a jacket or coat pattern. It serves a useful purpose in this respect, giving indication of distances from it to front and back limits of the figure.

Before leaving Figure 1 I will mention the vertical line P-P, drawn square with the chest line (C). Examination of the back shape in relation to this line is well worth making.

**Specific Type**

**Figure 2** is based largely upon the figure of a lady I had to fit some years ago. Note should be taken of the roundness at the top of the back and the fleshy development at 3 and 4. Figures of this type have a kind of “hunched up” appearance and they present problems of cutting and fitting which
are not solved entirely by inch-tape measurement.

The shape at 3 and 4 was, in this case, the result of wearing a particular kind of belt. There was a "roll" of flesh situated just above the natural waist line (if such a line can be given existence in this figure!) which extended almost completely round the body.

Take note of the line from N to the breast nipple—and particular note of the relation of the back shapes to the line P-P. Here is a case in which the prominence at the upper part of the back appears to be greater than that of the buttocks. The abdominal curve (5) is shorter than that marked by 1 on Figure 1, but it is quite pronounced. The stance of the figure, as will be seen by reference to the line O-O, is quite upright.

The shape factors in Figure 3 are encountered quite frequently. The figure is that of a young woman of slender build, but with a quite considerable "thickness through" in the chest and bust positions. The waist, seat, hips and legs of this figure do not carry much flesh and the upper back is what we might describe as "bony." The so-called shoulder blades are very prominent and the back waist is markedly hollow. These factors may be judged by relating the back shape from neck to buttocks to the line P-P. Note also the line O-O.

As is often found in figures of this kind, the breasts are conical in shape and are fairly prominent. The shape of the front from the base of the breasts to the lower abdomen (see 6 and 7) is relatively flat. Comparison of this with the shapes
of Figures 1 and 2 at 1 and 5 will endorse what was said about the wide range of possible shape changes in this area.

Another thing that occurs in the rather thin type of figure is the lengthened waist hollow and the lowered placement of the buttocks, indicated by the dash outline from line W to B. Width in the hips, also, is not uncommon. There are many figures with a comparatively short distance through, on the seat line, from front to back, but with a considerable width from side to side.

Other Anatomical Factors

There are many other anatomical factors that might well be discussed, but I do not want to overload the book with references. However, I think a selection of some of the more salient features of variation from the normal should be dealt with here. These are illustrated by the seven figures on Plate IX, each of which shows shapes and contours that are frequently encountered.

From a large number of photographs, anatomical drawings, etc., I have selected seven figures with different characteristics. Some of the latter are easily observed; others require a little keener examination. It is possible to register some of the differences by means of the inch-tape; but it is not possible to assess others solely by such means. And yet, for purposes of correct garment fitting, every kind of figure variation must be carefully noted in some way.

Figure A can be regarded as a very near approach to the tailor's ideal "normal." Shoulder slope, chest line, bust line, waist line and hips-seat line are in conformity with this. But there is one noticeable "break" from it—the difference in hip shapes.

Figure B can be rightly described as the square-shouldered type, with a rather large shoulder development and relatively narrow hips. Chest, bust, waist and hips-seat lines are not far removed from those of the normal.

Figure C is really capable of two main inter-
pretations—sloping-shouldered or long-shouldered. The lower placement of the armpits in this figure makes location of the chest and bust lines slightly lower than that in either of the two previous figures. Other things to note in this figure are the relatively high waist line and the increased distance between this line and that of the hips-seat line.

**Figure D** has a number of shape differences. The right shoulder is lower than the left; there is a difference in the altitudes of the breasts; the hip contours are not symmetrical; the chest line is rather high.

**Observation so far has been confined to the front of the figure; now we will make some notes on the back.**

**Figure E** is more or less "normal," with moderate shoulder blade prominences and waist and hips-seat lines located in proportion. The hips are slightly different but have a fair approach to symmetry.

**Figure F** depicts the fleshy type with wide hips and full seat. The greatest prominence of the hips-seat region is relatively high-placed. It will be observed, too, that the shoulders are not quite the same in slope.

**Figure G** may be taken as one in exact reverse of Figure F. This is a slim type, carrying little flesh. The shoulder blades are prominent, the shoulders themselves being rather angular. As will be seen, the hips-seat region is relatively narrow. This figure may be described as long-waisted.

**Many Varieties**

Figure observation is really an unending occupation, for there are so many varieties of type—particularly in the human female. An anatomist might spend the whole of his life in compiling a chart of female figure types; his chart might be a very big and comprehensive affair—but it would contain only a small proportion of the number of possible form variations.

For convenience, tailoring technique has decided certain basic types of figure with which the majority of cutters are familiar. There is a generally accepted "normal" and variations such as "stooping," "erect," "round back," "pigeon-chest," "head-forward," "square," "sloping" and "forward stance" are tabulated and used. There does not appear to be any recorded finality about these classifications. Cutters differ quite a lot with regard to their application. What is a "normal" to one might be an "erect" to another; one will see a "sloping" where another might interpret a "normal."

Opinions differ in this matter, as they do in so many phases of the cutter's art. However, there does exist a certain undefined agreement on some of the basic figure differences—sufficient to provide what I may call a "working mean" for the assessment of the typical figure types.

**A "Side" Analysis**

As a conclusion to this chapter on anatomical considerations, I will come back again to the so-called side dimension of the figure and conduct a kind of analysis of factors that should be noted.

**Plate X** is to be regarded as a kind of geometric diagram—its purpose is to indicate parts of the female figure most subject to variation. Chest, bust, waist and hips-seat girths are denoted by the straight and curved cross lines marked C, B, W and S. Vertical lines 1-2 and 3-4 locate the arm socket.

Perhaps the place where least variation occurs is the centre back waist, shown on this diagram by 7 and 8. There is not very much fleshy development at this part of the figure, even on stout women; but there is considerable development, with a wide range of variations, immediately above and below it and to the sides of it.
The side curve along the chest wall and over the breast, marked 9-10, is subject to many changes of both size and shape—changes which are part of form growth and which differ as the woman develops from the girl; and changes which result from grade of health, mode of life, occupation, etc. The relation of this curve to the vertical line R-S is susceptible of innumerable variations.

The abdominal curve, indicated by the arrow A, is also capable of noticeable changes. (Some of these will be discussed at more length in a later chapter.) For the present, I might observe that this curve can tend to be concave, instead of convex, at the front waist. Compare A with F, the latter shape being that of a young woman who has been under training in physical culture. This type of contour is often found in artist's models and mannequins.

From the waist to the upper thigh of the female figure is an area subject to considerable variation, particularly at the sides and back. The latter is indicated on Plate X by the curve marked 7-11. On this curve are the buttocks which, like the breasts, vary with different figures in a remarkable way. The relation of the curve 7-11 to the vertical line X-Y is one in which variation possibilities are legion. Notice also contours 5-7, 5-8 and 10-6.

The muscles situated in the chest and seat areas in the female are not so rigid as are the corresponding muscles in the male, the reason being that the former have a greater covering of adipose tissue and are not so large in development. In his book, Living Anatomy, published by Faber and Faber, London, Prof. R. D. Lockhart, M.D., Ch.M., writes: "The frame in woman is more rounded and has more fat, especially in buttocks, flanks, breasts, hips and thighs—fatty tissue 28 per cent. in woman, 18 per cent. in man; muscles 36 per cent. in woman, 42 per cent. in man."

Projections and Hollows

Consideration of the side aspect of the figure gives us an opportunity to make certain notes on what might be described as the projections and hollows—features in the figure which vary considerably, but which can be divided for convenience into three main types. They are indicated on Plate XI.

Figure 1 is taken to be representative of the normal type; the shoulder-blade projection and
the seat prominence projection are both touching the vertical line A. Take note also of the front of the figure—bust and waist regions. Further, observe the incline of the back neck from the vertical line.

**Figure 2** shows differences in the features noted for Figure 1. The shoulder-blade projection touches the vertical line A, but its shape is not the same as that in the first figure; the seat prominence is well inside the vertical line; the bust is higher and more prominent and the front waist is more forward. The back neck incline, it will be seen, is greater than that of Figure 1.

**Figure 3**—Here we have other differences to note. The blade projection again touches the vertical line, but the “round” of the back and the neck incline are both greater than those in the previous two figures. The seat prominence here passes outside the vertical line A. The bust is comparatively full and the line of the front of the torso from bust to groin is gradual.

**All these characteristics should be carefully studied—and it should be remembered that there are very many variants of them in the wide range of female figures extant.**

Another thing that ought to be noted is the position and shape of the back waist hollow in each of the three figures. Related to all the features discussed is the stance of the figures.

For those readers who would like to pursue the subject of anatomy further, I can recommend Professor Lockhart’s book. Another work on the subject is Anthropometry and Anatomy, by John S. Barrington. Both these books are in print at the time of my writing. I can also speak highly of *Women’s Measurements and Sizes*. This book, published by H.M. Stationery Office, records a survey undertaken in recent years.

Other books that have been of the greatest assistance to me in preparing this chapter are worthy of mention. The first is the famous work of Dr. Henry Wampe—*Anthropometry, or Geometry of the Human Figure*. This may be rightly taken as a classic in tailoring trade literature; the second is by Harry Simons, of the U.S.A., whose *The Science of Human Proportions* is probably the most comprehensive treatise of the kind offered to the trade in relatively recent years.

Then there is Samuel Keyworth’s *Form Growth*, a book that has helped me more than a little.

Unfortunately, these last three books are now out of print; but it is possible to pick up second-hand copies, or to borrow from certain libraries.

**Well, that brings us to the end of our considerations of anthropometry as such.** The next chapter will deal with foundation garments and the effects they have on the natural figure I have been discussing.

The study of the present chapter may have seemed to be a rather exhaustive (perhaps exhausting) procedure; but it is well worth the trouble. The whole point of such a study is the establishment of a plan to use the inch-tape with intelligence and to train the eye to make judgements of which that tape is not capable. And the figure assessments that are being made in the process will be found to apply to the cutting of women’s outer clothes.
CHAPTER II

Foundation Garments

The so-called foundation garments worn by women at the present time are made in different types and designs that are in number almost as great as that of the figures which are extant. And these garments are made from a quite large variety of materials. I shall not be concerned here with the cutting and making of foundation garments, but with the effects they are calculated to have on the natural contours of the figures wearing them. It is necessary to emphasise the fact that those effects will vary according to type, design and material of the garments which produce them.

Another and very important consideration will be the actual fit of the foundation garments—and this can vary to some extent. Many women are very particular about the matter; others are relatively careless. Good fitting corsery will have one effect upon the figure it is covering; bad fitting corsery will have another.

The above observations may appear to be so obvious as to make them almost superfluous in a book addressed to designers and cutters of women's tailored clothes. A little thought, however, will convince those who trouble to take it that my observations are pertinent enough. If tailored clothes are to fit as they should fit their construction must be based on knowledge not only of the figure they are to dress, but of the garments that are worn under them. And that knowledge has to be many-sided.

There is a further aspect of the subject to be considered. Quite a number of women wear different foundation garments at different times—and they expect their outer clothes to look exactly the same over all of them. It is not very unusual for women to wear two or three foundation garments when they come to the tailor to be measured for a suit and to wear only one—or none at all—when they call later for a fitting. I have encountered this kind of thing more than once in the course of my experience.

The difficulty, from the cutter's point of view, is that he may not always have the opportunity of seeing the type of foundation garments his lady customers wear. As he takes his measures he may be able to form some idea of their type, but it is only an idea. And he has no assurance that the particular type will be the one madam will favour all the time she wears the garments which he is engaged in having made for her.

It seems to me that cutters could save themselves quite a lot of perplexity if they asked, in a courteous manner, about the type of corsery their customers wear or are likely to wear. I venture to say that the majority of those customers would supply the information without evincing either offence or embarrassment.

Now let us consider certain foundation garments and the effects they have upon the outlines of the parts of the form they cover.

The part which is most influenced by the modification of foundation garments is the bust. Here, the brassiere (generally termed a bra nowadays) is worn. The two drawings on Plate XII have been prepared to give a comparison between the natural figure (right) and the figure with the bust covered by a bra. It will be noted that the breasts in the nude figure are relatively low; they will also be—in the matured figure—com-
paratively flaccid. In addition, the breasts will have a somewhat sideways placement. This has been indicated in the previous chapter (Plate I: front-view figure) and it is a natural tendency in the adult female.

These characteristics are not found in teenagers, or in very young women. In the figures of both the breasts are normally fairly high-placed, rather more towards the centre, and they are relatively firm. There are exceptions to this, of course. Some girls have large breasts and these are usually not very firm and not necessarily high-placed.

The general tendency of the bra (see left-hand figure) is to give uplift to the breasts and to bring them slightly closer together laterally. It will

therefore be realised that the cutter’s “bust prominence line” will be in one place for the natural figure and in another place for the figure wearing a bra.

The effect of bust uplift incorporated in a bra, or in the bra portion of a torso-length (corslet-type) foundation garment, is largely a matter of degree. This is indicated by Photographs A and B. The two young women pictured in these are not very dissimilar in figure type, but the uplift in their foundation garments is different. The former photograph shows considerable uplift and a tendency to place the breasts closer together; the latter one shows only moderate uplift, the bra section of the garment simply supporting the breasts and leaving their vertical position more or less natural. Further, there does not seem to be the tendency for the “closing” of the breasts.

Bust provision made in an outer garment will differ in these cases.
**Designing and Cutting Ladies' Garments**

A Summing-up

This matter of bra uplift and its effect on the bust contours is summed up, I think, in the three diagrammatic figures shown on Plate XIII.

**Figure 1** depicts the upper parts of a matured woman whose breasts are low-placed and relatively flaccid. Their natural outline is indicated by solid lines and their position in relation to the chest line will be seen by reference to the lines C and B, which denote chest and bust levels respectively.

Now there are many women of this type who wish to regain their youthful bust shape—they want to achieve something like that shown by Photograph C, on page 20. In their attempts to do so they may adopt brassieres of a rather rigid type; and they may wear them adjusted tightly over the shoulders so that they provide excessive uplift. The effect of such a type of brassiere is shown by the dash outlines on Figure 1. Notice the altitude of line D, taken from the most forward part of the brassiere, and the comparison with line B, which is taken from the most forward part of the natural breast.

The point I am endeavouring to make here is a very important one, for it is definitely connected with the making of women's tailored clothes—especially those which are designed to fit the figure fairly closely at bust, waist and hips. It is this: If a customer with a figure like that illustrated by Figure 1 is measured and fitted for a garment when she is wearing either a loose, slackly-fitted bra—or none at all—so that her figure assumes the lines which nature has originated—that garment will not fit satisfactorily when she adopts the type of bra indicated by the dash lines. (I am working on the assumption, of course, that it was correctly fitted in the first instance).

This example of the effects of a certain kind of bra is, I know, a rather extreme one; but it will serve the purpose of emphasising the wisdom of trying to find out the kind of foundation garments women customers are likely to wear from time to time. The correct styling and fitting of tailored jackets and coats depend upon a right assessment of undergarment shape and size.

**Figures 2 and 3** will help to drive my point further home. On each, the solid line contour A-E is drawn to show the difference in the bust prominences and to give an idea of the shape and extent of the latter.

It is possible for a woman with the natural bust profile shown by A-F on Figure 2 to wear a brassiere which will transform that profile to the one indicated by A-G. Take note of the relative positions of lines F and G and the distances from F to L and G to L, at the back of the figure. Observe also the distances along the lines F-N and G-N—bust to nape.

Similarly, differences are indicated on Figure 3. This shows a natural bust profile of a woman whose breasts are small and relatively "flat" (see contour A-H). Suppose such a woman endeavoured to produce, by means of corsetry, the bust profile shown by A-K. What would happen? Again, compare line H with line K, the distances of H-M and K-M, and those of H-N and K-N.

To make these observations perfectly clear to the reader I have shaded the parts of the drawings on Plate XIII which indicate the bra uplift.

**Interesting Note**

I have already made passing reference to Photograph C, indicating it as an example of a youthful figure. It is indeed, for the young lady (Delphine Withers of the Dubarry Model Academy) who
posed for the picture is nineteen years of age at the time I am writing. She is wearing a swim-suit and the interesting thing about it, from the garment designer’s point of view, is the placement of the seams. This gives to the garment a figure-fitting character that may well be kept in mind for when we come to deal with tailored garments designed to fit the figure with relative closeness.

Having dealt in some detail with brassieres and the upper part of the figure, I now turn to the lower part (hips, seat and upper thighs) and to the types of foundation garment associated with it.

**Torso Widths**

In the first place, I want to draw attention to **Plate XIV.** It shows the torso of a figure and was drawn from a photograph of a live model. The waist, hips and seat lines are indicated by lines W, H and HS. Line H is drawn across the figure at what I call the upper hip position, the part where the pelvic crests of the figure are situated. The seat line I have marked HS because it is generally referred to by tailors as the hip line but is really at a position where the greatest seat prominence is observable. (See my references to this matter in Chapter I.)

The typical female figure is considerably wider at the hips and seat regions than at the upper part of the torso. In the example we are now examining there is a considerable width at lines H and HS, the extent of which is emphasised by the two dash lines A and B. Such a conformation is by no means unusual, I might add. Another thing to note is the difference between the contour of the left side of the figure (from waist to seat) and that of the right side. These irregularities are often encountered and it is the business of the makers of foundation garments to modify them as far as possible.

**Photographs D, E and F illustrate different garments and give a very good impression of their effects on the figures wearing them.**

The first (D) was supplied by Kayser Bondor and it shows a waist and hip fitting garment which is designed to reduce the prominence of the seat and to effect a “slimming” of the hips and upper thighs. In passing, I will draw the reader’s attention to the bra in this photograph. It has provided considerable uplift and has obviously modified the shaping of the wearer’s breasts.

**Photograph E** depicts a young woman wearing a “Long-Line” corset, with attached underskirt. The idea here is to produce the gradually slim line from the bust prominence downwards; the torso is fitted very closely from bust level to pelvic region.
hips-seat region is full—more particularly towards the round of the buttocks.

The type of foundation garments shown on this figure is something of a combination of brassiere and girdle. The side and rear portions of the former section have the effect of "reducing" the figure at the fleshy parts mentioned, as can be observed by reference to the two dash outlines marked by letters A and B. These outlines indicate the natural shape of the figure.

Notice the dash outlines marked by letters C and D, taking particular note that the hips of this figure are not symmetrical. The lower part of the foundation garment, it will be seen, has the effect of producing something approaching symmetry in the hips region. Though it is not observable on the figure shown from this particular viewpoint, it may be assumed that the contours of the buttocks

PHOTO. D

In Photograph F, on page 22, I have combined two separate pictures. That on the left is from Kayser Bondor; that on the right, which shows a tailored dress (a Sambo Fashions model), gives an interesting indication of how bust provision has been effected by means of darts. An informative comparison can be made between the upper part of the dress and the bra of the left-hand picture. Indeed, the general fit of the tailored dress on the right-hand figure suggests that for its effective fitting foundation garments, both upper and lower, have been selected with care and thought.

The comparisons noted here may act as a kind of prelude to what is said in later pages about the designing and cutting of outer garments—the book's essential theme.

PHOTO. E

Lower Modifications
Plate XV (on the same page) illustrates, in semi-diagrammatic form, the modifications which lower trunk, hip and seat fitting foundation garments make on the natural figure outlines—taking the back view of the figure.

The body form here has a fleshy development at the sides, between the armpits and the waist hollow. The hips, too, are relatively fleshy; the
have been rendered different from their natural state.

We can gather from these elementary observations that corsetry has a very definite effect upon the female figure, and that measures and shape assessments of that figure must be influenced by the effect. It might be said that the shape factors are subject to considerable "displacement."

To illustrate the effect of symmetry in the lower areas of the figure I have selected Photograph G, which shows a type of lower foundation garment, produced on a surgical basis and made by the well-known Camp Company, specialists in form and posture under-garments.

Certain lines have been superimposed on the photograph. 1 denotes the waist, 2 the upper hips, 3 the middle hip region and 4 the hips-seat. It will be seen at once that there is a remarkable smoothness of outline in the figure from the waist to the upper thigh. This will act as a demonstration of what certain foundation garments can do to "rub out" some of Nature's rougher contours—as those indicated on Plate XIV, for instance.

The Larger Figure

Mention must now be made of a type known as the large and full figure—a type in the modification of which well-designed corsetry can play a very important part. Reference will be made to Plate XVI.

Many women with large and fleshy figures devote a lot of attention to their appearance and are as fussy and exacting about their corsetry as
they are about their outer tailored garments. Cutters engaged in the high class houses which specialise in ladies’ tailoring will vouch for this; and they will know that the shapes of the garments they cut and fit must bear a distinct relation to the corsetry under them.

In his book, *Living Anatomy*, which I mentioned and quoted from in the preceding chapter, Professor R. D. Lockhart draws attention to the remarkable flexibility of the fleshy tissues on the “well covered” female figure. That flexibility of flesh makes the larger figure amenable to the changes in shape which can be produced by certain types of corsetry.

The illustrations given in Plate XVI depict two views of a figure of the kind mentioned above. On each the effects of the combination corsetry gar-

ment can be seen quite clearly. The natural outlines of the figure are indicated by the dash line contours in each case.

On Figure 1, the profile view, there are some important observations to be made. The prominence of the natural breast is shown at 1, that of the brassiere portion of the foundation garment is marked at 2. The line which passes through point X is located approximately in the position at which a garment underarm seam often falls. Take note of the relative distances of 1 and 2 from X and the different slopes of the two slanting lines from those points to X.

The line A-H-B is drawn so that it touches the most prominent part of the upper back of the figure and the most prominent part of the buttocks. H on this line is immediately opposite the back waist hollow of the natural figure. Notice the shape of the figure a little above the hollow, as at 3, and compare this with the shape produced by corsetry (4). Take note also of the difference in the
waist hollow, as the result of the latter. The short slanting line from point H demonstrates that the corsetry ‘waist’ is higher than the natural waist of the figure. Shape of the buttocks (seat prominence from the cutter's point of view) has been altered.

Line H-W is what we call the natural waist line. It will be realised that location of suppression points in any garment seams which may pass over this line will have to be regulated according to the shape produced by the corsetry—that is, if the garment is to fit correctly. The natural waist line has lost its position, we might say.

Perhaps the biggest and most noticeable effect of the corsetry in this case is that shown at the abdominal curve marked by G. Here the shape of the natural figure is very different from that effected by the under-garment. The so-called "distances through" at chest, bust, waist and hips-seat levels have undergone obvious changes. (This aspect was discussed in detail in the first chapter.)

Figure 2 shows what changes the corsetry has introduced at the front of the figure. The breasts have been raised and brought inwards towards the centre of the body; waist and hips have been "reduced" to some extent.

On this figure the lines C-E and D-F serve to indicate the remarkable difference between the side shapes of the natural figure and those which have been rendered by the corsetry. Take note of the relative distances from points 5 and 6 to the side waist positions. Line O-P occupies a position similar to that of the garment centre line. It is instructive to relate this line to that joining points 5 and 6, and to think of the side shapes on this figure in connection with the front shapes of Figure 1. The actual round of the front waist cannot be effectively portrayed on drawings of this kind; but a little thought should convince us that waist suppressions made to fit the natural figure would not be adequate in a garment designed to fit the corseted one.

All the factors discussed in this chapter are worthy of thoughtful analysis, for they are very closely connected with the correct measuring, cutting, styling and fitting of tailor-made garments. The changes in figure shape which are produced by corsetry are quite remarkable. The cutter has to think not only of the type of shape, or shapes, but also of extent and location.

These two things are subject to almost innumerable variations according to the type of corsetry worn by women customers, its actual fit (good or bad) and its tightness or slackness of adjustment.

When, in the following chapter, I deal with the taking of measures these important factors are given full consideration. At that stage I try to demonstrate how far inch-tape measuring can go in giving a reliable assessment of the female figure and how much careful observation and judgement (not guess-work) is required to supplement what the inch-tape records.

As I have already indicated, all the illustrations of foundation garments may not be absolutely contemporary when this book is published—fashions change so very rapidly in the ladies’ dress world; but there are likely to be bras and girdles whose design is not very far removed from those shown in pictures here. Moreover, the principles involved in the relationship between the nude figure, the corseted figure and the garment pattern will not be affected.
CHAPTER III

The Taking of Measures

It is of cardinal importance that all measures are taken carefully and accurately. This observation—so obvious as to be almost superfluous—is made because the care and attention that should be devoted to measuring figures is often found to be lacking. Measures are too frequently taken hurriedly and casually, just as figure observation is treated perfunctorily. Experienced cutters are guilty of these things, thinking perhaps that their long familiarity with the business makes measuring and observation quick and easy undertakings. This is a great mistake. Measuring should never be rushed through.

In the first part of this chapter I shall deal with what I can call the standard measures taken for women's tailored garments; in the second part I shall take note of supplementary measures (short direct ones) in common use, and of those special ones that have been advocated in recent years by men who have devoted a lot of time and thought to the subject.

The three illustrations on Plate XVII, page 26, depict the same figure in front, side and back views.

Let it be assumed that this figure is that of a young woman of normal proportions and stance, with the breasts supported by a well-fitted brassiere made from material which is not stiffened in any way; and a hip girdle of pliable fabric and elastic—fitting the hips, seat and upper thigh with moderate tightness.

Chest Girth

The tape marked by 1 shows the chest measurement, taken at a position approximating the scye base of a jacket—just below the natural armpit. The tape should be held fairly tight to the figure and care must be taken that it does not slip down at the back over the shoulder-blades. Many cutters of experience take this measure from the back, that is, the customer standing with her back to the cutter—asserting that there is less likelihood of the tape's slipping down. It is a matter of taste. I have taken this measure, and the bust measure, from both back and front—sometimes on the same customer—with equal accuracy. Notice that the tape (1) has a slight upward tilt from front of scye position. This is determined by the figure.

Bust Girth

Tape 2 shows the bust measure. Notice that the tape runs parallel with the floor, as it were, all round the figure. This is a less common way of taking the bust "circumference," the more general plan being to take the tape round the back of the figure at chest level and lower it in front to pass over the bust prominences.

Tape 3 is the waist circumference measure, taken round the figure at the hollowest parts at back and sides, as near exactly as can be judged when measuring a clothed figure. This measurement should be taken closely.

Tape 4 indicates the hips measure, taken at the most prominent parts of the hips—the sides of the figure. No account is taken in this measure of the seat prominence, as it is usually called by tailors, the part of the figure anatomically described as the gluteal region or the buttocks—the hips-seat.

Measurement of the latter is shown by tape 5, which passes round the figure at the girth, including the so-called seat prominence. Each of the measures indicated by 4 and 5 is taken fairly closely on the figure.

As a matter of fact, I am in favour of taking chest, bust, waist, hips and seat girth measures with the tape held close to the figure. Any attempt made at the measuring stage to assess
allowances for ease, style, etc., is not likely to be entirely satisfactory, in my opinion. It is much better to make such calculations at the time of cutting the pattern—or the actual garment.

Tape 6, which starts at the nape of the neck, records the natural back waist dimension at the part traversed by tape 3 and will record the length of the jacket or coat according to requirements (see 6 and 6x). This tape may also record the distance between waist and hip levels (3 and 4) and waist and seat levels (3 and 5).

Tape 7 is the usual across-back measure, taken right across the back at approximately sleeve pitch (hind-arm) levels, or about midway between chest tape level and shoulder-point height. It is customary for only half of this measure to be recorded.

From the position at the centre back marked by X the tape is taken to 8, the elbow, and 9, the desired length of sleeve, or to the hollow of the wrist at the end of the ulna bone of the arm. (The latter is the better dimension for basic purposes.)
The bend of the arm in this illustration is rendered in such a way as will give a very near impression of what would actually be the case. The arm must always be held parallel with the floor.

Of the shorter direct measures indicated here, the across-chest may be taken at actual chest line level, as A, or at an upper chest level, as marked by the dash line B. (Some cutters favour the latter; I have used both.)

The across-bust measure is taken at C. This dimension and the two mentioned above are taken from scye-seam to scye-seam across the figure's front.

The front-scye measure is taken from centre back to E at the front of the arm. This point may be located by placing the graduated square in such a manner that the short arm will pass under the arm pit of the figure, with the angle of the square at the front-of-scye position, as denoted by E; the long arm of the square will pass down the figure as indicated by the dash line E-F. If the lady presses her arm against the square in this position it will not slip. This plan is illustrated by Photograph A.

Make sure that the short arm of the square is not pressed up tight into the figure's armpit; it should be about a finger's width below—in the position that the scye base of a garment will take. Be careful, too, to see that the short arm is parallel with the floor, so that the long arm is really vertical. Before recording the measure, place a pin or make a chalk mark at E (see Plate XVII) and take the inch-tape from the centre back to this indication.

A centre-back-to-bust-prominence measure is taken in the manner indicated by H. The tape traverses half of the figure (each side, if thought necessary) from the centre back to the most prominent part of the breast.

Photograph B shows this measure being taken. It also indicates the front-of-scye measure and one which may be taken from the centre back right round to centre front. Marks indicate the extensions of these three direct measures. The one at 11½ (see tape) is the front-of-scye, that at 15 is the centre-back-to-bust-prominence and that at 19½ is the centre-back-to-centre-front measure.

Tape D indicates the measure taken from nape of neck (back) over the shoulder and down the front of the figure, passing over the breast at its most prominent part, and continuing to the waist (tape 3). Two dimensions can thus be recorded—nape to bust prominence and nape to waist, over prominence. It is essential that the tape passes
directly over the breast prominence. Sometimes this is situated more outward.

**Further Measures**

I go on to mention certain further measures that are taken by cutters of ladies' garments. Some of these are used frequently, others are not in general use. Reference will now be made to Plate XVIII, which depicts three aspects of a young woman's figure similar to that of the previous plate.

The depth-of-scye measure, so-called because it is used to locate the base of scye in drafting, is shown by A-2 on the back-view figure. The tape is passed round the back neck and one end is taken over the front of the figure, as 3-4 (front-view figure), under the arm and across to 2 at the centre back. A pin may be inserted or a chalk-mark made at the upper edge of the tape at 2. The tape is then removed from its position and a measure is taken from the nape of neck (A) to the mark at 2.

It will be realised that this measure will include any curvature that is present in the centre back of the figure measured. As a "depth of scye"
dimension, therefore, the measure is not entirely accurate. Altitude of the armpit is not governed by spinal curvature. However, the measure can be of considerable service to the cutter who uses it in conjunction with his observation and his judgment.

When placing the tape for taking this measure I always ask the customer to raise her arm so that I can be sure of locating the position just below the natural armpit where I want the base of the garment scye to be. Once this is established I ask the lady to lower her arm, as indicated by the dash outlines. The front-shoulder measure is usually taken from the nape, (A) round the half neck and down to the front part of the scye base (4). To establish the latter position it is quite a good plan to place a graduated square at the side of the figure (as illustrated in the previous photograph) and to mark the level of the scye base where the short arm of the square is located.

For the over-shoulder measure the tape is placed on the scye depth line at the centre back (2), taken over the shoulder at 5 and down to the front to the scye base (4). Part of its direction over the shoulder is indicated by the dash line curved from C to D on the centre drawing.

The so-called middle-shoulder measure is taken from the centre back at sleeve pitch level (roughly) as shown at M, the tape passing over the shoulder (5), under the arm (1) and back to the starting point (M).

A shoulder width measure can be taken as from 6 to 7, the line of the shoulder from neck circle to shoulder-point.

The over-arm sleeve measure can be made a continuation of the shoulder measure, as shown by 8-9-10; or the outer sleeve measure can be taken from the head of the arm (9) to 10 at the wrist.

Three girth measures may be taken on the arm—the upper arm at 11, the top of lower arm at 12 and the wrist at 10.

The forearm measure is taken from the base of scye (towards front) or from the top of the forearm seam on the sleeve. Its direction is shown from 4 to W, the wrist. This measure is considered by some cutters to be inaccurate—or at least they think it cannot be taken with accuracy. Certainly a lot depends upon the type of garment the lady is wearing when being measured—what sort of scye depth, etc. However, I am of the opinion that the forearm measure can be taken with a very fair degree of accuracy and used with advantage in application to drafting. I prefer to measure the arm itself rather than the garment over it when I am taking the forearm dimension.

Skirts—All the measurements for skirts have not been dealt with in this chapter—excepting those for waist, hips and hips-seat. Skirt measures and the way in which they are taken on the figure are dealt with in a later chapter which has for its subject the designing and cutting of skirts.

“Dimensional” Measures

To make a conclusion of this chapter, I will give a few notes on certain measures that can be taken to record front, back and side dimensions on the figure.

Photograph C—This shows the taking of the half-across-front-waist measure. In this instance the measure is being taken by means of the Tailor and Cutter Measurer, which consists of a device which is fitted on the shoulder of the figure. There is an extension which falls down from the front-ofscye position. This extension piece is slotted and is equipped with a tape which fits into the slot by means of a screw unit. As will be seen, the measure referred to is taken from the extended arm of the measurer to the centre front waist position, indicated by an arrowhead.

This measure, I must mention, is one of the “split” measures introduced many years ago by Reuben Sytner. I should like to express my indebtedness to him for the mention of the measure and of others that are noted in this book. They are well worth studying.

PHOTO. C
Photograph D—This picture shows an arrangement of lengths of plain tape attached to the figure, by means of pins, at chest, bust, waist and hips-seat girths—also at the parts of the figure which mark the dividing lines between the front, side and back dimensions. These have already been mentioned and have been illustrated by diagrammatic figures (see Chapter I, Plate II).

I adopted this arrangement in an experiment I made and wrote about in the Tailor and Cutter in a series of articles which appeared during the years 1952 and 1953.

Measures were taken between the vertical tapes, along the girth tapes, at front, side and back dimensions of the figure. They were later applied to a draft for the pattern of a panelled jacket of "classic" design. The method tried out and the resultant draft are to be described and illustrated in the second part of this work.

* * * * * *

Size & Proportion Charts

To finish off this chapter on measures and measuring I give two charts, selected from a large number consulted. They are set out in Plate XIX, page 31.

Chart A has been taken from my book The Art of Measuring, published by the Tailor and Cutter Limited; Chart B is reproduced from a recent edition of Hard's Year Book, published by United Trade Press Ltd.

The main purpose of size charts is, or should be, to set out the measurements and proportions of figures that can be regarded as standard. It will be agreed, I think, that this is the idea prevalent today. (In earlier times, most charts were made out in relation to a kind of ideal figure rather than with regard to standard or average ones.) The task of the compilers in this respect is a formidable one, for it is extremely difficult to decide what is standard. In addition, there is the problem of making a decision on what measurements shall be included.

Proportions Needed

We are concerned here, of course, with proportions that are required for patterns of women's outer garments in the "tailored" category—jackets, skirts, coats, slacks, etc. Main girths are an obvious requirement; various lengths and widths (such as front-shoulder, over-shoulder, scye depth, nape-to-bust, nape-to-front-waist, across-bust and across-chest) are also very valuable. Cutters and designers in the wholesale garment industry find all these dimensions of the greatest help—and they add others to them.

Retail bespoke cutters do not appear to be so interested in charts, though they may always find them useful when they are engaged in making a new set of block patterns.

Their adoption is recommended, for the information they contain (information which is checked and revised from time to time) cannot fail to be of some value.

Chart A can be described as a standard one for the use of the bespoke cutter and designer. Chart B was, I believe, made out primarily for the wholesale trade. The dimensions shown on it are particularly interesting for their extensiveness.
**Measures and Proportions**

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<th>Values</th>
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<td>24, 26, 28, 30, 32, 34, 36, 38, 40, 42, 44, 46, 48</td>
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<tr>
<td>Waist</td>
<td>24, 24, 25, 26, 26, 28, 30, 33, 33, 38, 41</td>
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<tr>
<td>Hips-seat</td>
<td>24, 26, 29, 32, 37, 39, 41, 43, 45, 47, 49, 51</td>
</tr>
<tr>
<td>Depth of Scye</td>
<td>51, 61, 61, 71, 71, 81, 81, 81, 91, 91, 91, 91</td>
</tr>
<tr>
<td>Natural Waist</td>
<td>10, 11, 12, 13, 14, 15, 15, 16, 16, 16, 16, 17</td>
</tr>
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<td>Across Back</td>
<td>41, 5, 61, 61, 61, 71, 71, 71, 81, 81, 81</td>
</tr>
<tr>
<td>Elbow</td>
<td>Found by direct measure, or halving forearm.</td>
</tr>
<tr>
<td>To Cuff</td>
<td>17, 20, 23, 25, 27, 28, 29, 30, 30, 30, 29, 29, 29</td>
</tr>
<tr>
<td>Across Chest</td>
<td>5, 51, 61, 71, 71, 81, 81, 81, 91, 91, 91, 91</td>
</tr>
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<td>Front Shoulder</td>
<td>91, 10, 10, 11, 11, 12, 12, 13, 13, 14, 14, 15, 15</td>
</tr>
<tr>
<td>Over Shoulder</td>
<td>111, 121, 131, 13, 13, 14, 14, 14, 15, 15, 15</td>
</tr>
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</table>

**CHART A**

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<th>Height in feet and inches</th>
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<th>5' 1&quot;</th>
<th>5' 2&quot;</th>
<th>5' 3&quot;</th>
<th>5' 4&quot;</th>
<th>5' 5&quot;</th>
<th>5' 6&quot;</th>
<th>5' 7&quot;</th>
<th>5' 8&quot;</th>
<th>5' 9&quot;</th>
<th>5' 10&quot;</th>
<th>5' 11&quot;</th>
<th>6' 0&quot;</th>
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<tr>
<td>1/2 height</td>
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<td>Width of scye is 1/2 height</td>
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<td>Hip length 1/2 height minus 1 in.</td>
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<tr>
<td>Cuff width coats</td>
<td>1/4 of 36&quot; bust plus 1/4&quot; including seams. Increase 1/4&quot; for every 2&quot; above 36&quot; bust.</td>
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<td>Cuff back normal</td>
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<td>Cuff back modified drape</td>
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<td>Cuff back drape</td>
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<td>Cross back extreme drape</td>
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<td>Cross chest drape</td>
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<td>Cross chest plain bust dart front</td>
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<tr>
<td>Cross chest extreme drape</td>
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</tbody>
</table>

**CHART B**

**PLATE XIX**
Many dimensions, with alternatives, are given for parts of the figure and sections of garments. Such dimensions do not often feature in charts of this kind.

Apart from anatomical considerations, there are measurements for different styles in particular garment sections. These proportions may be compared with those issued at certain times by some of the trade organisations and by the British Standards Institute.

A Summing-up

I will make a kind of summing-up of the requisites of something like an ideal size chart for women’s tailored garments, casting the challenge, as it were, to future compilers of such charts. Some of the dimensions that will be noted have already been discussed; others, not frequently considered, have been added.

Let it be understood that the main girths—chest, bust, waist, hips and seat—are taken as essential; also the nape to back waist. We can now pass on to selection of other dimensions (vertical and lateral) that can be used in the formulating of a chart.

**Verticals**—Nape of neck to armpit level; nape of neck down front of figure to front of armpit; centre back at armpit level over shoulder to front of armpit; centre front at base of neck to front waist level; nape of neck round front to bust prominence; mid-shoulder over bust prominence to side waist; side waist to hip and seat prominence levels; centre back waist to seat prominence level; arm length to elbow and waist.

**Laterals**—Across-chest; across-bust; distance between breasts; neck circle; across-back; girth of upper arm; shoulder width from side neck to “end”; width of armpit; across front waist; across back waist; across front hips; across front at trochanter level; across back seat; girth of upper thigh; girth of knee; girth of calf.

Other localised dimensions will come to mind, but it is felt that those given here might well suffice the compilers of a size chart relating to the partly clothed figure. Many of these sectional measurements, if taken with care, would give a very useful indication of shape factors, irregularities of contour, asymmetry and general abnormalities (if any).

From such a basis, it is possible to compile a physical size chart and an experimental garment size chart that will be of great benefit to the clothing trades.

The latter chart cannot possibly have the relative permanence of the former; unless, in the first instance, it is made to take account of garments which are more or less standard in design and which are constructed to fit the figure comparatively closely. However, there will be some dimensions that will be fairly static.
CHAPTER IV

Basis of Design

The basic functions of design in ladies' tailoring are to adorn the garment and to enhance the appearance of the figure for which it is made. This may be an oversimplified definition, for garment design is a big and ever-changing subject. However, as all subjects of the kind must have a reasonable starting point, we can accept the definition as adequate for the purposes of this book.

Further, the creation of good design should be aimed at the establishment of harmony. In his book, Women's and Children's Garment Design, W. H. Hulme says: “The different features that go to make a dress scheme must harmonise: there must be no false note. Given the idea of unity in design, then all parts of the garment must also harmonise that there will be no conflict of idea, but every feature will emphasise the dominant note.

There must, in the first place, be harmony between the lines of the garment and the pattern of the fabric. If the fabric pattern is an elaborate or involved one, and the lines of the garment clean and crisp, there will be discord between two main factors.

“An elaborate fabric pattern may only be successfully used where the garment line is complex, flowing or fussy. A wealth of pattern in the fabric demands a corresponding amplitude of drapery in the garment.”

Though the types of garment discussed in the present book are not subject to any high degree of elaboration, the principles expressed by Mr. Hulme may well be taken note of; broadly speaking, they underlie the function of all clothing design.

On pages 34 and 35 will be found diagrams which illustrate some of the basic considerations in all garment design.

First Things in Design

It can be rightly asserted that the first things to consider in garment design are lines; so I will make a brief analysis of lines and their optical effect.

Diagram A—We have here a kind of broken rectangular figure, bounded by the vertical lines C and D and halved by the vertical line A-B. Inside the outer verticals C and D there is a short horizontal line. From this, a group of slanting lines is seen to emanate—one group to the left of A-B and the other to the right of it. The distance of the left end of the short horizontal line from line C is greater than that of the right end from line D; and the slant of the lines from the horizontal towards line C is different from that of the lines towards line D. Lines C, D and A-B are parallel and are equidistant; but the effect of the slanting lines is to make the distance between line A-B and line C appear smaller than that between line A-B and line D.

If one imagines the slanting lines as representing seam slopes in a garment, one realises the importance of seam placement in designing.

Now let us look at Diagram B, on which we have four groups of lines—two vertical and two horizontal, with both wide and narrow placements.

The width across groups 1 and 2 is exactly the same, but the effect of the slanting line across them is to make group 2 look wider than group 1. The height of horizontal groups 3 and 4 is the
same, but the effect of the curved lines on them is to make them appear different.

To emphasise the effect of curves superimposed on straight lines I have prepared Diagram C, which shows a group of vertical lines and three types of curved lines. The latter are meant to simulate panel seams which might be employed in a garment.

Curve 1-2 is a gradual one which might extend from the front scye to the bottom of the garment (in this case a jacket is in mind.) The next curve, 3-4, is more marked at the top and then passes into an almost straight line. The third one, 5-6, is a variant of the second; but here the curve at 5 may be described as acute, passing into the straight earlier and then continuing to the bottom almost parallel to the basic straight lines.

Observation of these curves and their relationship to the straight lines on the diagram will serve to bring an appreciation of the fact that the runs and directions of seams in a garment have a big influence on over-all design.

These elementary observations on lines, their placement and direction may seem to be only remotely connected with garment design—but this is not the case, as further reading of this chapter will attest.

Plate XX—This illustration will help to emphasise what has just been stated, in a very simple form. Here, Figures 1 and 2 have been drawn from life; their subject was a young woman of average build. Take note of Figure 1, on which the bust is indicated by the dash line B and the waist by dash line W. The two dash lines marked X are placed in “square” with the waist line and they serve to reveal that the figure is slightly larger on the left hip (right side as we look at the drawing).

Now examine Figure 2, considering the bust (B) and the waist (W) in relation to the garment design. On one side the waist of the garment has
been raised (see 1) and on the other it has been
left as line W in Figure 1 (see 2). The waist and
the hips have been fitted a little closer. It will be
seen at once that the right half of Figure 2 (as we
look at the drawing) looks quite different from the
left half. And both halves look different from the
equivalent halves of Figure 1.

These shapings are part of the function of
design and, in the case of a close-fitting style,
they are related to the actual fit of the gar-
ment. The conclusion must therefore be that
garment lines have their effect upon figure
lines.

Lines and Shape
To enlarge a little on the relationship between
lines and shapes I will now make reference to
Diagram D. In this rectangular form the line 1-2
marks the centre. Line A-B runs from the top of
the left outer edge and is brought in somewhat at
the bottom. On the right-hand side of the diagram
there is the curved line C-D-E. The straight dash
line on this side is the same, as regards slant and
"coming in" at the bottom, as line A-B on the
left. Comparison of the shaded portion bounded
by points A, B, 2 and 1 with the plain portion
bounded by 1, C, D, E and 2, will give a very good
indication of the difference in effect between a
"straight" outline and a "curved" one.

The general effect produced by the "curve"
contour is usually more pleasing, chiefly because it
imparts a natural "line" to the garment.

Design and Figure
I will now apply the basic principles detailed so
far to the designing factors in certain types of
ladies' jackets, relating a design in each case to a
particular figure type. Figure peculiarities and design factors will be related. **Reference will be made to Plate XXI.**

**Figures B, C, D and E** give impressions of four particular figure type outlines. The small illustrations at the sides will help to define them. In each case a more or less basic design is being considered, but the factors mentioned are common to any design—plain or fancy.

**Figure B**—This may be regarded as indicative of the normal type of female figure—moderate shoulder slope (S), moderate width at the bust (B), fairly gradual waist indentation (W) and hip prominence (H). The designing of garments for such a figure will not present any great problems; seam placements can be made with comparative ease.

**Figure C**—Here we have the square-shoulder type, with a waist about the same as that of the normal; and hips, also, not over-prominent. The seam placement (for a panel) indicated by line 1 takes an almost straight line; that indicated by line 2 is set farther out towards the shoulder end and takes a slanting run to the waist and from the latter to the hips, and beyond. The effect of 1 is to give a wider appearance at the waist but to modify the shoulder width. With 2 the effect is to give a more "waisted" impression, but to draw attention to the squareness at the shoulder end.

Let us suppose a yoke is to be introduced (the upper part of the panel seam thus being terminated at the yoke base). The yoke suggested by 3 is in a more or less straight line; that suggested by 4 has an upward tendency which might accentuate the figure's squareness. The one denoted by 5, with a
downward trend, takes the eye away from the square shoulder.

**Figure D**—In this example we have the sloping-shoulder type, though the actual width of the shoulders is not much greater, if at all, than that of the normal figure. The hips, however, are rather wide. Notice the difference between the effect of the panel seam (6) on the left and the bust dart (7) on the right. For a figure such as this it might be well if the tailor advised a style of garment which "bridges" the waist indent, as suggested by the dash outline (X).

**Figure E**—This depicts the "narrow torso" type, with markedly sloping shoulders and wide hips. The upper portion of the figure is comparatively small, whilst the lower portion is noticeably broad.

The simple design suggested by the yoke (8) and the waist dart (9) does nothing to modify the shoulder slope or to create an impression of relative smallness at the hips. The better placement and shaping of a yoke (if one were required) is that of 10. The upward slope of the seam tends to detract from the acute slope of the shoulder. Again, the curved panel seam indicated by 11 gives the suggestion of shoulder squareness.

Another design is indicated by a waist-seam (12) and a panel seam, running forward from the under-arm position (see 13).

**Tailoring modifications of figure types are not, of course, confined to seam placements or to some of the basic principles of design. There are other factors—such as padding, moulding and shaping with the iron, widths of lapels, position and number of buttons, location of pockets, etc. Each of these can have a definite effect upon the appearance of finished garments.**

This observation applies particularly to women's clothes. One has only to examine photographs of various fashions to see how great an influence lapel widths, collar depths, pocket flap shapes and button spacing can have on the style of a garment.

However, important as these things are, and the "manipulations" carried out in the course of make-up, there remains the application of the rules which apply to design as a whole. This is something which may have escaped the serious attention of some cutters, though it is ever present in the minds of those who are engaged in trades whose reputation has been built up on the excellence of their garment designs.

It may be that in the ladies' tailoring world design is paramount—especially in couture; here, fashion changes occur with extraordinary rapidity.
shoulder. Distances of the seams from the centre line (C-D-E-F) are very important. It will be seen that the left-hand side of Figure 1 looks quite different from the right-hand side—solely on account of the variation in seam placement. Extension of the length, too, will effect a marked difference in general appearance (see the line from G) on the same figure.

To refer again to the back view—Figure 2. If a centre seam is adopted, as 1-2-3, the distances from centre to shoulder points will appear relatively wide. On the other hand, introduction of panel seams—as 7-8-9 or 10-11-12—will tend to "break up" width at shoulder level and at bust, waist, and hip levels.

For a figure with a prominent seat, the placement of seam indicated by the dash line H-K will have the effect of "reducing"; but it will give the impression of larger hips. On the waist line, distances from seams to the side waist (7 and 13) will influence the general appearance. As will be noted, the two half-backs differ as the result of the difference between the placement of 5-6 and 7-8-9 and that of 10-11-12 and 10-H-K. Length to waist is emphasised on this figure by the raising of the shoulder-point (A). This may be done by means of cut and padding—or it may be necessary on account of actual figure shape and form.

Curved Seams

Seams which take a curved run from the front and back scye positions are frequently featured in jackets. The placing of the starting and finishing points on such seams is an important matter—equally important with what we might call the shape of the seams and the directions in which they traverse the body of the garment.

Figure 3—First let us consider the direction and shape of the curved seam marked by 1-2-3-4. The starting point of this seam (1) is placed high on the front scye curve and its run has a fairly pronounced "bow" as it passes over the region of the figure's bust line at 2; the run from 2 to 3 is almost straight, whilst that from 3 to 4 has the slightest curve in it.

Two main effects are thus produced—(1) an apparent enlargement of the shoulder region; (2) a "breaking" of the width between centre front (see line C-D-E-F) and side hip.

In contrast to this type of seam, the one on the other side of Figure 3 has a lower starting point (3), a straighter run into the bust line (6), a slightly forward run from bust to waist and a kind of angle-formed run from waist to hem (7-8-9). This kind of run is often made when a pocket is to be inserted at 7-8-9.

The effect here is a "splitting-up" of the shoulder region, an apparent reduction of front waist and a stressing of hip shape.

Neck opening lines are depicted by A-D-B and A-10-B; the former has a body-shortening effect and the latter gives a body-lengthening impression. The high neck-line shown by M-C-N gives a note of general severity as well as a lengthening of the shoulder line.

Shaping of the hem-line from side to centre front can be carried out in various ways. Some couture houses of repute design classic and other jackets with an upward trend, as indicated by the runs to point X. This is sometimes done in conjunction with an equivalent dropping of the back.

Back Seams

Figure 4—Here we see the back of the same blocked-out jacket. The run of the seam marked by 11-12-13 will be that adopted to go with the front one 1-2-3-4 of Figure 3. A variant of the run from 12 to 13 is that shown by the line from the former point to 14. Notice the difference in general effect here.

The curve of the seam marked by points 15-16-17 is that made to combine with 5-6-7-8-9 of Figure 3. The curve from 15 to 16 is strictly moderate and the run from 16 to 17 is almost dead straight.

If the sidebody seam is brought round on to the back of the figure, as shown by 18-19, there is the effect of "breaking" the width across the seat area of the garment.

In most cases, the back for a jacket with curved outer seams will not have a centre back-seam. There is no reason why one should not be featured if the designer thinks fit. Something of its effect
in relation to the two types of curved seam illustrated can be appreciated if reference is made to the dash line K-L.

On this line, K marks the high neck style. O-P shows a standard neck height, whilst R-S shows the low-cut neck-line featured frequently in present-day models. The "dipped" run to V is a variant of this.

"Straights" and "Curves"

Figures 5 and 6—For descriptive purposes, we may refer to the lines of certain seams shown on the two figures here as standard and to others as variants of the standard. Each figure represents an example of the so-called "classic" style of jacket, often featured as part of a tailored suit.

Figure 5—The neck and front edge lines indicated by 1-2-3 have been adopted quite widely in recent years. The effect is a body-lengthening one which, in conjunction with a skirt with relatively long lines and a close-fitting hem, gives the impression of figure height to the wearer.

Front Overlap

An important matter to consider is the amount of extension over the centre line in the pattern. This line is indicated on the figure by the dash line C-D-E-F. It will be noticed that the width of overlap from the centre line to 2 is smaller than that from the centre line to 5. This difference, small as it is, gives a certain style effect which would not be apparent if the front edge were marked in a perfectly straight line from 2 to 3.

In this illustration the front edge is such as will not produce an absolutely central placement of buttons in the finished garment. If this feature is desired, a certain amount can be deducted from the overlap on the right forepart and an equivalent addition made to the left one.

The run of the panel seam shown by 4-5-6-7 is in harmony with the front edge shaping. It gives a certain "breaking" of shoulder width, a slender effect at the front waist and a widening effect at the lower part of the fronts. The additional seam marked by 8-9-10 illustrates an effective employment of the curved seam in companionship with the straighter front seam. The combination is appropriate to the type of revers illustrated.

Notice the completely different effect on the left forepart. There is a lowered neck (11), with its rounded collar style, and a termination of the front panel seam at the bust. This seam, 12-13-14, has only a moderate inward tendency at the front waist. The general effect here is a widening of the front portion of the forepart—that is, from panel seam to centre line.

Figure 6—The back view shown on this figure is not necessarily meant to go in conjunction with the front view shown on Figure 5. Primarily, it is designed to indicate the effect of seam placement and direction when something of a multi-panel style is adopted.

On the left half-back we have three seams—15-16-17. Such a styling gives the impression of width at the shoulder, a slenderness at the waist and a reduction of seat width. The centre back line, G-H-I, is inserted to help comparison with the seam placements suggested on the right half-back by the solid line from 18 and the dash line from 19. The difference in the directions of these two seams makes an interesting comparison. The collar style indicated on this figure is that of the standard type adopted for a large number of jackets in which the step lapel is featured.

Giving Length

The seam placements shown by 15, 16 and 17 give the impression of length. They would be better used in a garment which did not have a centre back-seam. On the other hand, the seam placements shown by 18 and 19 could be used effectively with a centre back-seam style.

As has been stated, the seams suggested by lines 15, 16 and 17 will give a certain amount of shoulder width. This impression of width will be accentuated if the seams take a marked outward line from the waist upwards. Here is something which must be watched very carefully, for it may well be that such a styling will not be good for a figure with naturally "heavy" shoulders.

Also, acute running-in of the seams to the waist line will create an impression of slenderness there—again a feature which will not be suitable for some figures. It is always a matter of adaptation to the type of figure.
"Horizontals" and "Angles"

At the time when this book is being written jacket designs in which horizontal seams and angle effects are featured are almost non-existent; but there may be a return to favour of such features. Who can tell? I have already indicated that feminine fashion is a very volatile thing. It will not be amiss, then, to take a brief look at some horizontal and angle effects that have appeared in ladies' jackets in relatively recent times.

**Figure 7**—On this front view we have examples of angles allied to verticals. In conjunction with this combination we have a lengthening of the so-called opening of the garment, as seen from C to A on the centre line C-A-D-E.

Take note of the seam arrangement of 1-2-3-4 and compare it with that of 5-6-7-8, taking account of the dart denoted by 9. On the left, the angle at 2 is more acute than that at 6 on the right. It will also be noted that the run of the panel seam 2-3-4 is straighter than that of the panel seam 6-7-8, point 3 being further away from the centre line at D than is 7. Further, point 4 on the left is much nearer to E at the centre than is point 8 on the right.

Comparison of these differences will indicate that the seam placement on the left conveys the impression of a fuller waist and a comparatively slender hip; that on the right gives a slimmer waist impression and an accentuation of hip.

**Figure 8**—Here we have the back, with similar "straights" and "angles" employed in the design. Compare 10-11-12-13 with 14-15-16-17. Relation of these to the back centre line F-G-H will serve to indicate how much difference can be imparted to the general "line" of a garment by making variations, however slight they may be, in the placement of the seams and the widths of the panels.

As an example of the horizontal seam, I have selected that of 18-19 which gives a yoke to the back of the garment. A variation in which the angle idea can be expressed is shown by the dash lines 18-20 and 19-20. Differences in the placement of the side panel seams in the two halves of the figure can be very clearly seen and their effect on the over-all design of the back—indeed the whole garment—can be readily assessed.

**The Side Aspect**

The side aspect of any jacket is just as important as the front and back views of it; the position and direction of seams at front and back have a marked influence on the side aspect of the styling. See Plate XXII.

**Figure 9**—Here is the side view of a standard "classic" jacket styling. The neck "circle" is indicated by the dash line from 1 and the waist line by the dash line W-W. The approximate slope of the lapel crease is shown by the solid line running from 1.

In the majority of cases, the direction of the front panel seam will be that indicated by the line 2-3-4, a gradual line in the bust region, thereby not giving undue emphasis to the shape of the figure. The run of this seam below the waist (as from 3 to 4) may be varied according to design, but in general it is relatively straight.

The line from 5 is a variation in the form of a curved seam. At 6 a dart is indicated. There is also an under-arm seam running from the scye into the waist (7) and down to the hem (8). The side-seam, if one is adopted, runs from the back slightly forward, as to 9; this placement has the effect of reducing the impression of seat size. Notice the difference in the effect of the slanting pocket mark (A) and the straight one (B).

**Figure 10**—This illustrates two designs in the so-called "swagger" style of jacket. The lapel run is shown from 1. A straight-hanging style is shown by the lines 10 and 11—a style which will have the effect of imparting slimness. In contrast, there is the fuller, more "flared" design of jacket suggested by lines 12 and 13. This styling tends to emphasise hips and seat, though when it is worn with a close-fitting skirt the jacket looks quite elegant.

Many jackets of this kind have wide sleeves; in such cases it is a good idea to introduce an over-arm seam. The sleeve width is indicated by the dash outline C-C and the seam by the dash outline D-D, which takes away from the appearance of sleeve bulk.
Figure 11—In this instance we are thinking of a jacket made to fasten high at the neck, as suggested by the line 1-X. A front panel seam placement (one sometimes adopted) is depicted by the line 14-15-16, running to a horizontal waist seam. Here there is marked emphasis of the bust (15). For some figures it may be advisable to modify this, as suggested by the dash outline behind 15.

There is a side dart (17) and an under-arm seam (18) in this design. If the lower portion of the jacket is made quite plain it may have the effect of hip and seat stressing. An alternative is to terminate the horizontal seam at 16 and to carry the front panel seam down to 19, as the dash line.

A pocket placement is indicated by 20-21. This styling "breaks up" the hip and seat widths.
CHAPTER V

Drafting of Patterns—1

In all the most widely used systems or methods of drafting garment patterns, the so-called structure of the draft is described as being "laid in the square." By this is meant that certain vertical and lateral lines are drawn, thus forming a kind of framework for the various fitting points and style lines which have to be superimposed. The fitting points are those which denote parts connected with the actual fitting together, or joining, of the pattern sections; the style lines are those which indicate the general design of the garment for the cutting of which the drafted pattern is to be used.

A typical example of this initial framework, arranged for a jacket draft, is illustrated by Diagram A here and following is a list of the details it contains.

The front and back limiting lines are marked Centre Front and Centre Back. These lines denote the lateral extent of the complete draft, their chief function will be mentioned in connection with a subsequent diagram.

The six lateral lines extending all the way from centre back to centre front are:

Line T, the top construction line.

Line C, the chest line (sometimes referred to as the depth-of-scye line).

Line B, the bust line—struck across at the assumed level of the bust prominence on the figure.

Line W, the waist line—struck across from the back waist hollow. (This line is usually called the natural waist line).

Line H-S, the hips-seat line—taken to indicate the girth at the greatest part of the seat prominence of the figure.

Line H, the hem line of the jacket. Strictly speaking, this line is a fashion line rather than a constructional one, for it varies considerably with different styles of jacket and with changing fashions in garment length. I have included it, however, in order to complete the "square" in which the other shorter lines (vertical and lateral) are contained.

BN is the line for location of the back neck-point.

BSS is the line for the recording of back shoulder slope.

XH is the line of the half-across-back dimension and XBV is called the across-back vertical construction line.

The long vertical line extending from H almost to the top construction line (T) is known as the front-of-scye line. It is drawn through the front-of-scye position and carried down the length of the draft. At its lower end (on the line H-S) it will pass over the hip prominence position of the average female figure.

Line FSS is the construction line for the front (or forepart) shoulder slope.

The two short lateral lines running forward from the front-of-scye line at XUC and XNB to the centre front line are known as the across-upper-chest and the across-bust lines.

Line NP is the front neck-point construction line and line BD is what is sometimes called the basic shoulder bust-dart line.
All these lines are the construction lines required for the simplest form of basic draft as laid “in the square.” It will be seen that, with one exception, they can be squared from each other. That is, the laterals can be squared from the verticals—and vice versa.

The two exceptions are the basic bust dart line (BD) which is located, as will be indicated later, in relation to the neck-point after the basic neck-point line has been used constructionally and after the shoulder bust dart has been positioned in its basic form. This will be made clearer to the reader when I describe the two following diagrams illustrating the structure of the pattern draft.

The area denoted by the shading on Diagram A is that in which the scye (or armhole) of the pattern will be drafted. It is referred to by many cutters and by writers of technical books as the “scye box.” It can be regarded as a kind of boundary region for the shaping of the scye for a standard jacket pattern.

**Further Stage in Construction**

Now we will go a stage further and use the framework suggested by Diagram A for the superimposition of certain contours connected with the fit and style features of a jacket draft.

This second structure, then, is really the beginning of the draft proper. On it, we shall be making a start on the drafting of a pattern for what we might conveniently call a “classic” jacket for a lady of normal proportions—designed to fit the figure fairly closely. **Reference will be made to Diagram B. I have not repeated the letters on the various lines discussed in relation to Diagram A, but I have added certain numbers in order to make description of the drafting procedure easy for the reader to follow. He will readily recognise the lines that have already been detailed.**

**Drafting Scales**—It is necessary at this point to make a note or two on the so-called scales that are used by many cutters for the fixing of certain points on a draft. These scales are based on the assumption that certain dimensions on a given figure (the accepted normal as viewed by artists and anatomists) will bear a proportionate relationship to the chest and/or bust girth as measured. There are limitations—quite severe ones, in fact—to scales used in this way; but they form a convenient plan for the drafting of basic block patterns. I have decided to adopt them for this section of my book and for the second part that will follow the present volume. In the latter I shall also deal with other ideas on the subject of system drafting.
For the present chapter the adoption of scales is perfectly appropriate. **Now to produce Diagram B.**

Lines are squared both ways from 1 and the distance between 1 and 2 is the depth of scye, recorded by direct measure or assessed as a division of a scale. **In the present example we are dealing with a 36-in. bust figure and have taken a scale of one-third bust plus 6 ins. (a common one).** The distance of 1 to 2 in this case is one-fourth scale plus \( \frac{3}{4} \) ins.

3 from 1 is the nape-to-centre-back-waist measure; 4 from 3 is 8 ins.—a frequent calculation for the distance between waist and hips-seat lines, line 4 being the latter. (The reader should refer again to Chapter I on this matter.)

5 from 1 is the full length of the jacket. Lines are squared across from these various points. There are two shorter lines squared from 6 (midway between 1 and 2) and from 7 (midway between 1 and 6).

8 from 1 is one-sixth scale less \( \frac{1}{4} \) in. and 9 is \( \frac{3}{4} \) in. up from 8.

10 from 2 is the half-across-back measure as taken; 7 ins. in this case.

11 and 12 are squared from 10 to connect with lines 6 and 7.

13 from 10 is quarter of the half-bust. **(This point 13 is sometimes found by coming forward from 2 an amount of two-thirds scale less \( \frac{1}{4} \) in. or \( \frac{1}{6} \) in.)**

14 from 13 is one-sixth scale—often this amount is a fixed quantity of 3 ins., as it is here, for all sizes.

15 from 2 (for front centre-line) is half bust plus 1\( \frac{1}{2} \) ins. This arrangement is adopted for the drafting of a net system, one without allowance for seams but with minimum allowance for ease or tolerance.

16 from 13 is 1\( \frac{1}{2} \) ins.—a common amount for location of the bust prominence line; 17 is squared from 16 and 14; 18 from 17 is 1 in. and will be the so-called bust point. This location of the latter is dictated largely by style considerations and will be dealt with more fully at a later stage.

19 is squared from 15 and 16; 20 is squared from 14 and it is one-twelfth scale less 1 in. above the construction line from 1. **(This amount varies).**

A line is now drawn from 6 through 12 and 20 and on this line 21 is marked out \( \frac{1}{4} \) in. from 12.

Line 15X-22 is squared with line 2-15. Point 23 is squared by 22 at a point where one-sixth scale from 22 connects with the line drawn from 6 through 20.
With 18 as pivot centre, an arc is swept from 23 to 24 and the distance on the arc between these two points is one-sixth scale. Lines are then drawn from 23 and 24 to 18, thus forming the basic shoulder bust dart.

**This method of assessing the bust dart is arbitrary; it is used often in systems for a basic block draft. An analysis of bust dart location and size is made in a later chapter.**

25 from 24 is \( \frac{1}{4} \) in. less than 9-21 on the back shoulder.

A is \( \frac{1}{2} \) ins. above 13 and a line is squared across from it to locate C on the front centre-line. The line A-C may be referred to as the upper across-chest line—it will be dealt with again later.

26 is \( \frac{1}{4} \) in. below 25 and the armhole, or scye, is shaped from 26 through A, and 11 to 21.

The gorge is shaped from 23 to G, the latter point being one-sixth scale less \( \frac{1}{2} \) in. below 22.

The vertical line A-B, squared by A-C, is the front-of-scye line.

**Construction and Style**

Diagram C shows a third stage in the development of the pattern draft—the basic structure repeated and shown with the introduction of the main design and styling features within the framework.

There is an indent of \( \frac{1}{4} \) in. at point 3 (if there is to be a centre back-seam) and the outline of the centre back is drawn from 1 through 2, then through the indent to 4 and 5.

The panel seam for the back is begun at 27, placed 1½ ins. from 9; it passes through 28 (3½ ins. from 2) and 29 (2½ ins. from the indent). 30 from 4 and 31 from 5 are 3 ins. and 3½ ins. respectively.

32 from 29 is 1½ ins.; 33 from 30 is \( \frac{3}{4} \) in.; 34 from 31 is \( \frac{1}{2} \) in.

Point 35, for upper location of the under-arm side-seam, is midway between 10 and 13; a line is squared down from 35 to locate 36 and 37.

A suppression of \( \frac{1}{2} \) in. (maximum) is made at 36 and the two parts of the under-arm seam are shaped from 35, through the suppression points at 36 to 38 and 39, each of the latter points being 1 in. from the line down from 37.

It is to be noted that point 36 is raised a full \( \frac{1}{4} \) in. above the structural waist line squared across from point 3. This is dictated by the shape of the female figure—the side waist higher than the centre back.
waist hollow. (Mention of this factor was made in Chapter I.)

The raised line (see dash line from 32) is continued to the front waist (W), where it is dropped very slightly.

A dart is marked to run in the direction of 18 (bust point) and this is suppressed ⅛ in. full at the dot.

Treatment of the waist and the hips-seat regions in this way is a feature that is found in a number of systems for the drafting of ladies' jacket patterns, the proportions of the draft being assessed in relation to certain accepted ideas of proportionate measurements. In the present example we are considering a figure of 34 in. chest, 36 in. bust; 27 in. waist and 37½ in. hips-seat.

If the waist is measured on the draft, from the indent at 3 to point W on the front centre-line, it will be found that there is 2¾ ins. to 3 ins. over the half-waist measure; if the hips-seat is measured from point 4 to the front centre-line, it will be found that there is 2 ins. to 2½ ins. over the half-hips-seat measure. In each case, the parts are to be measured section by section.

The waist and the hips-seat measures quoted are taken as for the jacket (over the skirt). As was stated earlier, this basic structure is made without actual seam allowances. There is, however, an allowance for ease or tolerance.

It follows, that a jacket cut on these lines would be shaped at the waist but would not fit tightly there; in the hips-seat region there would be a “free” clearance of the figure.

**Bust Dart**—In Diagram B the location of this dart was what I have called its basic one—its constructional position. This is indicated in the present diagram by the dash lines from point 18 to 23 and 24. When the style design is superimposed the dart will be transferred to the position indicated by lines 18-23X and 18-24X.

23X is 1½ ins. from 23 on the shoulder-slope construction line. A sweep in is made from 23X to 24X, with 18 as the pivot centre, and the distance between points 23X and 24X will be the same as that between the basic dart points, 23 and 24.

Lines drawn from 23X and 24X to 18 are repeats of the basic.

The resultant bust dart indicated by 18-23X-24X-18 may be taken as a typical example for the type of draft we are discussing; it will be found in the drafts appearing in a number of textbooks published during the last half-century. The amount registered between points 23X and 24X (or between 23 and 24 on the basic draft) will vary here and there, but it is true to say that the variation very rarely extends beyond ⅛ in.

This kind of construction has been and is still used by a very large number of cutters engaged in bespoke tailoring houses which cater for ladies. It can be said that the method involved has proved satisfactory for the production of block patterns that can be adapted to the requirements of fashion and fit.

On the other hand, the implied reliance on a certain set of figure proportions that are by character arbitrary endorses remarks made earlier on careful figure observation and measuring.

**The Chest Lateral**

There is one construction line that is liable to critical question, not as a line but because of the direction it takes—it is the chest line, or, as it is sometimes called, the depth-of-scye line. This line is marked by points 2-10-13-14-15 on Diagram C (page 43).

It will be seen that the line takes an exactly horizontal direction from the centre back construction line to the centre front construction line. Such a direction is correct for a jacket of the kind depicted—one with a back panel seam which extends from a position on the shoulder more or less in line with the blade prominence position on the figure. In fact, the seam itself will pass over the blade prominence and is therefore set at what we can call the end of the back dimension and the beginning of the side dimension of the human figure. As I have indicated an earlier stage, this boundary position is an ideal one for the taking out of waist suppression (like that shown at 29-32 of Diagram C).

**Other Designs**

However, there are designs of jackets in which no seam falls in the position we are considering—the relatively straight-hanging jacket and the shaped one in which there is no through-under-arm seam but only an under-arm dart seam, with a side-seam positioned very much like that in a gentleman’s lounge jacket.

In cases of this kind it has been found necessary to drop the chest line from a position approximating the blade line (or seam) and to continue forward towards the centre front construction line at a lower level, perhaps ½ in. or ¾ in. below the original chest line at its commencement on the back portion of the draft. Realisation of this necessity must be laid to the credit of P. A. Ostinelli whose contributions to the Tailor and Cutter, and to other journals of the kind overseas,
have enlarged our sphere of sartorial technical knowledge.

As well as having an effect on the chest line—or dictating what direction this line should take—particular placements of seams in any given design can have an effect upon the actual balance of the garment. In order to demonstrate this fact, I have given two examples of design in a jacket, both of which, in certain seam placements and in relation to waist suppression and hip provision, call for adjustments in the chest (or depth-of-scye) construction line. Adjustments which must be made if balance is to be preserved.

These examples are dealt with fully in the next chapter.

To complete the explanation of Diagram C, I make reference to the front edge allowance. This edge is indicated by the dash line P-X which is $1\frac{1}{2}$ in. beyond 19-W-15X, the front centre line. If a lapel is featured, with the standard step collar, the distance from 23 to L will be $\frac{3}{8}$ in. The crease line is drawn from L into P.
Drafting of Patterns—2

In this chapter I shall enlarge on what I was written towards the end of the previous chapter on the subject of the chest line. For the purpose, I take two examples of design in a jacket—one a waist-fitting style and the other a straight-hanging style.

The first of these is illustrated by the small centre figure on Plate XXIII. Such a design may not be contemporary at the time of this book’s publication, but it has features in it that are likely to be repeated in a number of designs. Whatever the future may hold in the way of fashion, the observations made here of certain principles will always be applicable.

This jacket is a single-breasted one with a waist-seam and a “whole” back. This means that there is not a centre seam. There is the customary shoulder bust dart (dealt with in detail in a following chapter) and three short darts at the waist. There is no need in the present analysis to take any special note of the latter darts. Further, there is an under-arm side-seam—a frequent feature in jackets at the time I am writing this book.

It will be seen that the garment fits the waist very closely. This characteristic presents certain problems in cutting, for waist suppression has to be considerable—on back and forepart. Distribution of the darts in the latter reduces the danger of interference with balance; but the design of the former makes for some difficulty in getting the necessary suppression without disturbance of balance.

In the majority of female figures, as I have already stated, the back waist is very hollow, the hollowness being accentuated in some cases by the relative roundness of the upper back in the shoulder-blade area. These features are indicated by 1 and A on Figure 1. The side waist also has a certain amount of hollow, in relation to upper back and hips-seat regions, as shown at 2-2 on Figure 2. The ideal position for seams is indicated by lines B and C on the latter figure. This placement (one frequently adopted in the design of panelled jackets and coats) enables the cutter to effect waist suppression at the ends of the back and side dimensions; the balance is thereby less vulnerable to interference.

In a back of the type depicted on the illustration the nearest seam to the blade vertical is the one under the arm of the figure—in this instance 5 ins. towards the front of the garment.

Without thinking carefully about “what will happen” we might make a suppression of the under-arm seam as illustrated on Figure 3. Squaring down from A to locate B, we could mark out so much on each side of the latter point and fix C and D. (And this very thing has been done very many times.) Perhaps we have overlooked the relative distances of C-E and D-F, and what effect the ultimate suppression will have on those distances. We must also think of the distance 1-2.

Figure 4 tells us something. In this diagram the under-arm seam is shown in the “closed” state. E and F are pulled down, as the result of C and D coming together. 1 and 2 are much farther apart. The shaded triangles above points E and F (placed at equal distances from A in both Figure 3 and Figure 4) indicate the minimum amount of shortening which the pattern parts undergo when such a suppression as C-D is made. Here is a clear example of interference with balance.

Further complications would ensue as the result of the increased distance between points 1 and 2. The whole seev has been “opened out,” and when, later, 1 and 2 are brought together at the shoulder-point (as they must be when the garment is made) there will be some very unsightly effects at front and back seyes.

There is no necessity for me to take the matter
any further at this stage. Sufficient has been said to make it obvious that the chest construction line, however useful it may be in a basic structure (and of course it is useful there), has to adapt its original horizontal direction to the requirements of both fit and style. **And what happens to it has to be very closely watched by the pattern cutter.**

**The Straight Hang**

Now let us consider the second example—a straight-hanging style of jacket. This garment is designed to hang relatively loosely from the shoulders of the wearer, falling easily over the hips and seat.

A pattern for such a jacket can be constructed from the basis described and illustrated in Chapter V, with the appropriate changes made for the different placement of seams. The appearance of the resultant pattern would be that indicated by Diagram 1 of Plate XXIV, on page 50. Explanation of that diagram is as follows:

The chest line (C), the bust line (B), the waist line (W), the hip line (H) and the hips-seat line (HS) are marked across in their normal positions. The constructional shoulder bust dart—usually raised above the prominence point (P) for this style of jacket—is indicated by 1-2-3. On the front centre line an advance of $\frac{1}{2}$ in. is made at 4-5. The side-seam (really an under-arm seam) is drawn from mid-scye (6) through 7 and 8 to the hem. The overlap indicated on this seam at H and HS levels will usually provide sufficient material for these areas of the figure. It is about 2 in.

The diagonal lines from the centre back neck and from P to the hip line and the hips-seat line indicate directions in which adequate length must be provided. The overlap at 7-8 may be increased if more “flare” is required—”flare,” that is, which will remain at the place where it is added.
The diagonal "lengths" are also indicated on Figure A which gives a profile view of the nude. Here, the normal (or rather average) back contour—as from the blade projection and not the centre—is shown by the solid outline at 1; the more prominent-bladed shape is denoted by the dash-line 2. The latter, it will be seen, has a lower location of blade prominence. Length will be required from 1 or 2 to H (approximate position of the pelvic crest), as well as from bust point to seat prominence (S).

It will have been noticed that I have made reference to a "hip" line as well as to a "hips-seat" line, in connection with Diagram 1. This is an important distinction for the cutter to make when he is dealing with certain styles of garment—particularly a jacket of the design under review now.

This upper hip line, as I may term it, can be said to traverse the figure at the real hip position. The hip proper is called by anatomists the pelvic crest, or the ilium, and is in some female figures very pronounced.

I refer again to Diagram 1. On the back the line M-M passes through the blade prominence position; on the forepart the line N-N passes from front of scye through the hip prominence position—the pelvic crest. That is to say, the location of the crest in the majority of female figures will be near enough in line with the front of the arm socket.

It is on these two lines (M-M and N-N) that pattern manipulation can best be carried out. The particular manipulation to be dealt with here is one calculated to provide "room" in the pattern (and in the resultant garment) at this side hip position.

There is also what I might call a second manipulation to be made—this one affects the back section and is used to provide for the prominence of the shoulder-blades of the figure. (It is again suggested that the reader makes reference to Chapter 1.)

Diagram 2—Here we have the back pattern detached from the draft and laid out separately; the line M-M runs down from shoulder to hem, passing over the blade prominence position as marked by point X. There is also a lateral line running through that point from centre back to back scye curve.
The manipulation here consists in cutting the pattern from M on the shoulder along the line M-M to X; then a fold is made at the scye curve, in this case 1/4 in. (4/5 in. each side of the fold). The result is an opening at the shoulder which will be formed into a dart. This can be followed by reference to the small diagram marked 2A.

**Diagram 3**—Here we see the forepart separated, with the line N-N retained—the line I will call the manipulation line. Let me also draw attention to the dot-dash line from 6 to P. The distance of point P from the original 8 is, in this instance, about 1 in. It is proposed to take this amount away from the side-seam “flare” at the hem. That “flare” will not be needed at this position, but more “room” will be required at the hip region, extending down the line N-N and passing over the hip line and the hips-seat line. Point S is located where this line touches the scye curve.

For the manipulation, a pivot is made at S and the rear portion of the forepart pattern is swung outwards so that the 1 in. is inserted in the form of a “wedge” from nothing at S.

**The effect of this on the forepart pattern is indicated on Diagram 3A, the shaded part denoting the “wedge.”** In other words, the amount which lies between 6-P-8 on Diagram 3 has been transferred to a position in line with the pelvic crest position. This can be done in the manner described, or the pattern of Diagram 3 (after the piece has been taken off the side-seam at 6-P-8) can be cut up from the lower N to S and then opened out the amount of the “wedge”—1 in. in this case.

In each forepart diagram on Plate XXIV I have left the shoulder bust dart in its structural, basic position. More is said about this matter in Chapter VIII. That chapter is devoted to a detailed analysis of bust darts.

**Practical Experiment**

At this stage I will give account of a practical experiment I carried out in the cutting of a straight-hanging jacket. I had the services of a young lady model, pictures of whom, with details of her figure, will be found later in this chapter.

The main purpose of the experiment was to assess the side dimension of the figure and to produce a pattern draft in which this dimension was specially noted and made to conform with the characteristics of the figure.

**References will be made to Diagram AX, on page 52, which shows the basic structure of the pattern.** (The reader is also advised to consult Chapter I.)

Lines C, B, W and HS are, respectively, the chest, bust, waist and hips-seat locations. The structural bust dart (P-O-L) was introduced and the upper part of the back pattern was manipulated for the introduction of a shoulder dart. In this, X denotes the blade prominence position and from this point lines are drawn to 1 (1½ ins. from the neck-point) and Y (set about 2½ ins. down from the shoulder-point). The pattern was cut down line 1-X and folded over ½ in. at point Y. The opening thus effected at 1 was adapted for the shoulder dart.

The kind of structure thus shown is familiar enough to cutters, with possible design changes for a semi-fitted garment. These are, in various forms, seams at the dash lines 6 and 7, the dart H-K, and a variation (to include waist shape) on the underarm seam or side-seam.

The line S-T, as I have called the front-of-scye line, I consider to be very important, for it will pass over the hip prominence of the figure and can be used as a guide for the introduction of a wedge to provide greater room. In fact, the wedge was adopted for the straight-hanging jacket in this instance.

**Now, the part that has been lost sight of for so many years is that indicated by the shaded portion—the side part, comprising a section of the back and a section of the forepart of**
the pattern as laid down, bounded here by points 1-2-3-4-5. Figure stance will dictate either a swinging back or a swinging forward of this side portion, to express things in theoretic form. The majority of female figures today (and my model’s figure was no exception) tend to the “sway back” stance, suggested here by the arrowed lines 2X and 5X. Comparison of these with the lines 5 and 2 will convey the idea I have in mind.

The model’s measures were these: 8½ ins. scye depth; 16 ins. nape to back waist hollow; 24½ ins. length of jacket; 7½ ins. x-back; 3½ ins. shoulder-width; 12½ ins. front-shoulder; 24 ins. middle-shoulder; 33½ ins. chest; 34½ ins. bust; 24½ ins. waist; 36½ ins. hips-seat; 14 ins. nape to bust prominence; 14¼ ins. front neck (gore curve) to front waist. (As sleeves were not to be dealt with during the experiment, no sleeve measures were recorded.)

It will be noticed that certain of the additional direct measures referred to in Chapter III have been recorded here. Detailed explanation of direct measures and their application to drafts is to be given in the second part of this work; some notes on the subject will be found at the conclusion of the present chapter.

The main characteristics of the model’s figure in this instance were: Rather long in the back; slightly forward stance; relatively flat seat; somewhat prominent shoulder-blades (placed low); moderately prominent at hips (pelvis crest).

The pattern used for the cutting of a shell garment (made up in Vilene bonded interlining material) is illustrated on Plate XXV.

The amount taken out of the shoulder bust dart (it terminated just below the chest line and about 1½ ins. above the actual bust prominence position marked by P) was determined by a special measure I took from a stick held horizontally at the bust prominence. Against this, at a central point, a vertical stick was held and the measure was then taken from the vertical stick to the base of the front neck of the figure. (A full explanation of this measure, with photographs showing its being taken, will be found in a subsequent chapter).

In this instance, there was registered an amount of 3½ ins. Having regard to the style of jacket to be cut—a straight-hanging style—I did not need to have the dart quite as large, so I made a deduction of ½ in. The distance between the top two points of the bust dart is thus 3½ ins.

On the pattern are marked the chest and waist lines; the hips-seat line in this case coincides with the bottom edge of the pattern and it is 8½ ins. down from the waist line. At the hips-seat level a “wedge” of ½ in. has been effected in the pattern, running to nothing at the front scye and taken along the front-of-scye line.
Chest, waist and hips-seat lines are then squared from the "wedge" line, not from the original front-of-scye line. Incidentally, the front neck-point, in conjunction with application of the front-shoulder measure, has been squared from the "raised" chest line.

The principle involved here will apply to all garments in which there is no shaping cut for the hip provision—as there is indicated on the basic block structure illustrated on page 45 (Diagram C).

Another thing that should be noted is the passing out of the horizontal on the chest or depth-of-scye line—an example of the change which takes place sometimes, as mentioned earlier.

Photographs A and B, on page 54, show the shell jacket on the young lady model, giving front and back aspects respectively.

Marking-stitches were inserted at chest and waist lines and also at the revised front-of-scye line. Before the photographs were taken I marked in with chalk the chest line on back and forepart; the chest, waist and revised front-of-scye lines on the forepart only. This gave an excellent indication of how balance "came out."

In addition to the balance factors, it is interesting to note that the provision made for the figure shapes by the bust dart and the back shoulder dart is remarkably adequate. The whole garment, I might add, was made to fit the figure with just a reasonable clearance.

As a conclusion to these observations, I should like to add a few words on the back shoulder dart. The extent of the fold-out in the back scye, the first step in the sizing of the dart, will be determined by two main things—slope of the figure's shoulders and type and location of blade prominence.
The anatomical drawing on page 52 gives basically the shape of the back of the model and, by the solid outlines (1), the slope of her shoulders. (The shoulder-blades are indicated by XX). The dart taken out of the back shoulder in the shell jacket was, in the matter of size and shape, dictated by the figure surface contours.

Other figures may have less shoulder slope (as the dash outlines 2), or more (as the dash outlines 3). Shoulder-blade prominences may be higher or lower; they may be more towards the neck or inclined towards the arms.

In the pattern and in the shell garment cut from it the idea was to make a correct fitting of the young lady's shoulders, with no padding to be inserted but with allowance only for the necessary ease at the shoulder-points. The whole purpose of the experiment was to demonstrate the relationship between a pattern, a garment and a particular figure. The principles involved are applicable to a wide range of garments and to a large number of figure types.

* * * * * *

Standard Draft—Plate XXVI

As stated earlier, the basic construction dealt with in the previous chapter can be used for the drafting of a pattern for a straight-hanging jacket. However, in order to give the reader further information on this type of draft, I will give a detailed explanation of a standard system.

The jacket in this case is to have a roll (or shawl) style of collar. There is a centre seam at the back, with a short vent at the hem.
DESIGNING AND CUTTING LADIES' GARMENTS

On the draft, the shoulder bust dart is marked out as it would be if it formed part of the design—as it did in the draft just described. In this case, however, the dart will eventually be transferred from the shoulder position to one a little down from the scye base on the under-arm side-seam. (This transfer arrangement is discussed at length in Chapter VIII which deals fully with types of bust dart location and styling.

Measures for the draft shown on this plate are these: 15½ ins. nape-to-waist; 24½ ins. full length; 7 in. half-back; 35 ins. chest; 36 ins. bust; 37½ ins. hips-seat. (For a figure of the type being dealt with, and for the straight-hanging garment described, the waist girth measure is not essential.)

The drafting scale is ¼ bust plus 6 ins.

In this draft I have included allowances for the seams, with the exception of the bust dart. The draft therefore differs from that produced by the basic system described in Chapter V, which excludes seam allowances. Details of seam allowances are given in a following chapter.

To commence this draft, mark point O in a convenient position and square lines both ways from that point, as indicated.

1 from O is ¼ scale plus 3½ ins.; 2 from O is the natural waist; 3 from 2 is 8 ins. for hips-seat line; 4 from O is the full length plus ½ in.

5 is located at midway between O and 1.

Square lines across from these points as indicated.

6 from O is ¼ scale less ½ in.; square up to ½ in. to 7 and shape back neck from the latter point to O.

8 from 1 is the x-back plus ½ in.; square upwards.

9 from 1 is ¼ bust plus 2½ ins.; 10 from 9 is ¼ bust less ½ in.

11 from 10 is ¼ scale; square up to locate 12 on the line from O.

13 from 12 is ¼ scale less ½ in.; 14 is ¼ in. above 5.

Draw a straight line from 14 through 13, thus locating 15 on line 8; 16 from 15 is ½ in.

Shape the back shoulder, 7-16.

Square down from 9 to locate 17; 18 from 17 is ½ in.

PLATE XXVI
Draw a straight line through 9 and 18 to locate 19, continuing the line well above 9. This will form the front centre line.

The location of 20 and 21 is made by placing the short arm and angle of the graduated square on the centre line and moving it until the long arm meets the continuation of line 14-13; the distance between 20 and 21 is \( \frac{1}{3} \) scale.

The fixing of the front neck-point (21) in the manner described will be found to produce the requisite length from neck to bust level. It is partly arranged by the placing of point 19 slightly higher above 12 than is customary in a fitting type of jacket.

At the bottom of the centre line 22 is \( \frac{1}{4} \) in. below 19.

B is the bust prominence point of the figure—in this case 54 ins. back from the centre line. X is \( \frac{1}{4} \) in. above B.

23 from 13 is \( \frac{1}{4} \) in.; draw a line from 23 to X.

With X as pivot, sweep from 23 to 24, making the distance between these two points \( \frac{1}{4} \) scale less 1 in.

25 from 13 is the same as the back shoulder (7-16) less \( \frac{1}{4} \) in.; 26 is \( \frac{1}{2} \) in. below 25.

Connect 21-23 and 24-26; mark 27 at \( \frac{1}{4} \) ins. above 10 and shape the yoke as indicated.

28 is approximately midway between B and 10; square down to locate 29.

30 from 29 is \( \frac{1}{4} \) in.; 31 from 29 is \( \frac{1}{4} \) in.

Mark a seam step at each side of 28. The back side-seam is drawn from one step through 30 to 31; the forepart side-seam is drawn from the other step through 31 to 32.

34 from 9 is \( \frac{1}{4} \) ins.; 35 from 22 is the same.

36 is about \( \frac{1}{2} \) ins. above 34; 37 from 20 is \( \frac{1}{4} \) scale less \( \frac{1}{2} \) ins.; 38 from 37 is 1 in. \( \text{net} \) (variable to revers or lapel width desired).

Shape the gorse, front edge and bottom edges as indicated.

The top of the centre vent (marked by V) is \( \frac{1}{2} \) in. above point 4.

The standard back pitch mark for the sleeve will be at point 39; a lowered pitch (sometimes called a fashion pitch) is marked \( \frac{1}{8} \) ins. down from 39.

The front sleeve pitch is \( \frac{1}{4} \) ins. above the yoke base.

A, on the forepart side-seam, is about \( \frac{1}{2} \) ins. down. The line from it through X can be used for bust dart transfer (discussed in Chapter VIII).

**Fitting Jacket Draft—Plate XXVII**

Having dealt at some length with the principles of pattern dressing so far as jackets are concerned, and having given details of a draft for a loose-hanging style of garment, I will close this chapter with the draft for a close-fitting garment.

The basic structure illustrated by Diagrams B and C of Chapter V can be used for the drafting of a pattern for this jacket; the draft actually shown for it has been largely derived from that structure.

Again, the system is arranged net; seam allowances are to be made at the time of cutting the garment from the cloth. On the other hand, the draft can be made from the system, then the parts (back, side panel, rear forepart panel and front forepart panel) can be traced through separately on another sheet of pattern paper; afterwards, seam allowances can be marked round each part.

The design of the jacket includes a back section with a centre seam and with a waist dart in each half; a side panel section, and a forepart with a seam running through from bust dart to hem, thus forming two panels; the rear panel of the forepart also has a waist dart. The bust dart, I should add, is rendered in its "styled" position and it forms, of course, the upper part of the front panel seam.

Measures for the draft are: 15 ins. natural waist (nape to back waist hollow); 24 ins. full length; 7 ins. across back (half-back); 36 ins. bust; 26 ins. waist; 38 \( \frac{1}{2} \) ins. hips-seat.

**DRAFTING SCALE—\( \frac{1}{4} \) bust plus 6 ins.**

To commence the draft, mark point O and square lines in both directions from it. Now mark off the various points and lines as indicated in the following explanation.

O-1, \( \frac{1}{4} \) scale plus \( \frac{1}{4} \) ins.; O-2, waist length; 2-3, \( \frac{1}{4} \) ins.; 3-4, full length; 5, midway O-1.

2-2X, \( \frac{1}{4} \) in. indent; 4-4X, \( \frac{1}{8} \) in. "spring." 

O-5, \( \frac{1}{2} \) scale less \( \frac{1}{4} \) in.; 7, \( \frac{1}{2} \) in. up.

5-8, half-back; square up and down, locating 9.

1-10, \( \frac{1}{4} \) scale less \( \frac{1}{2} \) in.; 1-11, \( \frac{1}{8} \) bust plus \( \frac{1}{4} \) ins.

10-12, \( \frac{1}{4} \) scale less \( \frac{1}{4} \) in.; square up to 13 on line O.

13-13X, \( \frac{1}{4} \) scale less \( \frac{1}{2} \) in.; 14, \( \frac{1}{8} \) in. above 5; connect 14-13X and continue the line.

15-16, \( \frac{1}{4} \) in.; 16-17, \( \frac{1}{4} \) ins.; top of side-seam, \( \frac{1}{4} \) in. out.

18, 19, 20, 21 squared from 11; 20-21, \( \frac{1}{4} \) in.

22 squared from 11; 22-23, \( \frac{1}{2} \) scale; 23-A, \( \frac{1}{2} \) ins. B, \( \frac{1}{8} \) ins. in front of 12 and \( \frac{1}{4} \) ins. below it.

With B as pivot, sweep from A to 24—\( \frac{1}{2} \) ins. in this case.

Combined amounts of 23-A and 24-25 = 7-16 less \( \frac{1}{4} \) in.; 26 is \( \frac{1}{4} \) in. below 25.

10-27, \( \frac{1}{8} \) ins.; 10-28, \( \frac{1}{4} \) ins.; square down to 29 and 30.

31 from 2X is about \( \frac{1}{4} \) waist.

Waist suppressions are as follows: \( \frac{1}{4} \) in. at dart W, \( \frac{1}{4} \) in. at 31-32, \( \frac{1}{4} \) in. at 29, \( \frac{1}{4} \) ins. at 33 and \( \frac{1}{4} \) in. at 34. The last three points are raised above line 2-18 the following amounts: 29, \( \frac{1}{4} \) in.; 33, \( \frac{1}{4} \) in.; 34, \( \frac{1}{4} \) in.
Hips-seat arrangement: ⅛ in. (full) opening at 33-35X, ⅜ in. overlap each side of 30 and ⅛ in. opening at H.

The above calculations will give the following amounts: Half waist plus ⅛ in. from 2X to 18; half hips-seat plus 1⅛ ins. from back-seam at 3 to 19.

36 is 2½ ins. below 22; 37 is 1 in. out from the centre-front line and will mark the end of the lapel crease line. In this case, the latter line is drawn from a position ⅛ in. from point 23. Point 37 is placed 1½ ins. above 11.

S is 1½ ins. out from the centre-front line and is about 4½ ins. below 37; this gives a slight rounding of the front edge, a characteristic of the jacket. There will be a full effect over the region indicated by the dash line.

F is 1½ ins. from 18; 38 is 1½ ins. from 21.

The front sleeve pitch mark is at M—⅞ in. above point 10; the normal, or standard, back pitch mark is at 8; a lowered pitch (sometimes referred to as a "fashion" pitch) is marked at N—⅞ in. below point 8.

Complete the draft as indicated.
CHAPTER VII

Drafting of Patterns—3

At this stage it will be appropriate to deal with the cutting of sleeves and to make notes on certain standard styles of collar that are featured in jackets and coats at the present time.

There are, of course, many different types of sleeve—their various style and fitting characteristics being related to the general designs of particular garments. Apart from the magyar types, however, it can be said that all sleeves are derived in structure from the two-piece and the one-piece types. I have put the two-piece first because it is used most extensively at the period in which I am engaged on the preparation of this book.

The method of cutting the two-piece sleeve to be described and illustrated here is one which is comparatively simple to carry out and which will give a reliable basis for the drafting of sleeve patterns that have slight variations from the plain style. This method, or system, relates the sleeve draft to the scye of the jacket or coat—an important consideration. References will now be made to Plate XXVIII.

Section A depicts the scye (or armhole) of a jacket, similar to the type detailed in Chapters V and VI. Point A marks what is usually called the standard back pitch for the sleeve; it is located on the line which marks the across-back dimension (the half-back). This point will be a certain distance up from B, located on the depth-of-scye line, or the chest line. Points C and D denote the back and front shoulder-points (or shoulder ends as they are sometimes called).

The front pitch mark is indicated by E, fixed at ½ in. above the scye base as denoted by line B. This location is satisfactory for a wide range of figure types in which the hang of the arm can be regarded as normal (see Figure 1, Plate XI—Chapter I).

Point F locates what is termed a “fashion” or “dropped” back pitch mark. The idea here is to keep the hindarm seam of the sleeve as concealed as possible; the lowering of F below A in this manner will have the effect of placing the hindarm seam of the sleeve, when the latter is inserted, somewhat under the arm of the wearer.

The Sleeve Draft

Section B—This shows the constructional basis of the sleeve pattern, the uppermost part, or top-half as it is technically termed. The following explanation concerns this preliminary structure.

Mark point O in a convenient position on the pattern paper and square lines laterally and vertically from it.

1 from O is the same as A to B on Section A.
2 from 1 (diagonally) is the same as the combined distances of A to C and D to E, less 1 in. The measurement of D to E is taken in a straight line from point to point—not round the curve of the scye.
3 is midway between points O and 2.
4 from 3 is 2 ins. for a normal pattern, or it may be made a portion of the drafting scale (see notes in Chapter V). On the other hand, there is a method of relating the height of point 4 in relation to the height of the jacket shoulder-points (C and D of Section A). This will be dealt with at a later stage.

5 from 2 is the length of the sleeve, less the amount of the across-back measurement (if this is included) as indicated in Chapter V.

If the reader will refer to Plate XVII (Chapter III) he will see how the sleeve measure is usually taken. As an example, let us imagine that we have measures such as 7 ins. across-back, 20 ins. to elbow and 30 ins. to wrist (or cuff). In this case we are actually including the across-back measure in the length to elbow and the length to wrist; therefore it has to be taken into account when we
register the sleeve length at point 5. The tape is swung forward when the length measure is applied, as indicated by the double arrow at that point.

Application of the length measure is made by placing 7 ins. (on the tape) at point 2 and sweeping forward the length (30 ins. in this example).

The length to the elbow can be applied at point 9 (with the same deduction of the across-back); but I have decided in this instance to locate point 9 by another method.

6 is fixed by squaring on to 5 from line O-1. The distance between points 5 and 6 will depend on the width it is desired to make the cuff of the sleeve. For this draft I have made the distance ½ scale (half bust) less ⅛ in.—an average amount for present-day styling of the two-piece sleeve.

7 from 6 is ⅛ ins. to ⅛ ins.; 8 is midway between 1 and 7, a reliable plan for locating the elbow line in a basic pattern—and in one for which no elbow length measure has been provided.

9 is either squared from 2 and 8, or it may be located by application of the elbow length measure already mentioned.

10 from 8 is 1½ ins. Connect all points by the straight dot-dash lines indicated and complete the framework for the top-half.

Section C—On this diagram we see the completed draft of the top-half, with the under-half (underneath portion of this kind of sleeve) superimposed.

11 is 1½ ins. below 2 (the amount of the distance between A and F on Section A) and is full ⅛ in. out from the squared vertical construction line.

The crown of the sleeve is now shaped from a
position $\frac{3}{8}$ in. above 1, through 4 and 2 to 11.
There is $\frac{3}{4}$ ins. of rounding added beyond line 1-4 and $\frac{1}{2}$ in. beyond line 4-2. Note the gradual
shaping of the crown (or sleevehead) between
these constructional points.

Point 12, which forms part of the under-half, is
squared from 11 and the distance from 1 to 12 is
the same as the under-sleeve of the jacket (see
Section A) and is applied in a straight line. In the
taking of the under-sleeve measure—between points
E and F of Section A—an allowance of not less
than $\frac{1}{2}$ in. is usually added; this provides a certain
easing-in of the under-half when the sleeve is
being put in by the tailor.

13 is squared out from 1 and is made $\frac{1}{2}$ scale
(half bust).

The under-half can now be shaped out as
indicated from 12 down the hindarm, passing
about 1 in. in from 9 and full $\frac{1}{2}$ in. in from 5.

If this sleeve is intended to have its forearm seam
running down from the position just above point 1,
it will be drawn as the dash line running down
from that position and passing $\frac{1}{2}$ in. in front of 10
and then down to 7. However, it is common
practice nowadays to arrange what is called a
"false" forearm—that is, an extension of the
top-half and a corresponding reduction of the
under-half on the forearm. This will bring the
placement of the forearm seam under the sleeve—
usually about $\frac{1}{2}$ in. The "false" forearm has
been incorporated in this draft in the following
manner:

14 is marked $\frac{1}{2}$ in. out from 1 and 15 is marked
the same amount out from 7; the revised forearm
seam is then drafted as shown from 14, passing
$\frac{1}{2}$ in. inside 8 and down to 15.

On the under-half, there is a marking back of
$\frac{1}{2}$ in. from 1 to 16 and the same from 7 to 17. The
under-half forearm is then drafted as 16, passing
$\frac{3}{8}$ in. inside 10 and down to 17.

Separated Parts

In drafting the sleeve sections (top-half and
under-half) in this way we get a kind of composite
pattern. It will be necessary now to trace the
outlines of the under-half (12-16-17, the point
inside 5 and that inside 9 on to 12) by means of a
tracing-wheel on to a separate piece of paper.

To give the reader a clear indication of how the
two patterns will finally appear, I have prepared
Section D (top-half) and Section E (under-half).

If the "false" forearm is not to be included in
the pattern, the latter will be drafted with the run
on the top-half as indicated by the dash line 1-2
and on the under-half by the dash line 3-4. When a
"false" forearm is to be included, there will be

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**FIG. DS**

the forearm seam shown by the solid outline
beyond 1-2 on Section D and the solid outline in
from 3-4 on Section E.

**Crown and Shoulder Relation—1**

As already stated in this chapter, I said I
would deal with the relation of the sleeve
crown height to that of the shoulder-points
height. I propose, then, to detail two methods
of assessing the relationship. Each will be
shown in connection with a particular design
of jacket.

I shall deal first with a style of jacket in which
the shoulder ends have been slightly reduced in
width and made a little lower. That is, the length
of the shoulder-seam has been made a little less
than what is considered to be normal for a tailored
jacket and the shoulder-points have been dropped.
The finish of the shoulder and sleevehead in a
garment of this style will be soft; the two will merge
smoothly into each other and there will be an
absolute minimum of padding inserted.

The jacket is illustrated by Figure DS and I will
give a full description of the draft for it, as there
are many interesting features in the design.
Further, this draft will afford another example of
what can be done with the basic structure
described in Chapter V.

First, a few notes on the design. The jacket is
short, with a run-up effect at the front: it carries
four buttons. There is a kind of sailor-style reves
which terminate at the shoulder- seam; the back neck is finished on cardigan lines. Slight waist shaping is effected by means of darts and a very small amount of suppression at the side-seams. There is a centre back-seam. The hem of the jacket carries a laid-on band (or it may be seamed on). The sleeves are fashioned to a little below the elbow of the wearer and can be cut on standard two-piece lines. There is a laid-on (or seamed) cuff to match the band on the jacket.

Measures for the draft: \(15\frac{1}{8}\) ins. to waist; 20 ins. full length; 36 ins. bust; 19\(\frac{3}{4}\) ins. to elbow; 24 ins. sleeve length. (In this case I have not quoted an across-back measure; I demonstrate a plan for fixing the half-back width in the system of drafting. This plan is useful if, for any reason, an across-back dimension is not available.)

Scale is \(\frac{1}{2}\) in. plus \(6\) ins.

The draft is neat— all seams to be allowed at the time of cutting.

The draft is indicated on Diagrams 1 and 2 of Plate XXIX, the former diagram showing the initial basic construction and the latter depicting the resultant pattern after manipulation for the design.

Diagram 1— The basic structure here will be found suitable for any short-style jacket in which a strictly moderate waist shaping is required.

To commence the draft, mark point O and square lines both ways.

1 from O is \(\frac{1}{4}\) scale plus \(\frac{3}{4}\) ins.; 2 from O is the waist length.

3 from O is the full length; 4 is midway O-1.

5 from O is \(\frac{1}{8}\) scale less \(\frac{1}{4}\) in.; square up \(\frac{1}{4}\) in. to 6.

7 from 1 is \(\frac{1}{4}\) scale plus 1 in.; 8 is squared from 7, its location being established later.

9 from 1 is \(\frac{1}{8}\) scale less \(\frac{1}{4}\) in.; 10 from 9 is \(\frac{1}{4}\) scale less \(\frac{1}{4}\) in.

11 from 1 is half bust plus \(1\frac{1}{4}\) ins.

12 is squared up from 10 on to line from O.

13 from 10 is \(\frac{1}{4}\) scale less \(\frac{1}{4}\) in., connect 13 to X, placing the latter point \(\frac{1}{2}\) in. above 4. (Point 8 is thus established.)

Y from 8 is \(\frac{1}{2}\) in.; 14 from 13 is \(\frac{1}{4}\) in. less than 6 to Y on the back and is \(\frac{1}{4}\) in. below line 13-X.

Shape the scye as indicated, passing \(\frac{1}{2}\) in. in front of line 7-8. 15 is squared from 11; 16 from 15 is \(\frac{1}{4}\) in.

Draw a line through 11 and 16 to locate 17 and 18, the last point being at the level of 13.

19 from 18 is \(\frac{1}{4}\) scale, squared by line 17-16-11.

A from 10 is \(1\frac{1}{4}\) ins.; square the same amount from A to B; now draw lines to connect B with 13 and 19. This forms the basic bust dart; it will be "closed" later and its influence transferred to a seam which runs from B through C to D. Point D is \(\frac{1}{8}\) in. above line from 3.

E is \(\frac{1}{4}\) in. above 17; \(\frac{1}{4}\) ins. is allowed beyond line E-16-11 for front edge. The gorge is shaped from 19, passing about 2 ins. below 18.

20 is placed on the scye curve, at about \(1\frac{1}{2}\) ins. from 7.

Square down from 20 to locate 21 and 22. Suppress \(\frac{1}{2}\) in. at 21 and overlap \(\frac{1}{2}\) in. at 22.
Complete the outlines as indicated, adding about \( \frac{3}{4} \) in. of "spring" at the bottom of the centre back-seam at \( \text{g}. \)

The standard back pitch (BP) is on line \( \text{i} \); the front pitch (FP) is \( \frac{3}{4} \) in. above \( \text{g}. \)

**Diagram 2**—This diagram shows the back and forepart patterns cut out separately and manipulated for the style features.

The back neck is raised from \( \text{O} \) to \( \text{v} \) and from 6 to 24—\( \frac{1}{4} \) in.

The forepart neck is raised a similar amount as at 19-13 (established after the closure of the bust dart) to 26.

The narrower and lower shoulder which is the characteristic feature of this jacket requires modification of the pattern. The following procedure is adopted: First, lower the back about \( \frac{1}{4} \) in. from \( \text{Y} \) to 25 and the forepart \( \frac{3}{4} \) in. from \( \text{t} \) to 28; then shape the seye as shown by the solid outlines from 25 and 28 to 20. Width of revers at the top is \( \frac{1}{4} \) in.

With the closure of the bust dart there will be an opening at the part of the pattern below \( \text{B}. \) Hollow \( \frac{1}{4} \) in. at \( \text{C-C} \) on the panel seam, thus making a suppression of \( \frac{1}{4} \) in. (This suppression may be increased, if desired, but the styling of the jacket does not call for a very defined waist.)

The Sleeve

The sleeve pattern for this jacket obviously has to be constructed in accordance with the structure of the shoulder-points as they are found in Diagram 2—after the manipulation of the basic pattern. It is here that we can see the importance of the crown-shoulder relationship.

**Diagram 3**, which is really an extension of Plate XXIX, indicates the sleeve as drafted in the seye of the jacket, a plan I have described earlier in this chapter.

I must mention that this sleeve draft diagram is not reproduced in exactly the same scale as Diagrams 1 and 2 of Plate XXIX; but this does not in any way affect the explanation of the sleeve structure.

Points 25 and 28 are in the positions they occupy on Diagram 2; the pitches are marked as in Diagram 2. A lowered pitch is indicated by LP, full \( \frac{1}{4} \) in. below the standard pitch (BP). Lines are drawn through BP and LP.

To construct, first make A from FP, diagonally, the same as the combined distances of BP-25 and 28-FP (measured straight), less \( \frac{1}{4} \) in.

Square down from A to locate B, D, and E.

B is square with FP; D and E are the elbow and full lengths, less the across-back amount (centre back to BP, Dia. 2).

C is \( \frac{1}{4} \) in. below B; connect C-FP and square down by the line from FP to locate F and G, which are squared out from D and E respectively.

H from \( \text{F} \) is \( \frac{1}{4} \) in.; \( \text{I} \) from \( \text{G} \) is \( \frac{1}{4} \) in.; \( \text{J} \) is \( \frac{1}{4} \) in. above \( \text{I}. \) The forearm is shaped from FP through H to J, the latter point being a little over \( \frac{3}{8} \) in. from line F-G.

\( \text{L} \) is midway between \( \text{A} \) and the line up from FP; \( \text{M} \) from \( \text{L} \) is \( \frac{1}{4} \) in. more than midway \( \text{L} \) and the line from FP.

\( \text{N} \) is squared up from \( \text{L} \) and is \( \frac{1}{4} \) in. below the line joining 25 and 28. Shape the crown, FP-M-N-A, continuing to \( \text{O} \) which is from \( \text{A} \) the same as LP is below BP.

\( \text{K} \) from \( \text{J} \) is \( \frac{3}{4} \) in. in this case; shape the hindarm from \( \text{O} \) to \( \text{K} \), passing about \( \frac{1}{2} \) in. from point D.

This completes the top-half. For the under-half, mark back \( \frac{1}{4} \) in. from FP to 2 and draw the forearm as the dash outline. Measure the under-sye between the pitches, allow for about \( \frac{3}{4} \) in. of easing-in and then locate point 1, level with \( \text{O} \) on the top-half. Complete as indicated.

It will probably have been noticed that the sleeve draft just detailed is different in structure from the first draft dealt with in this chapter. The line FP-B is squared from the front pitch line; then there is a drop from B to G, another line being drawn from the latter point into FP. Later, the
line F-G is squared down from FP by the line FP-G, not FP-B.

This arrangement is sometimes adopted by cutters when they want to introduce a more forward hang to the sleeve than that which would result from the basic sleeve draft described at the outset. It is effective for a short sleeve.

The structure which gives this more forward hang, or tilt, to the sleeve is an advantage when the one-piece sleeve is being drafted. This is dealt with in detail later in the present chapter.

**Crown and Shoulder Relation—2**

Another method of regulating the relationship between the height of the back and forepart shoulder-points and the height of the sleeve crown will now be dealt with. It consists in the marking of certain lines in the scye, these lines emanating from the shoulder-points and the level of the basic back sleeve pitch. The lines are indicated on Plate XXX on page 64 and the sleeve draft for the garment draft illustrated is shown on Diagram 2X.

**Plate XXX**—This draft of a jacket, though derived from the structure detailed earlier, has one or two differences which will be of interest; therefore I have decided to give a full explanation of it.

The draft is for a jacket into which only a limited amount of shape is to be introduced. The back is cut with a centre seam and is styled on the lines of a gentleman’s lounge jacket. The forepart has an under-arm dart and a front panel seam; the latter being taken through to a welted pocket which is set on a moderate slant. At the bottom the fronts are rounded slightly. Lapels (or revers as they are sometimes termed in ladies’ garments) are designed for a roll, or shawl, style of collar. Details for the cutting of this type of collar are given later in this chapter. Following are the drafting instructions for the body-parts.

**Measures:** 16 ins. nape to centre back waist; 25 ins. full length; 7 ins. x-back; 27½ ins. sleeve length; 36 ins. bust; 28 ins. waist; 39 ins. hips.

**Scale for drafting—½ bust plus 6 ins.**

**Draft**—Mark starting point O and square lines both ways from it.

1 from O is ¼ scale plus 3½ ins.
2 from O is the nape to back waist length.
3 from 2 is 8 ins. for normal hip-seat line.
4 from O is the full length.
5 is midway between O and 1.
6 from O is ¼ scale less ½ in.; square up ½ ins. from 6 to 7 and shape back neck from the latter point to O.
8 from 5 is the x-back; square down to locate 9.
10 from 9 is ½ bust measure; 11 from 10 is 1½ ins. 12 from 10 is ¼ scale less ½ in.—2¼ ins., maximum for all sizes.
13 is squared from 12; 14 from 13 is ½ scale less ¼ in.
15 from 5 is ⅞ in.; draw line from 15 to 14, locating 16 where it crosses line from 8.
17 from 16 is ⅞ in.; shape back shoulder.
18 from 1 is half bust plus 1½ ins.; square up and down.

A note is made here of the dimensions given for the location of point 12—⅛ scale less ¼ in., with a maximum of 2½ ins. (as in this draft) for all sizes. It will be remembered that in Chapter V, when reference was made to a similar dimension, the amount stated was ¼ scale—this often left, without deduction or addition, for all sizes.

There is a relationship between the line squared from 12 (present draft) and the front neck-point (22 in this case); and both are closely connected with the amount taken out of the bust dart. The dart in a pattern such as the one we are drafting will form the upper part of the front panel seam. What is taken out here, together with the dimension of 10-12, will give a slightly closer fit in the region of the front scye.

In other words, it can be said that when the location of 12 is nearer the scye then the net ⅛ scale will place it from point 10, there will be a slightly closer fitting effect. More forward placement of 12, on the other hand, will give a slightly looser effect at the front scye.

These factors, directly associated with the bust dart, are dealt with fully in the next chapter.

10 is located at crossing of lines from O and 18;
20 from 19 is ⅛ scale.
21 from 20 is ⅛ scale; 22 from 21 is 1 in.
23 from 10 is ⅛ in. more than midway 10-18.
24 from 23 is ¼ ins. for average bust location.
25 from 24 is the same length as 22 from 24.
26 from 16 is 1 in.; 27 from 25 equals 7 to 17, less ⅛ in.
28 from 9 is ⅛ in.; square down to 29.
Drop ⅛ in. below 2, place one arm of square on this point, with the angle on point 29 and square down from the latter point, thus locating point 32.
33 from 9 is ⅛ in.; 34 from 29 is 1 in.
35 from 10 is ⅛ scale plus ⅛ in.; D from 34 is 3 ins.

Draw the under-arm dart as shown, terminating at 36, about 2½ ins. below D. There is a suppression of ⅛ in. only at D.
37 is drawn straight down from 23; 38 from 37 is 1\frac{1}{2} in. net.
39 from 37 is 3\frac{1}{2} in.; 40 from 39 is 5 ins. and is 4 in. up from bottom edge.
41 is squared down from 18; 42 from 41 is 1\frac{1}{2} ins., through which the front edge is drafted.
The gorge runs through a point 1\frac{1}{2} ins. below 19; shape as indicated. The curve of the front passes through point 43, squared from 4 and 18.
Shape out as indicated and complete the body parts.
On the scye, continue line from 8 to find X on curve. Now draw lines from 17 to X and 27 to 8. B is located where these two lines cross and point A is squared with it.
These are the lines referred to in connection with the arrangement of the sleeve crown and its relation to the shoulder height. The sleeve draft is indicated on Diagram 2X.
First, mark the pitches on the main draft. The back pitch is 1\frac{1}{2} ins. below 8; the front pitch is 3\frac{1}{2} in. above the scye base.
Top-half—Square lines from O.
from O is the same as 8 to 9 on the main diagram—Plate XXX.
2 from 1, diagonally, is the same as the combined distances of 8 to 17 and 27 to front pitch (measured in straight line) less 1 in.
3 is midway between O and 2; 4 from 3 is the crown height, found by measuring from A to B (main diagram).
Connect 1-4, thus locating 5 on line O-2; 6 from 5 is 1⅛ ins.
Connect 2-4 and place 7 midway; 8 from 7 is ⅛ in.
9 from 2 is ⅛ in. more than 1 from O; connect 1-9
22 from 1 is ⅛ scale; 23 from 21, through 22, is the same as the amount of the under-Scye, measured between the pitches on Plate XXX, plus allowance for ⅜ in. easing-in.
24 from 13 is ⅛ in.; 25 from 20 is 1⅛ ins.
Shape out as indicated and complete the draft.

**Crown and Shoulder Relation—3**
To conclude this analysis of crown-shoulder relationship in the business of sleeve pattern cutting, I will give details of a third method—one which can be adopted with comparative ease and convenience. It is illustrated by Diagram 3X.

and then by this line square from 1 downwards for the forearm.
10 from 2 is the sleeve length, less x-back.
Square from 10 to locate 11 on line from 1; 12 from 11 is 1⅛ ins.
13 from 12 is half cuff width required, plus ⅛ in.
14, midway between 1 and 12, is hollowed ⅛ in. beyond line 1-12. This will be the forearm for the fifty-fifty sleeve.
For a false forearm, continue as indicated from 1 to 15; ⅛ in. 16 from 14 and 17 from 12 will also be ⅛ in.
18 from 2 is 2 ins.; 19 from 18 is 1¼ ins. Shape the hindarm from 19 to 13, passing through 20 which is 9½ ins. down from 19 for elbow position. Shape the crown and complete the top-half as shown.

**Under-half**—First mark back the ⅛ in. of false forearm from 1 to 21, placing the latter point level with 15, squaring by 15-16, and then mark through parallel with top-half.

We have here the upper parts of the back and forepart of a jacket pattern. The system used for the sleeve construction is similar to that shown on Plate XXVIII.
The front pitch mark is shown at 1 which is ⅛ in. above the Scye base; the back pitch mark (standard or basic) is denoted at 2 which is 3 ins. to 3⅛ ins. down from the back shoulder-point (R).
3 from 1 is the same as the combined distances of 2-R and S-t (measured in a straight line, not round the scye curve), less ⅛ in.
C is 2¼ ins. above 2 and is actually midway between the vertical levels of 3 and 4, the latter point being squared from 1.
5 is squared from 1 and 3; 6 is ⅛ in. below 5 and is joined to 1. 7 and 8 are both squared from the line 6-1.
The vertical line A is squared by 1-5 and will be used for registration of the particular sleeve length required. Both the length and the width of a sleeve vary with its design.
The constructional framework thus shown may now be used as a basis for the type of sleeve I have discussed so far.

Diagram 1—This diagram depicts the preliminary draft for the one-piece sleeve.

The crown is continued from 2 to D, the distance being the same as that between M and S on Diagram A, plus \( \frac{1}{4} \) in. to \( \frac{3}{4} \) in. for easing-in. Point D is located on an extended line from 1-5.

At the front, the crown is continued from 3 to A, the distance being the same as that between P and S on Diagram A. Point A is located on another extension of line D-5-1. Complete the crown as indicated.

S is squared down by 5-1; F is squared down by 4-1.

C is squared down by 1-5; 7 is squared down by 1-4.

Each of these squarings is made on the line fixed according to the sleeve length required.

Now draw a line from D to E, parallel with 5-C, and a line from A to B, parallel with 1-B. If a loose style of sleeve is required, it may be cut as the outlines A-3-13-2-D-E-B-A.

(The dash line running into 9, of course, is the outline of the two-piece sleeve hindarm.)

A Variation

Close style—It is often required to produce a one-piece sleeve with the cuff part fitting the wrist closer than would be the case if the lower portion of the sleeve were cut in the manner just described.

The method of drafting the closer-fitting style is indicated on Diagram 2.

This is really a pattern manipulated from Diagram 1. Lines from 7 and C are taken right through to 2; lines from 8 and F are taken right through 1 to a point just clear of 3 (see dash line continuations in each case).

The pattern as drafted by Diagram 1 is now cut along these lines; later, 7-C and 8-F are "closed," with the result that the outlines of Diagram 2 are produced.

At the cuff, there is a hollow of \( \frac{1}{4} \) in. from B and a round of \( \frac{1}{4} \) in. into E, as indicated. To effect a closer fit at the wrist, take out a full \( \frac{1}{4} \) in. dart from the cuff to the elbow point (15), as shown by the dotted lines.

One of the most important factors in the construction of the one-piece sleeve is crown height—especially when reductions are made at the cuff of the sleeve in order to bring it closer to the wrist. The plan just described will ensure that no crown height is lost. The following will help to emphasise the importance of this consideration.

Diagram 3 shows the outlines of an arm. The dash lines 1 and 2 are imagined as drawn from the front pitch level and the scye base level,
respectively. Lines 3 and 4 are squared down from line 2 and may be taken to represent the forearm and hindarm of a straight-hanging sleeve; dash lines 5 and 6 represent the hindarm and forearm of a close-fitting sleeve.

If comparison is made between the two lines running from 3 and 4 to the crown at C and those running from 5 and 6 to the same point, it will be realised that although 3 and 4 are slightly longer than 5 and 6, the latter lines will pass closer to the arm. In other words, the fact that the close-fitting sleeve is against the wearer's arm, and not hanging away from it, indicates the requirement of relatively greater crown height.

In Diagram 2, points A and D have been lowered, as the result of the manipulation from Diagram 1; thus the crown height is adjusted. It is not satisfactory merely to reduce the bottom of the sleeve as from nothing at A and D to given amounts at B and E (see Diagram 2).

**Another Construction**

Plate XXXII—The diagrams on this plate show another method of treating the basic one-piece sleeve pattern. In this case, the sleeve has been drafted on a structure which has not incorporated the dropping of the scye base line in order to introduce a more forward-hanging tendency (see my notes on this earlier in the chapter).

The structure without the introduction of the drop at the rear of the hindarm line (as for the two-piece sleeve) will produce a perfectly straight hanging sleeve. This, although it restricts arm movement forward in some degree, is frequently used for sleeves of certain style jackets and coats.

For purposes of explanation of Plate XXXII, let me assume that a pattern has been drafted and cut by the system already described. The two vertical lines from the front and back pitch points have been drawn as before.

**Diagram 1**—Here we see the pattern, with the required lines marked, as 2-A and 3-B. The front part is denoted by 1-6 and the rear part by 4-5. The latter two lines will be brought together to form the under-seam of the completed sleeve.

The sleeve cut by this pattern will be "straight" and will naturally be relatively wide at the wrist of the wearer. It may be left quite plain, or it may have an all-round gauntlet style of cuff laid on. (This cuff feature will depend on the style of garment under consideration and also on the type of cloth being used for it.)

**Diagram 2**—Here we have the pattern after it has been adapted to the requirements of two style features: (1) the close fitting at the cuff, as already
mentioned, and (2) an extension of the jacket shoulder which makes its end come out into the region of the sleeve. For the latter style of shoulder there will be necessary a reduction of the sleeve crown height.

Whatever amount of extension has been given to the shoulder (this is sometimes called a "dropped" shoulder) will dictate the amount to be taken from the crown height of the sleeve. In this example, I have indicated a moderate amount — $\frac{3}{4}$ in. maximum. On Diagram 2 the original crown is denoted by the dash line curve from 2 to 3; the revised run for the lowered crown is shown by the solid line curve between the same two points.

It is simply that the area denoted between the dash run and the solid run is a representation of the amount the shoulder of the jacket pattern has been extended over the top of the arm.

A method of producing the "elbow room" is indicated on this diagram.

Line E-E is at the elbow position and point 7 is marked where the line crosses line 3-B. Now mark from B to 8 an amount it is decided will be correct for the further reduction. Cut along line E-E from the one E to 7; fold the pattern along B-7-8.

**Diagram 4** shows the finished pattern, with a short dart marked into the elbow point.

**Notes on Pitching**—A few notes on the pitching of this kind of sleeve may not be amiss. They will apply to the present style and to others with similar design features.

The sleeves will be pitched in the positions, with notches made at points 2 and 3—to attach to the marked front and back pitch positions on the scye of the jacket. That is, of course, for the sleeve-hang required for a normal figure. Variation of pitch will be made when required.

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**PLATE XXXII**

**Cuff Size**—Now let us assume that the sleeve being prepared is one which has to fit very close at the wrist of the wearer. The pattern will be treated in very much the same way as that described in relation to Plate XXXI.

The first procedure is to mark on each side of the lines A-2 and B-3 (first marked on Diagram 1), at points A and B, an amount which will bring the cuff down to a little more than the wrist size when the two "new" lines running from A to 2 and B to 3 are brought together. The "closure" of these lines will result in the pattern indicated by Diagram 3.

There is a difficulty in the provision of "elbow room" in the one-piece sleeve when it is constructed on the basis described so far—hence the arrangement of cuff reduction which will allow a margin for a further bring-in at the wrist. A

It will be realised that this method of marking the pitches on the scye to coincide with points 2 and 3 of the sleeve departs somewhat from general practice, as well as from the method detailed earlier in this chapter. However, it does ensure that the sleeve will hang from the real points of suspension on the scye. This will be found of advantage in the one-piece sleeve structure and will provide the cutter with a reliable check for pitch and for distribution of fullness.

**A Tailoring Note**

As I have been discussing the extended, or "dropped," type of shoulder and its relation to the crown of the one-piece sleeve (or to the two-piece), I will conclude the subject by taking an aspect of tailoring a jacket or coat with this styling.
This aspect concerns the "building-up" of the shoulders and the shaping of the sleeveheads after the sleeves have been sewn in to the armholes. It is largely a matter of well-planned padding operations. References will be made to Plate XXXIII.

**Figure 1**—This shows the front of a model stand. Layers of padding are placed in position on one shoulder. A is wadding, B is felt padding and C is thin linen canvas. The greatest thickness is placed at the shoulder end (X); it extends outwards according to the amount required to pass into the sleevehead.

**Figure 2**—In this side view of the stand the thinnest part of the padding is indicated by the arrow (2). All the materials used in the padding are moulded in order to fill up the relative hollow in the chest area (this will vary with different figures). Extension to the upper part of the model’s bust (where the paddings are carefully thinned out) will ensure the gradualness that is so important.

**Figure 3**—Here we have the back view. Note the extension over the shoulder end at 3. The padding, it will be observed, is not brought down very far at what will be the back scye region. Drape is to be preferred here. However, in cases where drape is not wanted, and when customers express a wish for a "clean" appearance here, padding can be carried down as indicated by the double lines (G and H) on **Figure 4**—a front view again.

There may also be cases in which it is not necessary to take padding down to the upper bust area. In such cases, shape it as indicated by the double line (F).

Other points to note on **Figure 4** are these:
- Extension of padding at 4 and the dash lines D and E. The latter mark the region where the greatest thickness is usually required.
- **Figure 5**—This suggests the "closed" scye. The different amounts of padding are indicated.
- The curve marked 5 denotes the limit of the actual shoulder; that marked 6 shows the minimum of shoulder extension; that marked 7 indicates the amount taken down into the sleevehead.

**Sections A and B**—These give an impression of the amounts of padding that may be allowed to pass into the sleevehead. A shows a fairly long extension of padding; B illustrates a quite small amount—about the same as that used in the standard type of sleevehead when no "drop" is intended. In each case the wadding used will be carefully thinned out at its lower edge.

**This method of padding the shoulders is**
applicable to a number of different types of
garment in which the main style feature is
an extension of the shoulder and a natural
rounding of it. The amount of shoulder
height required will dictate the quantity of
padding used—as will the type of figure of
the customer concerned.

A MAGYAR CONSTRUCTION

Although I shall be dealing with the cutting
of magyar patterns in the second part of this
book—in greater detail—I think it is fitting to
conclude this chapter on sleeves with an
example of the magyar style. In many
respects there is a relationship.

For the purpose, I have selected to describe
a draft for a particular style of jacket in which
the magyar sleeve is featured—see Plate XXXIV.

This pattern draft has an inset yoke-piece at
the top of the forepart. This is sewn in vertically in the
position normally taken by the shoulder bust dart,
or the upper portion of a panel seam. The yoke-
piece is taken laterally across the forepart and is
continued into the front edge. The sleeve portions
are made fairly narrow at the wrist and the upper
parts of them are constructed so that there is
reasonable room provided for the figure’s arms
and shoulder ends. There is provision for a
reasonable amount of arm uplift, without the
insertion of gussets—a frequent feature in a magyar-
style garment.

The following measures have been adopted
for this draft: 15½ ins. natural waist (napo
to back waist hollow); 25½ ins. full length; 5½ ins.
side neck to shoulder end; 28 ins. sleeve length
(taken over shoulder); 9½ ins. cuff (finished); 36 ins. bust.

A point about the measure quoted as being
taken from side neck to shoulder end. The
tape is taken about ½ in. beyond the limit of
the shoulder proper: this will give the length
required for the magyar type of sleeve.

Drafting scale—½ bust plus 6 ins.

This draft has been constructed to a net
system—all seams and turnings must be
allowed for when the garment is being cut
from the cloth. Alternatively, the pattern
parts can be traced through from the base
draft on to a separate piece of pattern paper
and seam allowances can be added to the
final pattern.

Diagram 1

Mark point O in a convenient position and
square lines from it in both directions as indicated;
then mark off the following points:

1 from O, ½ scale plus 3½ ins.; 2 from O, waist
length; 3 from 2, 0 ins. for hip line (normal); 4
from O, full length.

5 from O, ½ scale; 6 from 5, 1 in. (net).
7 from 1, ½ scale plus ¼ in.; square upwards and
downswards.
8 from 1, ½ scale less ¼ in.; 9 from 1, half bust
plus 1½ ins.

Square upwards to 10 and 11, and downwards
to 12 and 13; 13 is ½ in. below 12.
14 from 10, ½ scale; 15 is squared from 11 and is
½ scale less ¼ in. above 14.
16 is squared from 7 and O; 17 from 16 is ½ ins.
for normal shoulder slope.
18 from 16 is ½ scale plus ¼ in.; 19 is ½ in. below
18; 20 from 7 is 1½ ins.

Draw a straight line from 5 through 18, contin-
uing towards M. Now shape the back shoulder
through 17, marking the shoulder-end-from-neck
amount at B, continuing the run to M, which
marks the sleeve length. Square M to N, half the
cuff width, and connect N-20.

Draw a straight line from 14 through 19, con-
tinuing towards R.

Mark X at ½ in. from B on the back shoulder line
and connect X-15.
21 from 15 is 3 ins.; A from 9 is 5½ ins.
C from A and E from 9 are each 2 ins.
Connect C to 21 by a slightly curved line.

With C as pivot, sweep from 21 to 22—2 ins. in
this case.

This arrangement of the yoke, which really
forms part of a bust dart, applies only to
figures with a relatively small bust. A larger
dart will be necessary for moderately
prominently-busted figures; and it is sug-
gested that for such figures the seam is
carried below the base of the yoke section,
as indicated by the dash line to D, 1 in. to
½ ins. down. This style of garment is not
deal for very prominent-busted types.

The total distance of 15-21 and 22-F should be
½ in. less than 6-B of the back (F is ½ in. below line
15-X).

Draw from 22 to R, registering the sleeve length
from 15 (allowing for the opening at 21-22) and
mark R; square R-P, the same amount as M-N.
Connect P-20.

23 is squared down from 20 and there is an
"overlap" of ½ in. each side of 23. Shape the
under-sleeve sections and the side-seams as
indicated.

G from 10 is 1½ ins.; 24 from G is 1½ ins.; 25
from 13 is 1½ ins.; shape the gorge and the front
edge as shown.

Mark out a ¼ in. vertical dart at G.
The two sectional diagrams (marked 1 and 2) show the yoke separated from the main body part of the pattern and indicate the method adopted for the cutting of the collar.

**Section 1**—Here we have the draft of the basic collar pattern; it is modelled on Peter Pan lines.

The back and forepart sections are shown laid together at the shoulder seam part, with an overlap of \( \frac{1}{2} \) in. at F-B.

The “bust dart” is closed, as is also the gorge dart.  

H from 24 is \( \frac{1}{2} \) in., for the front of the collar at the neck.

The depth may be made to taste—in this example it is about 3 ins. in the front and 2½ ins. at the sides and back.

**Section 2**—This diagram shows the upper part of the forepart, with the yoke-piece separated and the dart marked.

The type of collar indicated on Section 1, usually called the Peter Pan style, as quoted above, may serve as an introduction to the remainder of this chapter. It belongs to the group of what we can rightly term the standard types of collars adopted for jackets and coats.

**STANDARD COLLARS**

There are already scores of different collar styles that are adopted for the various kinds of jackets and topcoats worn by women at the present time. One could devote a whole book to methods of cutting them. It is not my purpose here, however, to make an exhaustive study of collars. More styles will be dealt with in the second part of the book (to be prepared on the conclusion of the present part). The present volume takes account of a small selection of standard collars and deals with the methods of cutting patterns for them. These methods are basic and can be effectively used for a wide range of collar styles.

**References will now be made to Plate XXXV.**

On this plate, Diagrams A and B show two standard types of collar that can be applied to jackets or topcoats. The former is known as the step style; the latter is called a pointed or d.b. style. It is to be understood that these two diagram drafts show the under-collar section—the part cut in order to define the collar’s ultimate shape—rendered in the half. In other words, there will be two portions like these when the under-collar is being cut from the cloth. This may be of special collar melon or may be from the cloth in which the garment is being made.

**Diagram A**—Here we have the draft for the step collar; it is shown as laid into the gorge (neck portion), with the lapel crease line running well up beyond point X, where it coincides with the gorge curve.

This collar will be cut with a stand portion of \( \frac{1}{2} \) in. and a fall portion of \( \frac{3}{4} \) ins. These dimensions are common for a collar of this type, made to fit fairly high into the neck.

1 from a position on the crease line opposite the front neck-point is the same amount as the back neck of the pattern (see earlier drafts denoting this part).

2 from \( \frac{1}{2} \) in.; draw a line from X to 2.

Points 3 and 4 are squared by the line X-2; 3 from 2 is the stand amount and 5 from 2 is the fall amount.

A slight “spring” may be given to the fall edge from 4 to 5—not more than \( \frac{1}{4} \) in. This is not always necessary, but it has the advantage of adding a certain amount of length to the fall edge. It must be borne in mind, however, that if the “spring” at 4-5 is in any way excessive there will be a kind of “tit” at its termination and this will make an uneven edge and will have the effect of making the fall edge of the collar stand away.

Point 6 marks the gorge position for the end of the collar step; it is placed in relation to the corresponding step of the lapel and in this example is about \( \frac{1}{2} \) in. back from the lapel edge.

7 from 6 is \( \frac{3}{4} \) ins. and there is a slight slant on the line 6-7. This slant, and indeed the whole shaping of the collar-lapel notch (or step) are subject to variation according to the particular style of garment being produced.

The sewing-on edge of the stand can now be drawn from 6 through X to 3, as indicated, and the centre seam of the collar can be drawn as 3-2-1-5, or 3-2-1-4 if no extra fall edge “spring” is thought to be necessary.

The completion of the fall edge is shown by the run from 7 to 4-5; take note of the slight hollow in this run a short distance from point 7. This hollow should always be moderate in a standard collar of the type being discussed.

**Diagram B**—This illustrates the collar for a jacket or coat which is designed with a double-breasted, or pointed, style of lapel. The structure is exactly the same as that described for the step style of collar. Only a styling difference is made, as indicated by the run from 6 to 7 which is made to coincide with the run of the lapel point.

In this example the length of the collar edge at this part (6-7) is \( \frac{3}{4} \) ins.

The shape and width of a collar of this type are
variable according to requirements of design, personal taste and preference of customer.

**The Canvas**—The canvas used for a collar is usually made specially for the purpose and the method of cutting it is shown on **Diagram C**. Here we see the under-collar, with its two halves laid one over the other and with marks indicating the division between stand and fall—the so-called crease edge, or crease row.

The portion of the collar which will attach to the front part of the garment gorge is placed so that it falls on the straight grain of the canvas (see arrows); this will have the effect of placing the stand and fall edges on the bias grain; the crease line, too, will be on the bias. These are the essentials for the correct tailoring of a collar.

At the present time there are various bonded fibre fabrics being used for the interlining of collars; or they may be adopted for the ends of the collar only, being placed over and secured to the collar canvas. It must be remembered that there is no bias in the bonded fibre interlining and that
therefore the shaping manipulations which the tailor carries out will be restricted to some extent.

On the whole, I would say that for collars of the kind I have been describing, which are required to take a shaping on the part of the collar, the canvas interlining is to be preferred. On the other hand, in certain large style collars for ladies' garments the bonded fibre products are of considerable advantage.

**Shawl or Roll Collar**—This is a style in which the lapels and collar, as far as the turned-over, or outside, part is concerned are in one continuous piece—that is, the facing is taken right up over the under-collar (the portion we have been considering so far) to the centre back. In some cases there is no joining seam at the centre back on the outside; in others, a seam is made there.

Whichever plan is adopted for the outside, the under-collar will be cut in two pieces in very much the same way as that adopted for the styles indicated by Diagrams A and B. Cutting of the under-collar for the shawl style is illustrated on Diagrams 1 and 2 on Plate XXXV.

**Diagram 1**—I have taken here the upper part of a topcoat draft and have retained all the points related to the structure of the collar.

**Diagram 2**—Here we see the draft of the collar laid, as it were, in the gorge of the coat. The short gorge dart (39-39 on Diagram 1) has been closed out.

As before, the crease line of the lapel has been taken right through. The gorge, as is usual for the shawl collar, has been made lower and has been given a fairly steep run.

The stand is to be 1 in. and the fall, deeper for the topcoat, will be 2 ins. to 2 1/2 ins.

1 from the level of O (front neck-point) is the amount of the back neck (O to B on Diagram 1).

2 is squared from 1; 1 in.; 3 from 2 is the amount of the stand and 4 from 2 is the amount of the fall, point 4 being squared from S by line 2.

**Fall Edge “Spring”**

A gradual “ spring” of 3/8 in. has been added from 4 to 5, this being usually necessary in a topcoat collar of this type.

6 is placed about 3/8 in. beyond the top of the lapel edge and the stand of the collar is shaped from this point to 3, the greater part of the run being marked about 3/8 in. below the run of the coat gorge.

The fall edge is marked round in a gradual curve, continuing with that of the lapel edge, from 6 to 4-5.

Although this particular collar draft is made for a topcoat, the method of construction detailed applies equally to a jacket style in which the shawl or roll type of collar is featured.

As a final note on the collars so far dealt with, I will again state (mainly for the benefit of the beginner) that the patterns drafted here are for half the under-collar in each case. The cloth collar, when cut, will be in two portions—either in melon or in the material from which the garment is being made.

**Large Style Collars**

Passing reference has been made to large style collars—the style often adopted in the designing of topcoats for winter wear. I will conclude this chapter by giving a few notes and illustrations of four kinds of large collar. References will be made to Plate XXXVI.

**Figure 1**—Here we have the deep style, made to turn down a soft crease edge and taken to fairly long points in the front. Length of fall edge is important in this style of collar. The construction shown will help to provide it.

**Figure 2**—This style is made in such a way as will produce a fold in the collar at a position a little under half-way between the neck and the outer edge. Width is considerable, extending to a little distance beyond the shoulder ends. In the construction of the pattern, the shoulder ends of the back and forepart are well overlapped, which will effect a relative shortening of the fall edge. Another plan is to open the collar pattern and insert short darts.

**Figure 3**—The collar illustrated here is fashioned very high at the sides and the back. It may be cut with a separate stand or may be shaped by darts, as indicated on the diagram.

**Figure 4**—In this style we have a very wide end to the collar, made to meet a similarly wide lapel end. The collar, in two pieces, is formed by folding the lapel back, with the stand included, and marking in the requisite shoulder run.

The constructional details required for patterns of the four collar styles illustrated on Plate XXXVI are set out on each separate draft. There are many possible variations in shape and style which can easily be derived from the structural bases given.

Of course, styles of collars for topcoats—and for jackets too—change as frequently as other features in women's outer garments. The styles I have dealt with here have been in and out of fashion during the last five or six years. However, the principles of construction which I have described are not likely to change very much, if at all, in the course of the next few years. A study of the diagrams will therefore be worthwhile.
PLATE XXXVI

This selection of collars can be regarded as an indication of what varieties of styles can be derived from them as fashions fluctuate from year to year.
CHAPTER VIII

Drafting of Patterns—4

ONE OF the most important factors in the designing and cutting of ladies' garments that are required to possess fitting or draping qualities in parts which will cover the upper front areas of the figure is provision for the bust. This factor is paramount in dresses, jackets and coats. It is with the two latter kinds of garment that we shall be concerned in this chapter which deals with the so-called bust dart and methods of locating and sizing it.

The bust dart which has come to be regarded as the basic one is taken from the shoulder down to the point considered to be that which locates the greatest bust prominence. This applies to each upper half of the garment, for the bust, though referred to by a singular term, is really composed of the two prominences effected by the breasts of the figure. Size, shape and altitude of the female breasts are variable entities, as I have indicated in the first chapter of this book. Further, these entities are modified to a considerable extent by the adoption of different kinds of foundation garments.

Now, the shoulder bust dart can be employed in a garment pattern in its basic position or it can be what is called “transferred” to another position. Its influence will be the same—that of providing room in the pattern and the garment for the prominence. The dart can be an actual dart or it can be part of a panel seam.

To illustrate something of the function of the bust dart, I have selected three photographs. The first (Figure B1) appears on this page and it shows a lady wearing an evening dress in which there is a waist seam, dividing the upper, or bodice, portion from the lower, or skirt, portion.

The shaping of the bodice portion here has been achieved by the taking out of darts from the waist; these, one on each side of the bodice, run upwards from the waist to the bust prominences. When the pattern for this dress was first cut the shoulder and upper chest portions were marked out, with the shoulder bust dart located in its basic position (to be dealt with at length later). This dart was then “transferred” and its influence made to extend from the two waist darts just mentioned. The remaining manipulation of the pattern consisted in the removal of the shoulder sections so that the bust-level style was produced.
reader a clear idea of the purposes of the bust dart and to demonstrate how it can be moved from its basic position in the shoulder area to meet the requirements of different designs of garment.

The Bust Prominences

Let me make a simple analysis of the requirements of the bust dart and its relation to the lateral and vertical positions of the bust prominences. References will be made to Diagrams 1 and 2 of Figure B4.

Closely related to the positions of the prominences is the shape of the figure above and below the prominences—the chest and the under-bust areas. Also, altitude of the bust and the shapes of the areas immediately above and below it are influenced to a considerable extent by the type of corsetry adopted. How can we relate these factors to the drafting of the jacket pattern?

In Diagram 1 I have given an indication of the differences in breast shape and altitude. There is the relatively low placement shown by contour A, the medium placement shown by B and the rather high placement of C. Also, the chest wall may have a "run" such as that indicated by D, or it may have the shaping of E. Either of these chest

**Two Types**

*Figure B2* shows how the shoulder bust dart can become the upper part of a panel seam in a particular type of close-fitting jacket.

*Figure B3* indicates how the bust provision in a close-fitting tailored dress, to be worn under a topcoat in matching cloth, has been effected by the shaping of an under-bust panel seam and by a "transferred" dart from the shoulder to a quasi-horizontal position a little below the level of the scye base.

_These observations will help to give the_
wall shapes (and others) are to be found in figures with any one of the three breast altitudes indicated.

Now let us look at **Diagram 2**, which is intended to illustrate some of the bust dart variations which may be required in order to relate the garment shape to that of the figure.

The chest line is marked by 1; one breast altitude is marked by 2 and another by 3. The latter one is the relatively low placement, and for this we might shape the dart (or top of panel seam) as indicated by 3-4-5. For the other one, however, we should probably have to mark the dart as 2-4-6, because the prominence of the bust in this case is at a greater distance out from the neck (front) of the figure, as from F on Diagram 1.

We should have our measures of across-chest, across-bust and across-front-waist areas—and these can give us a great deal of help in the matter of bust size in its relation to chest and waist sizes—but we still have to calculate for "coverage" and "drape" in the garment we are making.

(The measures referred to above are described and illustrated in the third chapter in this book.)

The infusion of a certain amount of "drape" above and below the bust prominences is something as important as the actual provision of "room" for those prominences. Our problem here is to provide the extra material needed and at the same time to give a pleasing effect to the garment. We must also make efforts to allow the garment to follow the contour of the figure so that feminine lines are preserved.

One difficulty which presents itself is that of getting the requisite length over the bust without producing an excess of length in the lapel crease line in the jacket or coat.

To sum up, then, this is what we have to do: (1) provide sufficient room over the bust prominences; (2) cover the chest and under-bust areas artistically; (3) give adequate length over the bust and down to the waist; (4) avoid too much length in the lapel crease; (5) shape the waist in accordance with the figure and with allowance for a certain amount of ease.
The Basic Dart

It has already been said that the shoulder bust dart is the basic one in pattern cutting; now I shall deal with this dart in some detail and pass on to consideration of various "transfers." **References will first be made to Plate XXXVII.**

There are two main methods of placing the shoulder bust dart on a pattern. One places it in what we might call its styled position, related to the design of the garment, and the other places it in its truly basic position. Until quite recently, most authors of books on ladies’ garment cutting adopted the styled position. I will discuss that now, then I will deal with the basic placement.

**Diagram 1**—This indicates what was the more common placement of the bust dart. On the chest line (1-2) point 3 is marked according to the required placement of the seam; point 4 marks the position of bust prominence on the figure. The gorge curve (5-6) is shaped from neck-point to front centre line. 7 is made a certain distance from 5 and, with 3 as the pivot centre, 8 is swept from 7 to establish the bust dart "opening." The shoulder run is then 5-7 plus 8-9.

In spite of careful checking of lengths, it often happens that when the bust dart is closed the shoulder run is impaired. This is shown by the small inset diagram. The shoulder may be as A-B-C or as A-B-D—neither run being good. A good idea is to mark the dart on the pattern paper, leaving a margin beyond the shoulder, then to fold the dart out. The run of the shoulder can then be marked in, over the folded dart.

**Diagram 2**—Here we see the first stage in the placement of the dart when a straight line is ruled from the bust-point (4) to the neck-point (5). With 4 as pivot centre, 7 is swept from 5, the amount of bust dart "opening" required. The run of the shoulder from 7 through to 9 is continuous. Now, for styling purposes, the placement of the bust dart in the garment will be that indicated by the shaded portion, 4-7-10-4. To achieve this, when the styled pattern is produced, the basic pattern dart (4-5-7-4) will have to be transferred to 4-7-10-4.

**Diagram 2A**—This diagram shows the transfer accomplished. The shaded portion of Diagram 2 (4-7-10-4) has been moved over to the line 4-5.

7 then falls on 5 and the shoulder is marked out as 7-11 (the same as 5-7 on Diagram 1 and 7-10 on Diagram 2). By this process the shoulder line of the basic pattern, as drafted in Diagram 2, is preserved.

The principle applies to any particular styling of the shoulder bust dart—as a dart proper or as the upper part of a panel-seam.

It must be emphasised that these diagrams represent parts of patterns—not drafts on the cloth. Modification of the run of line 10-4, Diagram 2A, as it falls into the bust-point, will be made in the cloth draft according to figure and style requirements.

Whatever methods are used for location of the neck-point, this plan for placing the bust dart will be adaptable to them.

**Basic and Transferred**

We may sum up the foregoing observations by saying that the main function of any type of bust dart—as a separate thing or as part of a seam inherent in a particular design of garment—is to provide shape and covering capacity in the garment over the bust prominences on each side of the figure. As I have already indicated, most modern methods of cutting employ a basic shoulder dart, placed on the pattern in a way which will dictate its function but which will not necessarily locate the dart seam in the place where it will be required for design and style purposes.

Once again, I will give details of the basic shoulder bust dart—making reference to Section 1.

An "opening" is marked at 1-2 (its extent will be discussed later) and lines are drawn from points 1 and 2 to 3, the last point being located at the theoretical bust prominence position. This "opening"—in fact the entire basic dart—will be transferred to any position required by the style design of the garment. Certain placements of what we can term the ultimate shoulder bust dart are indicated on the other diagrams which follow.
Now let us examine the diagrams on Plate XXXVIII.

Diagram A—This shows the two front panels of a typical standard jacket. Chest, waist and hips-seat lines are marked by C, W and H respectively. The bust prominence point is marked at B, about 1½ ins. below line C. The dart referred to above is opened 4 ins. from 1 to 2. There is a point at 3 to mark a tentative location of a waist dart. The panels shown in the diagram are cut as from a set system, no seam allowances having been made—for a relatively close fit.

It is not my purpose at this stage to discuss the amount to be taken out in the dart between points 1 and 2. This will always be governed by the type of figure to be fitted, its shape and size factors. The amount stated above has been proved satisfactory for the majority of figures in which the bust prominences are what most cutters would call normal.

Diagram B—For a jacket in which it is desired to eliminate the shoulder bust dart and to provide for the figure by means of a panel seam running down from the bust prominence point to the bottom, manipulation of the pattern will consist of “closing” the dart B-1-2. The procedure is indicated on this diagram.

Point 2 is brought over to 1, which causes an opening of the lower part of the panel seam as shown on the diagram. The balance levels of waist and hip lines are checked by sweeping, with point B as pivot in each case.

The part of the “closed” shoulder dart between B and CX has actually lost a little of the round which is apparent on the original pattern (rear of the two panels on Diagram A). However, this is not likely to cause any great trouble in the majority of cases.

It will be seen that the run of the two panel seams into point B is rather sharp. This can be rectified when the seam allowance is made when the parts are cut from the cloth. Also, if it is felt that some compensation should be made (as might be the case when cutting for certain types of figure) adjustment can be effected at the time of cutting.

Diagrams C and D—These diagrams show another transference of the shoulder bust dart. Here, the pattern is manipulated to produce a near horizontal dart which runs from the under-arm seam in the direction of the bust prominence point (B).

The first stage is indicated on Diagram C, in which a line is drawn from B to 4, parallel with the chest line of the pattern. Point 5 is marked at 1 in.

below 4 and a line is drawn from 5 to B. The pattern is cut along the line 5-B.

The second stage is indicated on Diagram D. Point 2 is brought over to 1, as in Diagram B. This will cause an opening, as shown at 5-6. Point 7 is marked at about 2 ins. from B and a seam will be allowed from 5 to 7 and from 6 to 7. When the garment is made up the seaming out should be done very carefully, so that the end of the dart between 7 and B is evenly and gradually tapered.

In a jacket where the rear panel is relatively narrow the dart 7-5-6 will, obviously, be comparatively short. This shortness, with the large opening at 5-6, may cause a “sudden” throw of fulness in the region of point B; this, in turn, may give a little trouble to the tailor in the matter of canvassing and shaping at this region.

Diagram E—Here we have an alternative plan in which two horizontal darts are employed instead of one. The initial procedure is exactly the same as that in Diagrams B and C—the shoulder dart is “closed” at B-C. The difference is that the rear panel is cut along the line 4-B as well as along the line 5-B (see Diagram C). The opening is thus distributed in the form of two darts, as 5-11-8 and 4-10-9, points 10 and 11 being placed back from B the same amount as 7 is from that point on Diagram D. Seam allowances are made at 5-11, 8-11, 4-10 and 9-10, as indicated.

Pleat Darting—Sometimes, particularly in sports-style jackets, two pleats are formed at the under-arm position instead of the darts just described. The amount put into each pleat will be determined by the amount taken out in each dart when the latter method is adopted.

The matter of deciding how much shall be “opened” in any transferred dart will arise in all cases; and the decision will be influenced to some extent by type of cloth, style purposes and tailoring possibilities.

In a case like that illustrated by Diagrams C and D, for instance, the original distance between points 1 and 2 can be reduced in the manner suggested by the dot-dash lines indicated by E (Dia. D). If this were done, the aperture at 5-6 (Dia. D) would be automatically reduced, as shown by the dot-dash lines indicated by EX.

Obviously the amount of “opening” at the one end of any transferred dart will be influenced by the amount of opening in the original shoulder bust dart. Again, shaping of the jacket bust can be achieved by a number of other manipulations. So much can be taken out at the shoulder dart, so much at the panel seam under the bust
prominence point, and so much at a horizontal dart, or darts. In short, there can be various combinations of darts and panel seam suppressions.

There are many different style features in jackets and coats worn by women; and it often happens that the standard shoulder bust dart has to be transferred to other parts of the garment.

What must always be borne in mind is the fact that adequate provision must be made for the figure's bust.

**An Experiment**

More than one reference has been made to the amount that should be taken out of the upper part of a shoulder bust dart—either the basic one or the styled one. Various methods have been adopted, some taking a proportion of the bust measure or of
the scale, others working on the difference between the upper across-chest measure and the across-bust measure. So far as these assessments can be applied to basic block pattern construction, they are useful; on the other hand, they are not really related to the actual shape of the figure.

Thinking over this matter a few years ago I came to the conclusion that the factor which should be taken into account was the distance of an imaginary line, drawn from the bust prominence position upwards, from the level of the front neck of the figure. The idea is illustrated by the small shaded drawing on Plate XXXIX (described later). The vertical line is denoted by X-P on the shaded diagram; from the latter point another (horizontal) line is drawn to the front neck indicated by N.

It seemed to me that if we could record the distance from P to N we should have a very reliable guide as to the amount required to be "taken out" of the upper part of the bust dart. This is, in a way, like the application of a paper pattern to a model-stand. The paper is shaped to the stand in the bust area and the surplus above the bust prominence is folded out, thus indicating what will be the bust dart in the completed pattern.

What I did in order to make the experiment on these lines is illustrated by the drawing marked **Figure A** and the photograph marked **Figure B5**. The method of application was tried on a number of different figures and I felt that the information it supplied was very valuable. The procedure is simple enough and I will describe it in detail here.

The required "apparatus" can be very easily provided. It consists of two 18-inch rules, a length of plain tape and a short piece of wood.

**Figure A**—This shows the length of tape attached to the short piece of wood, to form the halter-like entity. The tape is fixed to the ends of the piece of wood by means of strong drawing pins.

**Figure B5**—The halter is placed round the neck of the figure and the length of the tape is adjusted (by pinning) in order to allow the piece of wood to fall on and extend across the bust at its most prominent part.

One of the 18-inch rules is held in a vertical position, touching the piece of wood; the other
rule is placed horizontally against the first rule, its one end touching the front neck of the figure. Note is then taken of the measurement recorded on the horizontal rule from the neck to the vertical rule. The amount thus recorded will be that to take out at the top of the shoulder bust dart.

To illustrate the application of the measure taken in this way, I have prepared diagrams—

**Sections A and B on Plate XXXIX.** These diagrams will also convey to the reader a further method of basic bust dart transference.

**Section A**—This shows the draft with the top of bust dart (A-A) “opened” the same amount as registered from the vertical stick to front neck (similar to P-N on the small shaded diagram in this plate). The bust point is marked at B. Suppressions on the front panel seam (3-4) and the side dart (5-6) have been made in accordance with the measures.

In this experiment I transferred some of the bust dart amount to the panel seam under point B; and I eliminated dart 5-6, substituting two smaller darts—located on the dash lines C and D.

**Section B**—Here the shoulder bust dart has been “closed” about one-fourth of its original amount at 1-2. The amount taken out of the dart 5-6 (Sect. A) has been distributed to produce the two darts C and D, the tops of which are set in a line sloping towards the bust prominence position.

From the resultant pattern shown on this section I cut a short shell jacket—it reached to about upper hip level and was remarkably satisfactory in fit. The shell jacket is illustrated by the photograph marked Figure B6.

**Further Aspects**

There are two further aspects of bust dart function which we might consider here: (1) the relationship of the foundation garment (brassiere) to the natural breasts and (2) the relationship of bust prominence to the under-bust area. References will be made to Plate XL.

In this plate, the drawing on the extreme left shows a natural figure (side torso) in solid outlines. The natural breasts are relatively low and their prominences will fall on the line B1. The contour indicated by the dash outline is what often results when the brassiere is worn. The so-called uplift of the bra will cause the prominence of the breast to be raised to the line B2. It will also be noticed that the shapes of the chest area, immediately above the bust (on line C), are considerably different. Further, the vertical line 1, taken from the front neck level and passing over the bust prominence, is more forward than the similar vertical line 2. The former line relates to the figure wearing the bra and the latter relates to the natural figure. It would appear that the higher location of the
breast prominence requires a larger "opening" of the top of the bust dart, if we are to take the findings of the experiment I have described. This is indeed the case.

There may also be, as the result of other foundation garments—girdles, corsets, etc.—a "pushing-in" of the front waist of the figure. We can compare the natural shape (W1) with the girdled shape (W2). The difference here will dictate a difference in the treatment on the pattern of the under-bust area. It will be possible, as has already been indicated, to transfer some of the bust dart influence to a seam which will pass over the under-bust area. This seam, of course, will be dependent on the design of the garment that is to be cut.

The second drawing from the left shows a figure wearing a bra and gives an impression of the contours which are found above and below the prominence of the bust (see the vertical dash line and the horizontals A and B).

**Pattern Part**

Now let us look at the diagram next to the figure we have just mentioned. This shows part of a forepart pattern in which the shoulder bust dart (1-2-3) has been assessed in such a way as will permit a transfer of some of its influence to the waist line by means of a suppression on the panel seam at 4-5. There has been a reduction (required) on the upper chest (line 6-7) and a slightly smaller one on the chest line proper (scoye-depth level, 9-9). These are in contrast, as they are in the figure, to the area along line 10-11 which coincides with the bust prominence position marked by 1. The waist, from the front-of-scoye vertical line from 7, has been reduced between points 12 and 13, again in accordance with what is required by the figure and by the particular style of the garment. In this example the latter is a panelled front jacket.

This diagram will serve to indicate and to emphasise the relationship which exists between the bust prominence, the over-bust and the under-bust regions of the figure.

A word about the small diagram at the extreme right of Plate XL. This represents the basic shoulder bust dart and its structure for two figure formations. Line 1 indicates the upper chest line, line 2 denotes the chest line proper and line 3 marks the bust prominence line.

If we assume that the bust dart is adjusted to the prominence line 3, it will be shaped out as the solid outlines 3-4-5, the length of 3-5 being made to conform with the length of 3-5 by means of a sweep from 4 to 5, with point 3 as the pivot. On the other hand, if the location of the bust prominence is higher (as the dash lines on the extreme left-hand figure indicate) the dart will be shaped out as shown by the solid line 4-2 and the dash line 2-6. The length of 2-6 will be made the same as that of 2-4 by means of a similar sweep to that just described, but with the pivot at point 2.

I think that I have now given adequate treatment of the shoulder bust dart and its function, together with some details of various transferences of its influence in a garment pattern. There are other forms of transfer, of course, as may be dictated by certain styles of garment—the transfer to a gorge dart, for instance. These other forms will be discussed in the second part of this work which is to be prepared later.

![Diagram X](image)

**A Style Matter**

There is a matter connected with the bust dart in its styled position about which I will make a few comments—because it is an important one.

Some jackets designed with a front panel seam have that seam placed well forward so that it will fall well in front of the figure's bust prominence point. Something of a problem is presented here and I have illustrated what can be done by means of the small Diagram X.

For the sake of simplicity I have selected what is regarded as the standard type of panelled forepart for a jacket. The actual position of one breast of the figure is indicated diagrammatically by the shaded circle.

Let us suppose that the seam is to be placed as 2-P-3, with the bust dart, of its equivalent at the top of the seam, as 2-P-3, the latter having been structurally placed as running from 1 to P and then transferred to its styled position. To be sure of getting the result of the bust dart in the real bust prominence area, we ought to place it as denoted by the dash lines from 2 and 3. However, as we are going to place the panel seam forward, we shall have to make some adjustment.

The distance from A to B will have to be adequate, but we shall require more localised
"room." The slanting waist dart (D) will help, suppressed in accordance with the waist size and shape required; and a short dart from S will give further assistance. The size and "openness" of the short dart will have to be assessed in relation to a part closure of the bust dart at 2-3. We must bear in mind, however, of the effect this may have in the region of F. The point is that wherever we place the front panel seam the provision for the bust must not be jeopardised.

To conclude on this diagram, I will say a word about the waist suppression and the clearance of the under-bust surplus when it is required to make relatively close fitting of the garment in that region.

The line A-W passes down from the front-of-eyel position; from that line, at point W, a measure can be applied to the front waist at X. Then the suppression at 4-5, as well as that of the dart D, can be effected.

By these means we have produced a reasonably equalised series of fullnesses to come on to the bust prominence, in spite of the forward placement of the panel seam. The direction of that seam at the bottom can be changed from the solid outlines from 4 and 5 down to the hem by following the two dash lines from those points. This styling variation is often used to good effect in cases of this kind.

**Type of Formation**

There is a particular type of bust formation, often found in women of relatively large and "fleshy" build, which calls for special attention in the matter of garment pattern cutting. The type is illustrated by Figure B7 which has been drawn from life.

The breasts are full and are comparatively low in location. They are well to the sides of the figure and are, to use a tailoring term, prominent at the side. Any tailored garment designed to fit such a figure will require length in the portions which are to pass over the area marked by the dash line A-B, as well as length in the direction of the dash line C-D.

It will be noticed that the brassiere depicted here is one which, whilst giving a certain amount of uplift to the breasts, does not draw them together towards the centre of the figure. Women who are particular about their foundation garments and who seek comfort as well as style in them, go to some trouble in the matter of selection; many of them have the garments made to measure and carefully fitted.

This is emphasised by Figure A, a diagrammatic illustration showing the effects on the figure of different bra fittings. If the solid-line circles (1) are taken to represent the natural breasts, the dash-line quasi-circles (2) may be taken as the outlines produced by the type of bra denoted on Figure B7. There is moderate uplift, but no "pushing" towards the centre. In contrast, the shaded portions (3) give some indication of what happens (as the result of unsatisfactory fitting of a bra) when the breasts are pushed forward towards the centre of the bust area.
These comparisons are interesting; but I do not intend to dwell on them. The purpose of this treatise is to consider the type of figure, and brassiere effect, depicted on Figure B7; and to consider the cutting of a certain type of jacket to fit it.

First, I will define the figure type in detail. This can be done quite briefly and effectively by reference to Figure B, which shows the nude figure in profile view. The arm here is being held a little backwards. The upper horizontal dash line marks the position of the armpit level; the lower level indicates the bust level. (Similar dash lines on Figure A denote the same levels; but in this instance there is an extra line to denote the raising of the breasts as a result of bra uplift.)

On Figure B the shaded area, marked by arrows 5 and 6, is that at which a considerable prominence is to be found. When a bra is worn, this prominence will be moved slightly upwards, but it will remain in its essential "side" location. Therefore, it will be necessary to make provision for this formation in the garment pattern.

Style of Jacket
The style of jacket I have taken for demonstration is one with a waist-seam running horizontally on the garment. It is the upper part of the forepart which will receive attention here. References will be made to Plate XLI.

Diagram 1—This shows the top front section of the forepart, in the form of a block pattern. It is to be assumed that the length from 1 (neck-point) to BP (standard bust-prominence point) is correct for the figure.

1-4 is a straight line, passing through the standard bust point; 2 and 3 are the bust dart (rear) and shoulder points. It is required to move the bust prominence provision over towards the scye. First, 5 is marked at two-thirds of the distance between BP and the chest line (or scye depth line) marked C-C. 5 is 1 in. back from line 1-4. Now a line is drawn from 1 to 5; 6 is squared down from 5.

The vertical level of 7 is approximately midway between the levels of BP and 5, point 7 being (in this case) 2½ ins. back from line 5-6, the position of

![Diagram](image)

FIG. XLII

Now the block pattern section is cut along 8-7, 7-5 and 6-5. The shoulder bust dart (1-2-5) is closed out.

Diagram 2—Here we see the result of the manipulation. Point 5 remains stationary; between 6 and 6A and between E and E8A, in each opening, half of the original bust dart (1-2) is taken out. In other words, the amount taken out at the original bust dart is transferred to the two openings at the places and in the proportions I have mentioned.

By this means an opening of the pattern has been made at 7-7A—this will give the required extra length at the side bust position. Special note must be made of point E; this is marked from 7 the same amount down as the distance of 8A from 7A. The dimension of E-8A is the same as 6-6A, as it...
must be; if an assessment were made at 8-8A an inaccuracy would occur.

Diagram 3—This diagram depicts the completed revised pattern. The dash outlines indicate the manipulated openings on Diagram 2; the solid lines at the same positions show the darts shaped out as they will be when the garment is ultimately cut from the cloth, their size and the amount of suppression taken out at their bases being consistent with measurements taken and with the shape of the figure.

In cases which might suggest that too much should not be taken out at these darts, their suppressions can be reduced and their amounts made good by taking off a little at the under-arm seam (as at 9-A9) and by taking out a small vertical dart at 10, about 2 ins. back from the front centre line (marked by the dot-dash line on each of the three diagrams).

Curved Seam Style

Transfer of either the basic or the styled shoulder bust dart into a curved panel seam is a fairly frequent requirement nowadays, for there are many jackets designed with different types of curved seams. The example illustrated on Diagram XX is representative of a large number of designs in semi-fitting jackets.

The diagram depicts the forepart sections of the pattern draft, with the basic bust dart indicated by 1-2-P; point P is located at the bust prominence position. The original shoulder line is 2-3 and the beginning of the curved panel seam is indicated by point 4.

For the transfer, the pattern is cut along the curved line from 4 to P and the basic bust dart is either cut out or folded out so that points 1 and 2 come together (the same procedure as that described earlier). The revised shoulder will then be as the solid outline t-9X and the front part of the curved panel seam will be as 4X to P.

The slight loss in the chest region (C) will be repeated in the revised bust dart on the curved panel seam; this is in accordance with the figure shape immediately above the bust prominence. Care must be taken, of course, not to lose any contour capacity in the region of P. The curve from 4X takes the run indicated into P, touching the line 2-P of the basic shoulder bust dart in the original pattern draft.

There is another form of dart associated with the curved panel design in jackets at the present time. It is a short slanting dart which is taken out of the front curve of the seam, between points C and P. It is effective in certain styles.

The Prominent Bust

In many respects, the figure with a prominent bust bears resemblance to the type of figure just described. There is usually a considerable fleshy development and the breasts are placed well towards the sides.

The small picture at the top of Plate XLII illustrates the type of bust formation I have in mind now and the diagrams which accompany it depict the forepart of the pattern I cut for a hip-length garment I had made a few years ago when I was engaged in carrying out experiments in the fitting of the prominent-bust figure. This garment had two darts and was designed to fit the figure fairly closely. The back of it, by the way, had a centre-seam and had a dart running from the bottom towards the shoulder-blade prominence.

Plate XLII—Diagram 11: Here we have the forepart pattern, with the dart from B (bust...
prominence position) marked in, after the closure at A of the basic bust dart in the manner already dealt with.

Point 1 is marked down about 4 ins. from the top of the side-seam (S) which runs down to 7 and actually takes up an under-arm position.

Point C was located by measurement on the figure and lines were drawn from it to points 1 and B, as indicated.

The amount of suppression made on the foremost dart B at 2-3 and the shaping from these points to 4 and 5 were satisfactory for the amount of waist and hip shaping required in this case. However, the introduction of the rear dart C made it necessary to reduce the suppression (at the waist) on dart B.

This reduction was carried out in the following manner:

The pattern was cut along the line 6-D-C and along the lines 1-C and C-B. On Diagram 2 we see the second stage in the pattern manipulation. Point 2 is brought towards point 3 in order to make the front dart suppression half the amount it was in the original draft; at the same time D is "opened" so that the other, or remaining, half of the suppression is made at the rear dart.

The partial closure of dart B will cause C to drop to C1 and the opening of dart C will make it necessary to check up the rear portion of the pattern (from side-seam to dart D).

What the pattern will look like after these movements is indicated by the solid outlines 1-C-B, B-C-1x, B-3-4-5-0-B, C-D-B, 6x-D-C and 6x-7-1x. That is, in the areas affected by the manipulation; the other areas will remain as already indicated.

Now, it is possible to swing the rear portion of the pattern back so that point 1x joins 1, thus
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producing the outline denoted by the dash lines C-E-F-G; but I found this to be too severe an operation. Although no more actual suppression is taken out of the rear dart C-D by this move, the size of the dart is greatly increased—and this is not a satisfactory result. For one thing, the line C-E runs very much on the bias and will therefore be on the bias of the grain of the material from which the jacket is to be cut.

A better plan is to leave the pattern as indicated by the solid outlines after the manipulation, and to employ a lateral dart.

Diagram 3. In this diagram we see the completed manipulation, including the lateral dart. It is actually placed to run from 1 and 1 to midway between the levels of C and C'. (See Diagram 2.) I have not marked any points on Diagram 3, so that the outlines of the completed forepart pattern can be followed quite clearly.

It will be seen that extra provision has been made effectively in the side bust region by means of this manipulation. Description of it is necessarily somewhat laborious, but I hope that readers can follow what has been written and that they can trace the reasoning behind it.

To conclude, I must mention that the pattern has been drafted neat. All seam allowances must be made when the garment is being cut from the cloth. This is the most satisfactory way of dealing with the drafting and manipulation of patterns for ladies’ garments.

Another Experiment

Some little time ago I carried out another experiment in the production of a short garment for the purpose of assessing the correct bust provision for a particular type of figure—again, the full-busted type. The following are the details of the garment I cut and a description of the figure to whose measures the draft pattern was constructed:

The pattern and garment were cut to a length which would reach to the waist, to the measures taken on Miss Sally Perceval, a student at the Tailor and Cutter Academy, who kindly acted as my model. Miss Perceval’s girth measures are these: 35½ ins. chest; 38⅞ ins. bust; 27 ins. waist. Chest and bust girths were taken with the inch-tape held parallel with the floor; the waist was taken with the tape held moderately close to the figure—not drawn tightly. The half-across back was 7⅞ ins.; the front-shoulder was 13 ins. and the over-shoulder 17 ins.; the across-bust was 18 ins.

Some “extra” measures taken were these: 7 ins. from base of armpit to side waist hollow; 4½ ins. from central under-arm position to side bust prominence; 4½ ins. from centre front to centre bust prominence; 3½ ins. from centre back to upper shoulder-blade prominence.

(This last measure is mentioned in passing; I shall not deal with the back here, the main concern being to give a description of what was done to get the correct bust assessment.)

What the completed front pattern looked like before any manipulation was carried out can be gathered from Figure C, left-hand picture. The shoulder bust dart was located in its styled position and a line was drawn straight down from its termination at the bust prominence.

![Figure C](image)

Next, a line was drawn from the termination to a position a little in advance of the front-of-sleeve level; this line (E) was made to slope to the second position, the latter having been located by measurement and an observation of where the side bust development was greatest. A third line was then drawn down, made to run parallel with the first one down from the bust dart termination. On the two vertical lines thus located the darts were to be taken out.

Cuts were made along the lines mentioned, the shoulder bust dart was closed out and the two darts were formed. The result was that shown on the right-hand illustration of Figure C. This is a forepart cut from Vileene; with its companion forepart it was joined to the back and a shell garment was basted up. Waist suppression on the darts was made according to the requirements of the figure and the front edges of the shell were cut in what was the front centre line of the basic pattern. The latter was constructed in very much the same way as that shown by Diagrams 1 and 2 on Plate XLII and the manipulations were akin to those related to those diagrams.

The basted shell jacket is shown being worn by Miss Perceval on Figure B8.
I must mention here that the arrangement of the dart suppressions in the jacket were related to the shoulder bust dart in this way: two-thirds of the amount taken out at the top of that dart were taken out of the foremost waist dart; the remaining one-third was taken from the rear waist dart. Previously, of course, a proportion of the waist measure was applied in order to make a check on general waist size in relation to a close-fitting garment of the type described.

These experiments I have detailed, though connected with patterns and garments produced for particular figure types and made for individual models, will serve to help the reader of this book in the matter of assessing different kinds of bust prominence. They may be considered as a means of indicating the principles involved in the creation of bust contour capacity in garment patterns. These principles are applicable to any style of garment in which it is required to provide bust "room" in the upper portion, with a close-fitting effect at the waist.

**Locating the Prominences**

As a conclusion to this chapter, I will give some notes on measures that can be taken on the figure to obtain the vertical and lateral positions of the bust prominences. **References will be made to the photograph marked Figure B9.**

Five lengths of plain tape are required and these are pinned lightly on to the garment being worn by the model or customer. Of the five lengths, three are attached vertically: one on each side of the figure, extending from the shoulder to the bust; and one in the centre from the upper chest to the waist; then two lengths of the tape are pinned round the figure at the bust position and at the waist. These lateral tapes are taken right round the figure, but their application to the location of the bust prominences is made at the front only.

A graduated square is now placed on one side and then on the other side of the figure, positioned as shown on the photograph, with the long arm occupying the place of the front-of-sye line marked on a pattern and the short arm held by pressure from the model's arm.

Measures can now be taken in the following manner:

On the vertical tapes, from shoulder to bust...
prominence and from waist to bust prominence; also from waist up to centre of bust region.

On the lateral tapes, from front-of-shoulder (arm socket on the figure) to the bust prominence; also from the centre front vertical tape to the bust prominence on each side.

In addition to these bust location measures, one may be taken from the long arm of the graduated square, on the waist line, to the centre front vertical tape. All the measures quoted are such as can be conveniently applied to a pattern draft. Those relating to the bust prominences and their correct location I have found to be particularly valuable. A further measure can be taken on the lateral tape on the bust line between the two bust prominences. The couturiers of Paris often adopt this measure.

The importance of adequate provision, in all kinds of tailored garments, for the bust formation of the various types of figures encountered by the designer and cutter cannot be passed over lightly. That is why I have gone into the subject at some length. Sufficient has been written in this chapter, I think, on the location and sizing of different kinds of bust dart and their relation to the design and style of garments—particularly those which are designed to fit the figure closely—to have given the reader a sound insight of the principles involved.
CHAPTER IX

Drafting of Patterns—5

THE MAIN theme of this chapter is the designing and cutting of skirts. It deals with the basic measurements that are required, with notes on certain additional measures that can be taken and which will enable the designer and cutter to obtain a "picture" of the shape of figures measured. Many of the anatomical considerations related to skirt cutting have been dealt with in the first chapter of this book; they will be enlarged on here before account is taken of the technique involved in the drafting of skirt patterns. Indeed, acting on the axiom of putting first things first, I shall discuss the anatomical side of the matter before dealing with the taking of measures.

Anatomy and Principles

Observations that will be made here will take the form of establishing a relationship between what is observed on the figure and what is contained in the basic principles of skirt pattern cutting. In other words, anatomy will be linked with the system of constructing a pattern draft for any type of skirt.

Whatever the style of any skirt, it can be stated that there are three main functions which it has to fulfil. These are: (1) it must fit the waist of the wearer; (2) it must pass over the hips and seat with an appearance of "fit" and with a calculated amount of closeness or ease—according to design—and (3) it must drape or flare from the hips-seat line.

References will now be made to the figures on Diagram 81.

For the purpose of initial demonstration I have taken a figure which can be accepted as a typical example of what most cutters would describe as standard. Two views of this figure are illustrated in diagram form here—the front and the side.

Three lines run across the upper parts of each figure section, marking the waist, the upper hips and the hips-seat. These lines will be located in every case according to the figure to which they refer in particular instances. A fourth line is marked across the lower part of the figure sections; this is the hem-line which will vary with fashion, type of skirt required and height of figure. (It will also vary in accordance with the tastes and whims of customers.)

What I have termed the waist line (the one running horizontally across the two figure sections) is really the theoretical waist line usually formed by the square on the drafts of skirts. The figure waist line is indicated by the line A-B, running from side to side, on the front view section, and the line C-D, running from side level at front to the back of the side-view figure. It is a fact that in the great majority of female figures the back waist hollow is at a lower level than that of the side waist.

The upper hips line is located on the figure at a position a little below the top of the pelvis (marked by P-P). The actual contour of the figure at the sides here is subject to many variations. The solid outlines on the figure illustrated are flat, with a slight tendency to be hollow, which is a form
Back Factors

The back of the female figure, as it affects the cutting of skirts, has a number of features which must be carefully noted by the cutter. Let us take account of some of these. References will be made to Diagram S2.

Figure A depicts the back view of the lower part of an average figure. The waist, upper hips, hips-seat and skirt hem lines are marked as they were in the two figures illustrating front and side views in the first diagram.

Attention is again drawn to the position of the back waist and its relation to the side waist hollows. The line A-B traverses the figure at side waist level; the dash line A-C-B indicates the run to the centre back waist hollow as found in the majority of figures. This difference of side and back waist hollows is something which should receive the careful attention of cutters and tailors.

In addition to the three main figure lines mentioned above, a line has been placed below the hips-seat level at a position on the figure which may be described as the upper thigh region. There are many female figures in which the contours at F and G on this line are farther out than the corresponding contours on the hips-seat line. Such a formation presents difficulty to the skirt cutter and fitter—to a greater extent when the skirt being dealt with is of the close-fitting or "pencil" style, or one with certain types of pleat.

The side shapes along the curves of the figure

frequently encountered. There are figures, however, with a contour like that indicated by the dash outline on each side.

On the side-view figure, B marks the most prominent part of the buttocks, where the seat line is located, and F denotes the part of the figure known to anatomists as the gluteal fold. As I stressed in my series of articles, "Assessment of the Female Figure" (mentioned earlier), these shapes are worthy of very careful consideration.

Comparisons of shape and size at the front and sides of the figure will give the cutter much useful data when he is preparing to cut a skirt. The same can be said of the shape and "run" of the abdominal portion of the figure, shown in the side view here from C downwards. This curve will vary in shape and size with different figures and will be influenced by the type of foundation garment worn.

The vertical lines at the sides of both front and side-view figures denote what may be called the boundaries at front, back and sides of a completely straight-hanging skirt. It is required that the skirt shall hang evenly down from the hips-seat level and that it shall fit into the front, side and back waist areas. Comparison of the vertical (theoretical) lines with the contours of the figure at the parts concerned will give some hint of what has to be done when the skirt is constructed.
(A-F and B-G) are largely determined by the form and development of parts of the \textit{sartorius, gracilis} and \textit{rectus femoris} muscles and the fatty tissue covering them. There is considerable variation in those shapes in different figures. Girth measures taken in the usual way at upper hips and hips-seat positions will not of themselves tell the measurer the complete story of the figure concerned.

Apart from the actual covering of the figure at these parts, it is essential that the skirt shall contain room for expansion when the wearer moves. There should be ease enough to allow her to walk with some grace and to sit down without undue tension across the front and back of the skirt. It is well known to cutters that some women are very insistent upon being "in the fashion." They will ask for the closest of fits (if close-fitting skirts are the vogue), but will leave out of consideration the fact that they will not always be standing upright in a fitting-room. Remarkable tact is required in cases like these when attempts are made to convince the customer that she must concede some of her fashion predilections in order to obtain a skirt which will permit her to live in comfort.

Another area of the figure which varies in different women is that of the buttocks, or seat as the tailor terms it. This area is divided into two sections on Figure A and these are indicated by the vertical lines D and E. Assessment of length from the waist along these two lines is an important factor in the preliminaries of skirt cutting.

In the plane-drawing diagram, Figure B, we might find a kind of summary of the requirements of any skirt. There is a certain length required at the front (line F-F), a certain length at the side (line S-S, placed at the approximate position of the side-seam in a plain two-piece skirt) and a certain length at the back (line B-B).

Top line F-S-B must be reduced according to waist size; line H-H (the hips-seat line) will be made to conform with size and ease allowance; lower line F-S-B will be made according to hem width required.

\textbf{Waist and Hem}

It has already been established, I think, that so far as lateral dimensions are concerned the three main girths to be considered are those of the waist and hips-seat of the figure and that of the skirt hem.

In his book, \textit{The Practice of Garment-Pattern Making}, the late W. H. Hume takes the waist and the hem as what he calls the two extremes of the subject. He proceeds to demonstrate, by means of
circles, the relative circumferences of these two extremes as well as the circumference at hips-seat. For the purpose of basic explanation, Mr. Hume first of all calculates in terms of a cylindrical figure.

There is no better way of dealing with this aspect of the principles of skirt cutting; therefore, something of the kind is given here on Figure a on Diagram S2. It is assumed that we are endeavouring to cover a figure which has an accurately circular waist and hips-seat. We will imagine that such a figure has been made in wood. These girths, and the hem girth of a supposed skirt, are marked on the diagram; there is also a line which cuts through the centre of each circle.

A skirt could be cut to fit such a figure at the "waist" to go easily (but not necessarily full) over the "hips-seat" and to drape to the desired hem. These main features are the ones required in a skirt cut to fit and drape a human figure.

The fitting process, however, is a very much more difficult matter. This can be gathered from an examination of Figure b on the same diagram, which gives the anatomical shapes of a typical female figure as they would appear if that figure could be cut across at the waist and seat-hips lines. It will be seen at once that the contours here are very far removed from the circular ones of our imaginary cylindrical Figure a.

We can, of course, retain the basic idea of circles; in effect, the waist and hips-seat circumferences in any skirt are circles—but they have to pass over contours which depart considerably from the geometrically circular. The centre line on Figure b will assist the eye in registering the differences of contour on each half of the figure at waist and hips-seat portions. In many female figures these halves are not symmetrical, but are subject to appreciable variation.

The small side-view figure (Figure c) is complementary to the rectangular diagram figure in the diagram S2. A kind of cylindrical skirt is suggested by the dash line rectangle 1-2-3-4. The two lines emanating from S give some indication of the figure’s stance. C-D is the hips-seat line. The line A-B passes through the figure from the back waist hollow to the front waist, straight. This is an arbitrary line, included to emphasise the point made in the two previous diagrams that the back waist hollow is, in most cases, below the front and side waist hollows.

The constructional qualities of a skirt demand that the top (1-2) of the rectangle shall be adapted to fit the figure closely.

Muscular Formations

The leg muscles that have already been mentioned in this chapter would, in certain types of development, influence the shape of the back of the legs and that of the side portion emanating from the back. There are two other muscles which have an even greater influence upon leg shape—particularly that of the actual side of the thighs.

These muscles are the tensor vagini femoris and the vastus externus. The former extends for some distance down the side of the limb, beginning at the part marked by the wavy line M on Figure d of Diagram S4. The latter is situated in the region of the wavy line N on the same figure. Extra development of these muscles, together with that of the muscles mentioned in the first chapter, and an excess of fatty tissue over them, often produces the shape indicated in relation to the straight line A-B.

It will be seen that this line passes (touching) the figure at the hips-seat line, just clearing the figure at the upper thigh line. The solid outline is that of an average female leg at this part; the dash outline is that of a figure with the extra development mentioned above. The shape in this case is slightly fuller at H and quite considerably fuller at T. In other words, the figure appears to be wider at the upper thigh line than it is at the hips-seat line.
The dash line marked R traverses another part of the leg, the front of thigh, where again muscular development can cause alteration in shape and present problems to the cutter when he is dealing with a close-fitting type of skirt.

**Basic Requirements**

Figure e on the same diagram presents, in diagrammatic form, a kind of indicator of the basic requirements in any skirt. The dash line rectangle, 1-2-3-4, suggests a completely straight-hanging skirt. Translated into terms of practical tailoring procedure, it gives the following indications:

1. The line H-S is that of the hips-seat region. Whatever style a skirt may be it will have to pass over this region, either fitting the figure closely or passing over it with a small, moderate or large amount of "play."
2. Line 1-2 is the theoretic waist line, on which points 1 and 2 will have to be brought in to the figure so that the waist fits it closely.
3. The arrow-headed line, C, marks the centre of the skirt. It is necessary to note here that the size and shape of the figure from this line to 1 and H may be different to those from the same line to 2 and S.
4. Arrows lines 5-5, passing through points H and S, give some indication of the lines taken by the sides of a close-fitting, narrow-hemmed skirt. The other arrowed lines, 6-6, give similar indication of the lines taken by the sides of a looser style, with wide hem. There is a limit to the inward slope of lines 5-5, but there is no limit (within reason, of course) to the outward slope of lines 6-6.

On Figure f the possible "run" of the waist line on a natural figure is indicated by the dash line 7-8. It is interesting to note the relative heights of this line above the line U-H—the upper hips line.

**Further Notes**

One or two further notes on this aspect of our anatomical observations will serve to sum up the factors that have to be observed when we are preparing skirt pattern drafts.

Obviously, it is always necessary to think very carefully about the hips of the figure as well as about the seat. These two parts should really be regarded as independent. Though they are related, each has characteristics peculiar to itself.

References will now be made to Figures 1, 2 and 3 on Diagram S5.

These things have to be considered: (a) Shape and size of seat (buttocks); (b) Height of seat prominence; (c) Shape and size of hips; (d) Height of hip prominence; (e) Lengths at sides and back to hip and seat prominences. In addition to these, we must take note of thigh shape and size from seat level downwards.

**Figure 1**—This drawing has been taken from a photograph of a nude figure, the outlines of the latter having been traced with great care. There are several things worthy of note in the drawing. The side waist indent on the right side (A) is lower than that on the left (B); the shape from A to C is different to that from B to D (C and D indicate the hip positions). The seat line is that marked E-F; it will be seen that the shape of A-C-E is not the same as that of B-D-F. Further, the distance A is in from a vertical line touching the side of the figure is smaller than the distance between B and a similar vertical line.

**Figure 2**—This diagrammatic illustration is
given to indicate the slope of the femur in the female figure. In this figure the pelvis is wider than that of the male, and consequently the slope of the femur is greater. Line 1-2 denotes the pelvis and the lines 3 and 4 indicate the slope of the femur; fleshy and muscular development beyond these lines is a remarkably variable factor.

Figure 3—I have made reference to thigh shape and size below the seat level. This drawing shows the position of two important thigh muscles—the tensor fasciae latae (T) and the vastus externus (V). These muscles are a determining factor in the outer shape of the thigh. In athletes and ballet dancers they develop considerably; in some women they become flaccid and are well covered by fat.

Development of either muscle or fat can, in certain instances, produce an outer thigh contour which falls “outside” the vertical of the side seat.

Taking Measures

I can now pass on to the business of taking measures for skirts. One or two of these were referred to in the chapter on measuring, but detailed illustration of the skirt dimensions required were held over until this stage. References will first be made to Plate XLIII.

Though there is some variety in the skirt measures taken and applied by designers and cutters of ladies’ garments, it is reasonable to state that the most general ones are these: Front, side and back lengths; waist girth; hips girth. Such measures will give the skirt cutter an indication of size and style, but, of themselves, they will not provide him with a picture of the shape of the figure he is aiming to fit.

Of course, the cutter will make some observation.
of the figure and will take notes on it (mental or written). He will cut the skirt and will fit it, making adjustments where necessary. This is all right up to a point, but would it not be better to take some additional measures in order to establish a more complete picture of figure shape before any cutting was done?

In this connection we are considering the close-fitting type of skirt—one which is very much in evidence at the present time.

The picture on page 97 depicts three figures, emphasising the front, the side and the back. Tapes indicate the measures that are to be described. The waist is marked by W.

First, we will take brief note of the standard measures mentioned above. The front length, shown on the left-hand figure, taken to a fashionable hem, or in accordance with the customer's wishes; the side length, shown by the centre figure and the back length, shown by the right-hand figure. In many cases, height of the hem above the floor is also recorded.

The girth measures will be the waist and the hips-seat (B, E and G on the three illustrations).

Additional girths that can be taken are the upper hips (A, D and F) and the upper thigh (C on the left-hand figure). This last measure is a valuable one in relation to the style of skirt I am discussing.

**Short Measures**

Now to deal with the additional measures which will help to assess shape. Four cross measures, from side to side, can be taken at waist, and at A, B and C (see the left-hand figure). These may be taken with the side-seam location as a guide—provided that it is established exactly where this will fall—or by means of a graduated square as a point locating agent. If the square is used it is placed with the short arm under the armpit of the figure, the angle falling at the front-of-scye position and the long arm extending down the side of the figure. Pins can then be placed at the three levels, A, B and C. The square will be used in this way on both sides of the figure.

These measures can be taken "on the half"—that is from side to centre from left and right. Such a plan will reveal any difference in shapes across the two halves of the figure's front.

Side measures can be taken from centre back to the pins already referred to as well as from centre front to the same positions. Again, the "half" idea can be adopted. The side measures are recorded at waist, upper hips (D on the centre figure) and lower hips or hips-seat (E on the same figure).

Similar short measures can be taken on the across-back region, as shown at the waist and at tapes F and G on the right-hand figure.

Vertical front, side and back measures can be taken from tapes B, E and G up to waist level.

**These additional measures will be of the greatest help in the correct assessment of surface shapes at the different parts of the figure we have denoted. The taking of such measures will not rule out altogether the need for careful observation. Stance will have to be noted as well as general attitude. However, the measures will form a valuable augmentation of the things observed.**

The front-of-scye vertical has been suggested as the basis from which to take certain measures; so has the side-seam location. This does not mean that any other plan of positioning may not be adopted. The main thing to consider is that these measures must be taken from one well-defined point to another. As long as the "measuring points" are established accurately, the cutter can proceed in whatever way he favours.
Direct application of measures, of any kind, has sometimes to be modified in relation to the style of skirt being cut. Perfect fit may be all right in a case, but we have to consider what can be done to conceal the customer’s physical peculiarities (when these exist in abnormal form). A lot can be done here in the matter of seam and panel placement, as well as by the introduction of darts and fullnesses.

The value of the additional measures suggested here need not be negatied by these styling considerations. Their importance rests in the fact that they give a much more informative picture of the figure for which the skirt is to be designed and cut.

I will now give fuller details of the measures already discussed, with some notes on additional dimensions that may be taken. The more or less standard or basic measures that have been described will again be dealt with, for it is the purpose of this chapter to use these for the drafts which follow. References will be made to Plate XLIV.

The front view is indicated on Figure A and the front length measure is taken from 1 at the front waist, to 2. The hip-seat line is shown by 3; it indicates where the tape will pass round the figure—to traverse the most prominent part of the buttocks, or seat. When the level of this line is established on the figure a measure can be taken from it up to the waist line; that is, in the present instance, from 3 to 1.

It is possible to “fix” the hips-seat line by means of a piece of plain tape, placing this round the figure with pins so that it is parallel with the floor—the parallel can be checked by using a long stick and measuring upwards to the hips-seat level right round the figure, at different points.

Figure B shows the side view of the figure. Location of the line 4-6-5 can be made by placing a long stick vertically so that it touches the front of the figure’s armpit, then making a mark (or placing a pin) at waist, hips-seat and hem lines at the edge of the stick which touches the front of armpit.

The side length measure is taken from 4 to 5. Another measure may be taken from 6 (hips-seat level) up to 4. These side measures should be taken on each side of the figure—particularly the short one, 6-4. Comparatively few female figures are exactly the same at each side in the hip region, in either length or shape. As a matter of fact, in the drawings here (which have been taken from a model) the hip side contours differ.

Differences

There are many figures, of course, in which there would be considerable difference from a given point 6 to the front and back. The characteristics of corpulence, for instance, are to be found
in women as they are in men; there are figures in which there is greater width from 4 to the front than to the back; and there are some with a greater distance from 6 to the front than to the back. These abnormalities, and many others, will be discussed in the second part of this work—now in preparation.)

In Figure C we have the back view of the figure. Here, the length is taken from 7 to 8 in the centre back. The hips-seat line is marked by 9 and a measure may be taken from 9 upwards to 7.

The two lines 10-11 and 12-13 traverse vertically each buttock of the figure and measures may be taken along these lines, upwards from the most prominent part of the seat on each side. Variation of shape and size at these sections of the figure, both vertically and laterally, is quite considerable. Lines 10-11 and 12-13 in this case are truly vertical, but some seat shapes may suggest measures taken in slanting directions, either inward or outward from the lines given.

As has been hinted above, lateral shapes on each side of the centre line 7-9-8 vary with different figures; size also differs.

It must be remembered, of course, that figure shapes are modified to some extent by corsetry; but size distribution is not greatly influenced by it. If a figure is relatively large in the front (at waist and hips-seat levels) and relatively small in the back portions, corsetry will not entirely disguise that formation.

In Figure D the waist and hips-seat lines are marked with the letters W and H-S respectively. An imaginary line passes through the centre of the front of the figure from the waist line. Line 14 is the actual hip line, taken round and across the figure at the position where the greatest prominence of the hips is found, as apart from the seat. Line 15 indicates the upper thigh position (referred to earlier) where some female figures are relatively large. Girth measures can be taken on lines 14 and 15.

The figure may also be measured across the front from 1 to 2, 3 to 4 and 5 to 6, at waist, hips and hips-seat levels. Such measures may be recorded between two lines struck down vertically from each front-of-oye position. The use of a long stick was suggested for the location of that position.

The side view of the figure is indicated by Figure E, on which the vertical line referred to above is marked. Measures may be taken from this line to centre front and centre back, as shown by the arrow-headed lines from points 7 (waist), 8 (hips) and 9 (hips-seat). As has been said before, figures vary considerably in shape, as well as in size, in these areas.

Figure F gives the back view, on which a centre line has been placed from the waist downwards. Measures can be taken from this centre line to the sides of the figure (measuring both ways) at the waist (10), and the hips (11) and the hips-seat (12). Or, measures may be taken right across the back of the figure at the positions marked.

DRAFTING SKIRT PATTERNS

The remainder of this chapter is devoted to the cutting of skirt patterns and it will give various methods of doing this. First of all, a basic structure is illustrated and described; then I take the application of this to the actual draft. Different styles of skirts will be dealt with, after first discussing the straight-hanging two/three-piece style. This is the most convenient style to use for a basis, as most skirts in wear at the time when this book is being written are derived from it.

Mainly, I shall use only the standard measures already mentioned; in some instances, however, application of certain of the additional measures I have described will be applied to the draft.

Basic Structure

With the standard two- or three-piece skirt as a model, I will begin by outlining a basic structure for a pattern. The structure is arranged for a skirt which will hang straight down from the hips-seat level to the hem. It can have side-seams only, the front and back panels being "whole"; or it can have a seam at centre back only, or a seam at both centre front and centre back. The skirt is to be quite plain—no pleats or slits.

References will be made to Diagram S6.

In order to assess conveniently the fitting requirements of this type of skirt construction I have arranged this preliminary draft in the form of a rectangle—a simple form for the purpose and one that is adopted frequently at the present time.

The rectangle is marked here by points 1, 2, 3 and 4. Horizontal lines 1-2 and 3-4 are the theoretic waist and hem lines, respectively. The hips-seat line is marked by 5-6. The vertical line S-H-S marks the position of the proposed side-seam in the skirt. Point H is located ½ in. more from 6 than midway 5-6, a frequent location for this kind of skirt. The total distance between 5 and 6 is half the hips-seat measure plus ½ in.—this, again, is a very general dimension.

If we assume that this skirt is to be cut so that it will hang quite straight from the hips-seat line to the hem (allowing that the formation of the
figure's thighs below line 5-H-6 is not bulky at the sides—see my earlier notes) the rectangular structure outlined by 6-5-4-3-6 will be satisfactory.

This lower rectangle, however, is only part of the total construction. We have to consider the waist, as a girth and in relation to its comparative altitudes above the hips-seat line (5-H-6) at front, sides and back. We also have to consider what shapes and sizes may be encountered on the figure at various positions along the upper-hips line.

This structural "draft" is made to the following measurements only—25 ins. waist, 38½ ins. hips-seat, 26½ ins. length. (The hips-seat line in this case is 6 ins. below the theoretic waist line.)

As will be noted, the difference between the waist and the hips-seat measures here is considerable—13½ ins. Such a difference is by no means rare in present-day figures. Shape variations, too, are to be found laterally and vertically between waist and hips-seat regions.

In terms of elementary arithmetic we are faced with the problem of reducing the waist (1-2) on the diagram to half of the 25 ins. measurement quoted. Set out in the diagram, the theoretic waist line is the same length at the hips-seat line. The distance from 1 to W is the half waist measure (12½ ins.); the remaining distance registered between W and 2 is the amount which will have to be "taken out" at the waist of the skirt in order to make it fit a figure.

The most general way of effecting the reduction is to take out so much at the top of the side-seam (S) and so much in two darts in the back portion, as indicated at D and E. The positions of these two points on the diagram are equi-distant between 1 and S; but in an actual skirt they would, in most cases, be spaced equally between the top of the side-seam (which would be a certain distance from S) and the centre back. The amount between W and 2 in this instance is 7¼ ins.

Two-piece Skirt Draft

I use the term "two-piece" here to define a pattern draft for a skirt designed to hang straight; the actual pattern will be cut in two pieces. If it is required to have a seam at centre back or at centre front, or a seam at both, the same structure can be used. Similarly, if there are to be panels, or gores, as well as the seams referred to, or without them, the seams for such panels can be introduced quite conveniently. It is to be remembered, however, that the construction of this pattern draft is designed for a skirt that will be completely straight-hanging.

References will be made to the two diagrams on Plate XLV, on page 102.

The figure for which this draft was used, and for which a pattern and a skirt were cut, was that of a young woman. I have detailed the characteristics.

Her hips are relatively prominent and are fairly evenly rounded into the upper thigh region on each side. Her seat areas (buttocks) are moderately fleshy; there is a slight round in the front of her figure between the waist and hips-seat levels.

In the "extra" measures quoted below there were small differences in certain cases, between left and right sides (as is the case in nine out of ten female figures); but these were so small that I have not noted them for this draft. The latter is designed to illustrate a method, therefore I have aimed at simplicity, in order that the principles inherent in the method can be made easy to follow.

The waist measure was taken closely over a skirt; the hips-seat measure was taken with the tape just "easy." Below is a full list and description of all the measures taken.

Girth Measures—Waist—24½ ins.; hips-seat—37½ ins. (The latter measure was taken round the figure at the level of the greatest prominence of the seat. It so happened that this coincided, in level, with the most prominent part of the hips, or upper thigh.) The tape was checked for level with the floor at front, sides and back; it was then fastened round the figure. The remaining measures to be quoted were taken upwards, with another tape, from this hips-seat tape—as described earlier.
(A). Centre front—\(7\frac{3}{4}\) ins. (from hips-seat level to the front waist).

(B). Side, from hips-seat level to hollowest part of waist—\(8\frac{1}{4}\) ins.

(C). Centre back—\(7\frac{1}{2}\) ins. (from hips-seat level to hollowest part of back waist).

(D). Seat prominences, from hips-seat level over buttocks to waist—\(8\) ins.

Of these measures (B) and (D) are the ones taken on the right-hand side of the figure and I have decided to use them for the basic draft. As a matter of interest, I will mention that their equivalents on the left side were: (B)—\(8\frac{3}{4}\) ins. and (D)—\(7\frac{1}{2}\) ins.

(E). Hips-seat to intended hem; Front, 21\(\frac{1}{4}\) ins.; side, 21\(\frac{1}{2}\) ins.; back, 21\(\frac{1}{2}\) ins. (These lengths were taken to levels fixed equally above the floor.)

**Diagram 1**

Draw the horizontal line, A-B, at a convenient position on the pattern paper.

X represents the position on the figure level with the front of the armpit (or front-of-scye).

This is obtained by the method already described. **It is illustrated on Figure A (page 98).**

Place a long stick with one edge touching the front of armpit and place a pin at the position of that edge at the hips-seat level. If preferred, a graduated square can be used in very much the same way (see Figure A). In this case the outer edge of the long arm will be placed at the front of armpit.

The distance of B to A is \(\frac{1}{2}\) hips-seat plus \(\frac{1}{4}\) in.

C is \(1\) in. back from X for the decided position of the side-seam of the skirt.

B to 1 is the front distance of hips-seat level to waist (as measure A).

C to 2 is the side distance (as measure B).

A to 3 is the back distance (as measure C).

D is located to correspond with the most prominent part of the back seat—\(4\frac{3}{4}\) ins. in from the centre back (A) in this figure.

D to 4 is the seat prominence from hips-seat to waist (as measure D).

Connecting lines are drawn from 3 to 4, 4 to 2 and 2 to 1.
5 and 6 are each 2 ins. from 4; 7 and 8 are each 1\frac{1}{2} ins. from D.

The lines 5-7 and 6-8 are the direction lines for the two darts that will be taken out. The reason for this particular slope is that the resultant fullness of the darts will be distributed in the area where "room" is required for this figure.

The figure being prominent at the front between waist and hips-seat levels, I decided to locate a dart at the front. Point 9 marks its starting position and the slope of the line from that point denotes the direction of the dart. Connection is now made of 1-9-2 and 2-6-4-5-3.

The distance from 1 to E is 1\frac{1}{4} waist plus \frac{1}{2} in., the latter amount to be taken out at dart 9.

**Waist Reduction**

The skirt waist is to be reduced to the waist measure taken (close) plus \frac{1}{4} in. The distance between 1 and 3 (straight) is the same as that between B and A—\frac{1}{2} hips-seat plus \frac{1}{4} in. (19\frac{1}{2} ins.). On this computation there is 6\frac{1}{2} ins. to be taken out of the half waist between 1 and 3.

The dart at 9 accounts for \frac{1}{2} in.; 3\frac{1}{2} ins. are then taken out between E and F; the remaining 3\frac{1}{2} ins. will come from the back darts (5 and 6), 1\frac{1}{4} ins. (approx.) being taken out at each.

The establishment of E and F is accomplished by sweeping the amount of C-2 (side hips-seat to waist), with C as pivot centre. E and F are then located on the arc.

A to R, C to S and B to T are as the back, side and front hips-seat to hem lengths (see measure E).

As was mentioned earlier, the distances from X to the front of the figure (B) and to the back of the figure (A) can be registered by measurement, as well as a note being taken of their particular shapes. The locating of the side-seam can be effected in relation to the fixed position of X, on whatever figure is being measured.

1 must also make additional note on the dart marked at 9. Its direction was correct for the type of figure in this case. There are other figures (many in number) which would require the dart in a different direction—more towards the side hip, as indicated by the short dash line from point gx.

**We now have the basic structure of the draft fully laid down. The next procedure is to "fill in the gaps," as it were, and complete the pattern.**

This is illustrated by Diagram 2, which shows the actual draft "built" on to the structure mentioned above. The suppressions have been carried out in the manner indicated.

The rounds at the side-seam from E and F to C are required by this particular figure; but there are figures whose shape might not demand such a contour. Of the two back darts, the one from 5 terminates about 2 ins. above 7 and that from 6 terminates 2\frac{1}{2} ins. above 8. This arrangement, again, is made in accordance with the figure shape observed.

**Darts Check**

Top level of the dart seams should be checked by sweeps from 7 and 8; in the case of the former the back is marked in a straight line from the top of the dart (rear side) to 3x, the last point being placed \frac{1}{2} in. above 3. This is done to give a more pleasing run at the back waist; the little extra length over the measure taken will not be a disadvantage. The front dart (g) is 3\frac{1}{4} ins. long.

Lengths of darts in this part of a close-fitting skirt will vary with figure shapes. Possible variations are denoted by the arrowheads marked on Diagram 2.

The draft, of course, is constructed net—all seams must be allowed when the skirt is cut from the cloth.

**Fitting Notes**

Though this draft is for a close-fitting skirt of the type described, there is sufficient ease in the "circumference" of the hips-seat areas to make provision for reasonable movement on the part of the wearer. There are figures which would require a greater allowance for normal movement. This can be provided by increasing the distance along line A-B (see both diagrams) according to requirements.

For the time being, I am endeavouring to set out a method of basic drafting which takes into account certain basic measures and other "special" ones. I am primarily concerned in this volume with minimum amounts of ease infused into the structural basis of drafting a pattern for this particular type of skirt.

More detail on matters of ease and on the use and application of what I have called the "special" measures and dimensions will be given in the second part of this work.

**A Recapitulation**

It will be well worth while to take a step or two back in this explanation and to make some additional notes on both the structure of the two-piece draft and some of the anatomical considerations involved.

I shall first make reference to Diagram 3x, page 104, which is largely a reproduction of Diagram 1 on Plate XLV.
Many expert skirt cutters with whom I have conversed at different times have mentioned what they call the "problem of the rounded side-seam"; they refer to that part of the seam which runs from the waist to the hips-seat line. There is the difficulty here of getting the "rounded" side-seam of the skirt to lie "fair" over the plaquet when the latter is fastened. This is particularly so if the pattern construction has been based (as is the case in many skirt systems in publication) on a placement of the side-seam at the waist as one-fourth of the waist measure from the centre front—plus a vee, dart or pleat as the case may be.

However, though there is much truth in such observations—I have already implied it—they are not applicable to all figures.

The main consideration is that adequate size and correct shape are provided in the skirt to enable it to cover these particular parts of the wearer's figure. The suggestion of a measure "from centre back to side hip" is a good one—and one I have mentioned earlier, together with a measure from centre front to side hip, at hip or seat level. The advantage of such measures is that they can be taken on both sides of the figure; they will thus reveal any difference in size and shape between the two sides.

There are various additional measures that can be taken, of course, according to any designer's or cutter's predilections. The thing to remember is that these measures must be taken from one defined point to another. As long as the measuring points are established, the cutter can proceed with a considerable degree of accuracy—wherever he may have decided to fix his points.

Positioning of the side-seam is largely a matter of style—some ladies' tailors like to see the side-seam forward (as at C on this diagram) and others prefer it backwards (as at Y). On the other hand, placement of the seam at the most prominent part of the hip (at side) is a satisfactory arrangement for the adequate fitting of many figures. In this case, the side-seam waist suppression can be reduced and the dart suppression increased.

If we assume that the hip prominence is at C on the diagram, the side-seam can be shaped as the dash lines H and K, or straighter; a dart can be taken out at M, and the amounts taken out at darts 5 and 6 can be increased—if necessary to get correct size. Or other additional darts can be employed. Distances from side to back and front (A and B) can be registered by measurement.

**Anatomical Link**

What has been said so far in this recapitulation has a very definite link with the figure. I will summarise some of the points in this link. References will be made to Diagram 57.

**Figure A** depicts the side view of the figure's trunk and shows a complete leg, with the waistline (W), the upper hips line (H) and the hip-seat line (HS) marked on it. Vertical lines 1-2 and 3-4 draw attention to the shape of part of the abdomen and the buttocks. The horizontal line at HS runs to the most prominent part of the buttocks (or seat) in this particular figure; but this is not the case in every figure. There are many female figures in which the prominence is lower; there are others in which it is higher—taking the calculation from the horizontal line struck from the first "bend" inward of the lower abdomen, or level with the so-called "crutch" region. The shape of the figure from waist to seat prominence varies accordingly.

The crest of the pelvis and the head of the femur are, in nine figures out of ten, situated about midway across the side, as indicated by the dash line, 5. Here again there are variations—forward or backward, as indicated by lines 6 and 7. The point here is that if we decide to locate the side-seam of the skirt at the hip prominence position (on each side), taking a measure from both centre
front and centre back, we must make quite sure that we have located the prominences accurately. Or, if we want to put the side-seam forward (whatever may be the position of the hip prominence) we must make provision in some way for that prominence.

It is an anatomical fact that the pelvis of the human female is relatively wider than that of the male. Some women have what we might term an "extra wide" pelvis; and it is frequently found that such women are relatively flat in the seat, with a consequent lack of what cutters call "distance through" the figure.

This type of build, together with a somewhat forward stance (something akin to a "swayback"), will have a considerable width at the front from side to side. The type is suggested by the small sectional Figure B. Treatment of a skirt for such a figure will certainly require more front portion than back portion, in relative terms.

Figure C is the reproduction of a drawing I made from a photograph of the pelvic portion of a skeleton—that of a young woman, I believe. This figure actually depicts the whole of the pelvis and also shows the heads of the femur bones (great trochanters) of each leg. These are marked by A and B. It is interesting to note the shape of the sides of the pelvis, for these go to provide our "hip prominences." (See also line F, Fig. B).

Waist Line

I have marked an imaginary waistline on this drawing (see W-W) and I have drawn from this the outer contour of each side of the figure. It should be noted that there is a round in each contour over the pelvic crest, a slight hollow between the latter and the great trochanters (A and B) and another round at the trochanters.

These side shapes (where there is not a lot of flesh on the majority of figures) can vary to a considerable extent. In some cases, as I have mentioned earlier in this book, the trochanters are quite prominent—projecting well beyond the sides of the pelvis.

These observations are, I believe, of great importance to the cutters of ladies' garments. They apply particularly to "straight" skirt construction. Of course, apart from bone structure, there is muscular formation to be considered. This I have already discussed at some length.

A final word—on the altitude of the waist and the difference between the front and back.

I have drawn attention to the fact that a very large proportion of women contains figures in which the back waist hollow is lower than the front and side hollows. This is true, but it does not rule out another fact, that there are women with a back waist hollow more in line with the side one.

Types should be judged carefully and then assessed in accordance with anatomical peculiarities. This waist line matter is an important one—more especially when skirts with waistbands are being considered. The waistband, in most cases, quite plain and it is cut perfectly straight. An example will be found in the next chapter.

Another Two-piece Draft

Before leaving the more or less basic style of skirt, I will give the draft of one which, cut on the two-piece structure, has infused in it a moderate amount of side "flare." References are made to Plate XLVI, page 206.

Measures: 26 ins. waist; 38 ins. hips-seat; 5 ins. from side waist to hip prominence; 7½ ins. from centre back waist to seat prominence level; 28½ ins. length.

To draft, square lines both ways from starting point O. 1 from O is 7½ ins. (waist to seat prominence level).
2 from O is the full length (assumed to be the same all round).
3 from 1 is ½ hips-seat plus ½ in.; 4 from 2 is the same; square 3-X.
5 is midway 1-3; 6 from 5 is ¼ in.
7-8 is squared from 6, and 7 from 8 is the 5 ins. to hip prominence. (A line is also squared straight down to 21.)

Proportioning of the waist reduction for a standard skirt of this kind I should carry out in the following manner:
Points 9 and 10 are placed ⅛ in. above the line O-X; 1½ ins. is taken out between 8 and 10 and 1¼ ins. between 8 and 9; 11 is 1½ ins. (full) from 9; 12 from 11 is 1½ ins. The dart here is taken down to 13, level with 7, and is shaped to run parallel with the side-seam of the skirt.
A small dart (about ¼ in.) is taken out at 14, ½ ins. back from O. 15 and 17 are placed about equi-distant between 8 and X; square down to locate 16 and 18, as indicated.
19 from 16 is ⅛ ins.; 20 from 18 is ¼ ins. to 2 ins. Darts are then shaped from 15 to 19 and from 17 to 20, the amounts being taken out at 15 and 17 in accordance with the surplus remaining for waist reduction.
There is an overlap of full ½ in. on each side of point 21, as shown, at 22 and 23.

The draft is constructed net. Seams and turnings must be allowed at the time of cutting from the material. All darts are to be sewn out in the marks.

Hem Width Factors
The distances of points 22 and 23 from 21 on the draft just discussed (Plate XLVI) represent an overlap of the front and back portions of the two-piece skirt, the overlap making an increase of the skirt hem. When the total increase of the hem width (taking the straight-hanging style as the basis) is moderate, not exceeding 2 ins., the method described will be satisfactory. Its effect will be an increase of the entire hem and the infusion of a certain amount of side “flare.” As hem width, in relation to waist and hips-seat size is an important consideration in skirt cutting, I will give some extra notes on the subject.

References will be made to Diagram 88.
First, let us take once again the rectangular structure already dealt with. This is indicated by the solid lines bounded by points 1-2-3-4. Line 1-4 is the waist construction line; line 01-02 is the hips-seat construction line; line B-7 marks the position of the side-seam.
If side “flare” is required, we can make the additions for overlap on each side of point 7, provided we make the amount moderate.
However, there is another way of increasing the hem width and of inserting a quantity of side
“flare.” This consists of making a drop at the front waist from 1 to A (in this instance 1½ ins. has been registered) and then drawing a line from A to 4, locating point 5 on the side-seam line. At the rear part of the pattern (centre back) a line is squared (by A-4) down to 4X at the required length. The outline of a pattern cut in this way will be that bounded by points A-4-4X-2-A. The side-seam may be left as 5-7, or it may be marked so that it runs parallel with the revised centre back (dash line 4-4X).

Waist reduction will be carried out in the manner already described and will be dictated by figure size and shape. If this plan is adopted, the greater the drop at 1-A the greater will be the hem width. Further, there will be an increase in hips-seat girth. It will be noted that already we have made an increase of this dimension by the distance between point 02 and the dash line 4-4X.

Now to discuss another method of increasing the hem—one advocated by W. H. Hume in the book quoted earlier in this chapter. The author adds the hem increase at front and back, in the central position. **This structure is indicated on Diagram 58 by the dot-dash lines.**

An increase, decided upon according to requirements, is made from 2 to D (centre front) and from 3 to E (centre back). Now lines are drawn from D through 01 to locate F on line 1-4 and from E through 02 to locate G on line 1-4.

Next, lines are squared from 01 and 02 to locate C on the side-seam line; lines are also squared from E and D, to locate point CX. The completed hem line will now be marked as E-CX-D, with the shaping made to effect an even contour. The dot-dash line 01-C-02 becomes the revised hips-seat line.

**Waist Line**

The “bringing-in” of point F from 1 and point G from 4 has really made a reduction along the waist line; therefore the side-seam and dart reductions will be smaller than those required for the draft shown on Plate XLV and a little smaller than those of the draft on Plate XLVI.

Height of the side waist will be determined by special measure (already described) and this will indicate whether it should be located at B or at 5. In this regard, it must be realised that the rise of the side waist is related to the relatively close-fitting type of skirt. The fully “flared” type will not usually need a rise here—on the contrary.
(apart from skirts for figures with considerable hip abnormality) the side waist will be relatively lower than the front and back waist—that is, in the basic structure of the pattern.

The difference will be observed when the reader studies the two following drafts.

**FLARED SKIRT—WITH PLEATS**

**Plates XLVII and XLVII (A)—**The style of skirt shown by these diagrams has three pleats in the front and three in the back—one at the centre and the other two spaced in the way adopted for a panelled type of skirt. All the pleats will be stitched down in a seam from the waist, the seam continuing 4 ins. to 5 ins. down and finished at the commencement of the pleat with a triangular or arrowhead tack.

The most satisfactory method of producing a pattern for this kind of skirt is that which sets the pleats in the paper before the draft is made. The method is indicated on the first diagram; other diagrams extend the drafting procedure.

**Measures for this draft are:** 27½ ins. length; 24 ins. waist; 36 ins. hips-seat.

**Diagram 1**—This shows the position and the direction of the side front pleat; it also shows the allowance required.

**Diagram 2 (Front)**—Mark point O; 1 from O is 1½ ins.

2 from 1 is ½ waist; connect 1-2 and hollow ½ in.
3 from 1 is 8 ins. for hips-seat line; 4 from 1 is the full length.
5 from 2 is 8 ins.; it is swept, with 2 as pivot, and from 3 is ½ hips-seat plus ½ in.
Connect 2 through 5 to 6—full length. Draft out as shown.

**Diagram 3 (Back)**—7 from O is 1 in.; 8 from 7 is ½ waist; connect to 8 and hollow ½ in.
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9 from 7 is 8½ ins.; 10 from 7 is the full length plus ½ in.
11 from 8 is 8 ins.; it is swept, with 8 as pivot, and from 9 is ¼ hips-seat plus ½ in.
Connect 8 through 11 to 12—full length. Draft out as shown.

Diagram 4—This shows the actual completed pattern of the front of the skirt, with the pleats opened. The back pattern will be produced in a similar manner, the infusion of the pleats being carried out in the same way as for those of the front. If preferred, the centre pleat at the front, or the back (or both centre pleats) may be eliminated and the skirt fashioned with only the two sets of side pleats.

HALF-CIRCLE SKIRT

Plate XLVIII—This style of pleated skirt is referred to as the half-circle style, a smaller hemmed skirt than the full-circle, or ballerina, style. In this particular pattern draft there are six inverted pleats; they may be stitched down for a few inches below the waist and “soft-pressed” to the hem. One pleat will fall on the side-seam of the skirt, at the top of which the plaquet will be formed.

The length of a skirt of this kind is largely a matter of personal taste. Some are cut to knee length; others are cut to upper or mid-calf length.

In the draft given here the construction is based on a waist measure of 24 ins. The hips-seat measure will be 36 ins. or 37 ins.; for this style there is no need to make actual application of the hips-seat measure, as the general “case” incorporated will be sufficient to clear that part of the figure with ample provision. When abnormal figures are being dealt with, however, it may be necessary to check on the hips-seat measure. In any case, there is no harm done in taking that measure for all figures.

In the present draft there is an allowance of 2 ins. for each pleat; the length is taken as 27½ ins.

Now to describe a simple method by which to obtain the circle radius and its application to the waist and the distribution of the “flare” and the pleats.

First, add the total amount of pleat allowances to the waist measure. In this case there are six pleats of 2 ins., which makes a total of 12 ins. This amount is now added to the waist (24 ins.) and gives a total of 36 ins.

Now the total is divided by 3, which gives 12 ins.; from this, ⅓ in. is deducted, giving 11⅔ ins. to be taken as the radius.

This application will produce a waist girth slightly above the actual measure, to allow for an even fulling-in all round the waistband. The latter will be cut separately and attached in the usual way.

Mark point O in a convenient position and square both ways from it.
A from O and B from O equal the radius.
C from B and D from A equal the full length.
E and F are squared down from O, the former being the radius amount from O and the latter the full length from E.

PLATE XLVIII
Now divide A to E, E to B, D to F and C to F into three equal parts, thus locating points G, H, I and J.

Mark in 1 in. from points A and B; also mark 1 in. either side of points G, H, E, I and J.

The side-seam will be formed by the joining of lines A-D and B-C. Allowance must be made for this seam when the skirt is being cut from the cloth.

DIVIDED SKIRT—WITH PLEATS

This type of skirt is something very much like wide and long shorts. It is constructed in very much the same way, but its finished appearance does resemble that of a pleated skirt; the division made to accommodate the legs of its wearer is not actually seen when the skirt is on the figure.

References will be made to Diagram 59 which is a typical example of the basic kind of draft for the divided skirt. There are inverted pleats—one at the front and one at the back, on each side.

Measures for the pattern draft are: 26 ins. side length; 12 ins. body-rise (this dimension is explained fully in the following chapter which deals with the cutting of slacks); 26 ins. waist; 36 ins. hips-seat.

Drafting scale—half hips-seat measure (19 ins.)

The construction is similar to that which has the dropped front waist (see reference in connection with Diagram 58 in this chapter).

The pattern is cut in two portions: the front portion is termed the topside and the rear portion the underside. These terms will be used again when I deal with the drafting of slacks and breeches.

In the present draft the topside is marked out in dash lines and the underside in solid lines.

Topside

Square construction lines O-2-5.
1 from O is 1 ¼ in. for centre front waist.
2 from 1 is one-fourth waist plus ¼ in.
3 from 1 = 8 ins. for hips-seat line.
4 is located at 8 ins. below 2 and is one-fourth hips-seat measure plus ¼ in. out from 3.
5 from 1 = skirt length.
6 is squared by line 3-4, and from 2 = skirt length.

Line 1-5 represents the centre front and a pleat should be added as illustrated above 5, this forming half of an inverted pleat.
7 is 1 ¼ in. out from 1 for seam.
8 from 7 = the rise (12 ins.).
9 is squared out from 8 and = ¼ scale.

10 is squared down from line 8-9; 11 from 10 = 1 in., or 2 in. for wider style.

Draw leg-seam from 9 to 11.
12 from 8 = half of 8 to 9 plus ½ in.
Shape from fork seam from 7 through 12 to 9.
This completes the topside pattern. It can now be cut out, round its outlines (with the pleat allowance included); then it is laid on another sheet of pattern paper so that the underside can be drafted from it.

Underside

13 is swept out from 2 (pivot at 4) and drawn straight through from 6 and 4.
14 from 13, on the sweep = ¼ in.

Shape top section of side-seam from 14 to 4.
15 is ¼ in. above 1.
16 is midway between 14 and 15 on straight line drawn between these two points.
17 is squared from 16 and = 5 ½ ins.
The dart at 16 = the quantity between 2 and 14, divided on each side of point 16.
18 is ¼ in. out from 15.
19 from 9 = 1 ½ ins.; 20 from 11 = 1 ½ ins.

Shape seat-seam from 18 through 21 to 19.
A pleat should be added from 15 to 19, corresponding with topside.
The bottom edge is completed by squaring from 20 to 5, then shaping gradually to 6.
22 and 23 are 2 ins. below 9 and 19, this is dropped so that a more comfortable "fork" is obtained.
The top is finished with a waist band in the usual way. In some cases the band has an extension of anything from 2¼ ins. to 4¼ ins. This usually has a pointed end in which a button-hole is inserted to fasten with a button on the opposite side of band.

**VARIOUS STYLES**

I intend to conclude this chapter with a few notes on six different styles of skirt, a pattern for each of which can be drafted on the construction given for the basic two-piece or three-piece model. This basis can be used conveniently for quite a large range of styles.

References will now be made to Plate XLIX which shows the six styles I have in mind. All these styles have had varying periods of popularity—they have been in and out of fashion, and back again, for a number of years. They have also had their particular variants in the matter of design, pleat placement and number, "flare" and other style features.

Figure 1 shows the ordinary two-piece skirt with an inverted pleat at centre front. This particular style requires an extra 4 ins. to 6 ins. at centre front for the pleat, plus seam allowance.

Figure 2 illustrates a skirt with two inverted pleats forming a panel. This design requires twice as much pleating as the single pleat skirt and the width of panel can be made about 7 ins.

Figure 3 portrays the single knife pleat; this only requires about 2½ ins. on the double at centre front.
Figure 4 is a different type; the extra width at front is required to form an overlap and the quantity depends upon individual taste.

Figure 5 depicts yet another style; it has a fairly deep hip yoke and the lower section consists of several knife pleats. The yoke may be cut by the foundation pattern to whatever depth is desired, whilst the pleated section is simply a straight piece of material folded into as many pleats as required.

Figure 6 may also be designed by the two-piece foundation, but in this case an extra piece of material must be provided (cut on the bias) to form the narrow front panel and part of the inverted pleats.

The size of panel and width of pleats vary according to requirements, but the best effect is produced by making the panel as narrow as possible.

Pleats

The principle involved in the cutting of skirt pleats and the allowance made for them are factors that have already been dealt with in this chapter. As regards the insertion of additional panels, it will readily occur to the reader that these can be placed where fashion and taste may dictate. The important thing to remember is that allowance must be made for these additions; the size of the skirt at waist, hips-seat and hem must always be related to the measures taken.

* * * * *

In part two of this book (now in preparation) I shall deal with various fancy styles of skirts in which pleats, basques, godets, flounces and other fashion adjuncts are featured.
Drafting of Patterns—6

This chapter deals with the drafting of patterns for slacks and breeches. The slacks described are those that may be worn as part of a two-piece suit (a combination enjoying some popularity at the time when this book is being written) or as articles for informal and leisure wear. The breeches I shall discuss are those designed for riding.

Slacks

Measures—The measures required for slacks are these: side of leg from waist to sole of foot, inside leg from crutch to sole of foot, body-rise—crutch to waist—round knee (with clearance according to fashion), round bottom (with clearance according to fashion). These measures are recorded in the manner detailed below.

Side leg (or side-seam)—Taken from the waist, as for the side length of a skirt, continued down to the sole of the customer's foot.

Inside leg—If the lady customer is wearing slacks and she is being measured by a lady member of the tailor's staff, she may not object to this measure's being taken from the crutch down to the sole of the foot. However, if there is any embarrassment in this respect, or if a male cutter is taking the measures, the recording of the inside leg length is made in the way illustrated by Figure SM. In this, the subject is depicted as wearing a skirt.

The customer sits on a stool or chair, in a natural upright position. A measure is then taken from the waist hollow at the side to the seat of the stool or chair. This measure will be that of the body-rise; when deducted from the outside leg length it will give the length of the inside leg.

In the application of the inside leg measure to the pattern draft there will be a deduction made in the length registered, in accordance with the customer's wishes. The amount of deduction will also depend on the width of the bottom—the narrower this is the greater will be the deduction of the leg length. Women's slacks are not usually designed to produce the "break" over the instep arch that is often seen on men's trousers; in most cases the legs of the former are made to hang "clean." In the course of make-up, the bottom will be hollowed slightly to clear the instep arch comfortably so that there will be a nice line.

For the draft to be discussed here it is to be assumed that the inside leg measure applied has already had the reduction made; the length thus registered will be that of the finished leg when the slacks are completed. It is satisfactory to
make about 1½ ins. or 1¾ ins. of deduction in leg length for a bottom of the size stated in the set of measures given.

The waist measure and the hips-seat measure are taken in exactly the same way as the similar measures for skirts.

The knee measure and the bottom measure are taken round the leg at those parts. In most cases only the bottom measure need be taken, the knee measure being calculated in accordance with the general run of the leg-seam and side-seam. The important thing here is to get a nice tapering run from the side hip position down to the bottom.

The taking of the bottom measure requires the passing of the inch-tape round the heel of the wearer's foot (or shoe) and over the instep arch to the extent of width desired. **This is illustrated on Figure SMX.**

These measures, and the draft which will now be described, refer to slacks for make-up in the standard range fabrics—wool, worsted, mohair and certain synthetics and natural/synthetic fibre blends. They do not apply to slacks that are to be made up in either knitwear or “stretch” fabrics. However, with comparatively little modification the measures and the draft can be adapted to those types of material.

**Standard Slacks Draft**

This draft is depicted on Plate L and is constructed to the following measures:
- 40 ins. side-seam (side leg); 11 ins. body-rise;
- 26 ins. waist; 38 ins. hips-seat; 15 ins. bottom.

**Drafting scale—half-hips-seat (19 ins.)**

**Topside Pattern**

Draw line O-1, making the distance between these points the side-seam length plus one seam and less the band depth (1¼ ins.).
- 2 from 1 is the rise measure less 1⅛ ins.
- 3 from O is midway O-2 plus 2 ins.
- 4 from O is ½ bottom measure; 5 from O is the same.
- 6 from 2 is ⅛ scale; square upwards to locate 7.
- 8 from 6 is ¼ in.; connect to 7.
- 9 from 8 is ⅛ scale; 10 from 9 is ¼ ins.
- Connect 10 and 5 to locate 11 on knee line.
- Shape from 9 through 11 to 5 for the leg-seam.
- 12 from 8 is ⅛ scale; shape as indicated.
- 13 from 3 is the same as 3 to 11.
- 14 from 2 is ⅛ scale.
- 15 from 7 is ⅛ waist measure plus ½ in. for seams and ⅛ in. for a front dart. The latter is taken out

with ½ in. each side of point 1; length of the dart is about 3½ ins. **(This dart seams in the mark.)**

There is ⅛ in. of round between 15 and 14.

**Underside Pattern**

Lay the cut-out topside pattern on the paper and proceed as follows:
- 16 from 5 is 1 in.; 17 from 11 is the same.
- Measure from 11 to 9; place this amount at 17 and sweep an arc from 9 out to 16.
- 18 from 9 is ⅛ scale plus ½ in. on to the arc; 19 is midway 8 and 9.
- Draw a line from 19 through point 7; shape the seat-seam as shown through to 18.
- With 14 as pivot, sweep out from 15 towards 21.
- From approximately 1¾ ins. above 7 measure across to 21—⅛ waist plus ⅛ in. for seams and plus ⅛ ins. for two darts. **(These darts are seam out in the marks.)** Place one arm of the square at 19 and the other on 21 and locate 20 at the angle.
- The darts are located at 22 and 23 (more or less equi-distant) and are suppressed 1 in. They are about 5⅛ in. in length.
- 24 from 8 is ⅛ scale; 25 from 14 is the same.
- 26 from 20 is the same as 7 to 24.
- Measure from 24 to 25, place this quantity at
26 and continue out to 27—half hips-seat measure plus 1 in. for seams and ½ in. for ease. Complete as indicated.

**Waistband**—A to B is the width (1½ ins.) plus ½ in. C from A is ⅛ waist plus ½ in. D is squared from C and B. The shaded portion (D-C-E-F-D) indicates the extension, to finish 2 ins. in length.

This method of cutting a waistband pattern may be used for many skirts. Finish of the end, and the extension, will vary according to style preferences.

**Note:** This system includes allowances for ½ in. seams, excepting the darts in both topside and underside, as stated.

**RIDING BREECHES**

First, some details with regard to the measures required for breeches. The side leg (or side-seam) measure may be taken down from the waist to the sole of the foot, as for slacks; or it may be taken from the waist to the side position of the knee. The inside leg measure can be recorded by first obtaining the side measure from waist to sole of foot and the body-rise measure in the manner described for slacks (see Figure SM); then a measure can be taken from sole of foot to knee position; now the body-rise will be deducted from the sole-to-knee measure and the result will be the inside leg from crutch to knee.

Many breeches cutters take the measures at side leg and body-rise in the same way as that adopted for slacks; then they deduct the body-rise measure from the side leg measure and take the resultant amount as the full inside leg measure. After this, they take half the inside leg measure so found and take that as indicating length to the small of the leg—that is the hollow portion between the knee and the calf of the figure. If this is done, the knee position on the draft of the pattern will be placed at 2½ ins. to 3½ ins. above the small position and the calf position will be placed at 3 ins. to 3½ ins. below the small.

The waist measure and the hips-seat measure are taken exactly as for skirts and slacks.

Now we have to consider the taking of the measures round the knee, small and calf of the leg. This is indicated on Figure BM.

**Section (a)** shows the front of the leg in the area

**Fig. BM**

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**PLATE L**
with which we are concerned. The knee measure (K) is taken with the tape held relatively loose, but not slack; the small measure (S) is taken with the tape held very close; the calf measure (C) is taken with the tape held just next to the leg—neither loose nor close, just “fair.”

Section (b) shows the same measures being taken and indicates the position of the customer’s leg. Notice that this is flexed slightly at the knee, the correct position for the knee measure to be taken.

It is important to take great care with these three measures. The tape must pass well over the knee and calf prominences and it must be held well in the hollow of the small.

Now to give details of the breeches draft.

References will be made to Plate LI.

The measures which follow include the side-seam and inside leg measures as taken to the knee position (see references above). They also include a lower calf measure, sometimes used when the breeches are required to be long or to have what are called continuations (described in the instructions for this draft).
**Measures**—23½ ins. side waist to knee; 10 ins. knee to lower calf (or full length); 11½ ins. body-rise; 28 ins. waist; 39 ins. hips-seat; 14 ins. knee; 12 ins. small; 13½ ins. calf; 10 ins. lower calf.

*Drafting scale—½ hips-seat (19½ ins.)*

**Topside Pattern (left-hand diagram)**
Mark the starting point O in a convenient position on the pattern paper and square lines from it as indicated.
1 from O is ¼ scale plus ½ in.
2 from O is ⅛ scale net.
3 from 2 is ¼ scale net.
Square up from O to 4—body-rise measure.
5 from O is ½ scale and marks the commencing point for the front fall curve.
6 from O, halving the angle 1-O-5, is half the distance of O to 1.
Now shape the front fall from 5 through 6 to 1.
7 from 4 is one-fourth waist plus ⅛ in.
Mark down a full ½ in. from 4 to 8 and shape the top from 7 to 8.
A small vee, or dart, is sometimes marked out at about ¾ ins. in front of point 7, as indicated.
Square a line down from 2 towards 13.
9 from 2 is made 1 in. or 1¼ ins. to allow for extra ease to the knee position.
10 from 9 is the inside length to knee, calculated in the manner described earlier.
11 from 10 is 2½ ins.; 12 from 11 is 3 ins. *These dimensions, as will be noted, are assessed according to one of the methods described at the outset of the remarks on breeches; they can be assessed in relation to measures taken, as already mentioned.*
13 from 12 is the distance between the calf prominence and the lower calf. If no extension is required here the topside pattern will be marked to finish for length on line 12.
Lines are squared from points 10, 11, 12 and 13.
14 from 10 is ½ knee measure; square down from 14 to locate A on line 11 and B on line 12.
Measure back from 14 to 15 half the knee measure.
Measure back from A to 16 half the small measure.
Measure back from B to 17 half the calf measure.
If the longer style is required, measure back from 13 to 18 one-fourth of the lower calf measure.
E from 10 is 2 ins.; 19 from 3 is ⅛ in.—variable to taste. The run of the side-seam from the waist and through point 19 downwards is always determined by the amount of "flare" or "pouch" it is desired to give. There are changes in this from time to time, according to fashions and tastes. The present example is more or less standard at the present time.

20 is midway between 19 and E; 21 from 20 is 2 ins. to 2½ ins.
The side-seam can now be shaped as indicated. Square up 2 ins. from 15 to C.
Connect C to 1 by a straight line and give a slight round from C to 15.
A full ½ in. dart is taken out at D which is located ¼ in. above 15. It is usual for this dart to be steted when the breeches are made up; sometimes a small seam is taken (allowed for when the dart is cut) and is reversed. The dart will be concealed by the buckskin or self strappings which are attached.
The knee opening tack position is marked by M, about ½ in. below 10.
The completed topside pattern is now cut out and laid on another piece of pattern paper for the drafting of the underside. The dash line portion beyond M-11-12-13 is the turn-in for the knee opening facing. It can be cut on the pattern, if desired, or the pattern may be cut along line M-11-12-13 and the turn-in added at the time when the breeches are being cut from the cloth.

**Underside Pattern (right-hand diagram)**
The laid-on topside pattern is indicated here by the dot-dash outlines.
Now, with C as pivot centre, sweep an arc from 1 to 22, making the distance between those points ½ scale.
Draw a straight line from 22 through C to N on line 15.
23 from 5 is 1½ ins.; draw a straight line from 1 through 23 upwards towards point 24.
24 from upper 25 (squared line) is 3 ins.
Now shape the seat-seam from 23 to 22 as indicated.
Add ½ in. to the knee measure and apply this from 15 to lower 25 (on line 15), after deducting the topside amount of 10 to 15.
26 from 16 is the small measure, plus ⅛ in., after deducting the topside amount of 11 to 16.
27 from 17 is the calf measure, plus ⅛ in., after deducting the topside amount of 12 to 17.
If the extended style is required, draw line from 25 through 26 and 27 to 28 on line 18.
In this instance, if the measures have been applied from the topside line 25-27 should be straight. However, in some cases this will not necessarily be so—it will depend largely on the small measure. In such cases, it is essential to keep line 25-26-27 straight and to make any adjustment to measures on the leg-seam portion.
29 from 28 is ¼ in.; curve the bottom run ¼ in. below the base line from 18 to 29.
Apply the lower calf measure (when required) from 13 to 18, then from 18 to locate point 30—adding $\frac{1}{2}$ in.

The amount between 29 and 30 is the surplus which will be taken out in two darts (31 and 32); both darts are sewn out in the marks.

Draw a line from M parallel with 15-25 to establish points S and T. Shape the bottom half of the back knee cut from T to S, hollowing $\frac{1}{4}$ in. between K (on line 14-B of topside) and S.

33 from 19 is 2 ins., or according to style and amount of "pouch" that may be required.

Measure from 19 to 7 on the topside and sweep an arc to this amount from 33 in the direction of 34 (19 as the pivot). Add $\frac{1}{2}$ in. to sweep.

34 from 24 is the half waist plus 1 in. for seams and $\frac{1}{2}$ ins. for two darts at H and L and with allowance for the small dart taken out at a short distance from 7 on the topside.

The side-seam may now be given a preliminary run from 34 through 33 into 25 (see dotted line contour).

Starting at point 26, give a little round in the region of 25 and continue to the inner side of the line about 3 ins. above this point.

35 and 36 indicate balance marks (or notches), each being about 2 ins. from 19 and 33 respectively.

Measure round the topside outline from 35 to E and apply this amount from 36 to 37, deducting $\frac{1}{4}$ in. for fullness for the topside, which will be infused during make-up in the region indicated by the wavy line.

36 from 37 equals E to M of the topside.

W is $\frac{1}{2}$ in. above line 15-10; curve the top part of the back knee cut from N to W and W to 38, passing through point K as shown.

A button-stand or a vent turn-in is allowed as indicated by the dash lines beyond line T-29.

**Note:** The small inset diagram denotes the two sections of the underside as they will appear when ready for laying on the material. The shaded parts represent the inlays that are usually left.

When making up, the undersides should be well stretched on the side-seam at V and shrunk at J prior to being joined to the topsides.

Apart from the instances specially noted, all seams in the breeches draft are allowed in the system.

**JODHPURS**

The drafting of patterns for jodhpurs will be discussed fully in the second part of this work. However, a few notes on them and their relation to breeches as riding garments, can be made here.

A pattern cut by the system just described can be adapted for the cutting of a jodhpurs pattern quite easily. It is a matter of extending the leg length (below line 18-13-28 on Plate L) to ankle length. For the jodhpurs bottom there will be required the measure indicated on Figure SMX and, of course, the inside leg measure.

The two darts shown on the breeches draft (31 and 32) will be longer; they will extend from the bottom of the jodhpurs leg and will be terminated where they are on the breeches draft—at the calf prominence position.
THE SUBJECT of this chapter is the drafting of patterns for Topcoats, or Overcoats, to apply their older name. As with the drafts of jacket patterns, I deal primarily with the basic principles which are inherent in the structure of topcoat patterns and from which various stylings can be worked out. I take the basic construction of patterns for straight-hanging topcoats and for Raglan styles. Also, I deal with certain pattern manipulations that are frequently adopted.

Plate LII, on page 120, depicts the first draft to be discussed—that for a pattern of a straight-hanging, loose topecoat.

This garment may have a "whole" back or may be styled with a centre seam; a centre vent, or a pleat, may be introduced.

The chief characteristic of this particular style of over-garment is its amleness. It is a roomy, comfortable coat and lends itself well to make-up in cheviots and tweeds.

On the draft vertical pockets are illustrated; these are inserted at a slight slope. If preferred, horizontal flapped or patch pockets may be adopted.

It will be noticed that the scye is of the standard cut, with the customary deepening. The standard sleeve system as described in Chapter VII and illustrated by Plate XXVIII will be found adaptable.

Notes on Measuring

Measures should be taken easily. Further, it is a good plan to ask the customer what type of garments she is likely to wear under the coat. If she wishes to wear a suit, it may be better to increase the scale size when cutting the topecoat.

It is the usual custom for cutters to take topecoat measures in the same way as they take those for jackets, described earlier in this book. There is the necessity then to make increases for the topecoat structure—either by adding 2 ins., 3 ins. or 4 ins. to the bust measure as taken and calculating the scale for drafting on the increased dimension, or by incorporating the required increases in the system of drafting. In the present example the latter course has been adopted.

These are the measures:

- 15½ ins. nape to back waist hollow
- 43 ins. full length
- 7 ins. x-back
- 36 ins. bust girth

(For a loose-fitting style such as this there is no need to record the waist and hip-seat girths—provided the pattern is to be drafted to the proportions of a normal figure.)

Drafting scale—½ bust plus ½ ins. (18½ ins.).

Such a scale will apply to figures of 36 ins. bust and over; for sizes below 36 ins. bust a scale of half-bust may be used effectively for a basic pattern.

To commence the draft, mark point O in a convenient position and square lines from it as indicated.

- 1 from O = ½ scale plus 3½ ins.
- 2 from O = natural waist length.
- 3 from 2 = 8 ins. for normal seat line.
- 4 from O = full length of back plus ½ in.
- 5 is midway between O and 1.
- Square across from these points.
- 6 from O = ½ scale less ½ in.
- 7 is squared from 6 and = ½ in.
- Shape back neck from 7 to O.
- 8 from 5 = x-back measure plus ½ in.
- 9 is squared from 8 and is located on depth of scye line.
- 10 from 1 = ½ bust plus 3 ins.
- 11 from 10 = ½ scale less ½ in.
- 12 from 11 = ½ scale.
13 is squared up from 12 and is fixed on top construction line, as indicated.
14 is squared from 13 and \( \frac{1}{2} \) scale less \( \frac{1}{8} \) in.
15 is \( \frac{1}{8} \) in. above 5.
Draw straight line from 14 to 15.
16 is squared up from 8 and is located on line 14-15.
17 from 16 = \( \frac{3}{8} \) in.
Draw back shoulder-seam from 17 to 7.
18 from 14 = back shoulder length less \( \frac{1}{8} \) in.
19 from 18 = \( \frac{1}{4} \) in. for shoulder end.
20 is \( \frac{1}{2} \) in. above 11.
Shape armhole from 19 through 20 and 8 to 17, deepening it 1 in. between 9 and 11.
The front pitch is fixed \( \frac{1}{8} \) in. above the deepened seye line, and the back pitch \( \frac{1}{4} \) in. below 8.
21 is a continuation of line 14-15, and from centre front line equals \( \frac{1}{4} \) scale.
22 is squared across from 21.
23 from 22 = \( \frac{1}{2} \) scale.
24 is squared down from 21 and = 2\( \frac{1}{8} \) ins.
25, 26, 27 and 28 are squared from 10, the bottom point being \( \frac{1}{4} \) in. below 27.
29 is 2\( \frac{1}{8} \) ins. beyond centre line and about midway between 10 and 25.
30 from 28 = 2\( \frac{1}{8} \) ins.
Draw front edge from 29 to 30, then complete lapel by adding a fair amount of width and round above 29.
31 is midway between 10 and 11, this line being squared up to shoulder-seam for construction line of bust dart.
32 is \( \frac{1}{8} \) in. nearer front and 1 in. below 31 for bottom of bust dart.
33 is \( \frac{1}{2} \) in. in the other direction for top of bust dart.
34 is swept over from 33, the pivot is fixed at 32 and the distance between 33 and 34 corresponds with the quantity from 14 to 21, less \( \frac{1}{8} \) in.
Complete dart from 33 and 34 to 32, as indicated.

**Top of Side-seam**
35 is the position of side-seam; this is a matter of taste, but a good guide is to fix it at the point where armhole crosses the normal depth of seye line. Mark seam steps on each side of 35.
36 is squared from 35 to waist line.
37 is located by drawing a straight line from 35, adding or going out \( \frac{1}{2} \) in. at 36.
38 is the bottom of back side-seam; this is drawn straight through from 35, adding about \( \frac{1}{8} \) in. at 36.
The amount of overlap at 36 depends upon the width required at hem; therefore, points 37 and 38 can be fixed accordingly.
39 is squared down from 11, it is about 1 in. below waist line and fixes top of vertical pocket which runs parallel with forepart side-seam.
Complete bottom of back from 4 to 38 and forepart from 37 to 30.

**Notes on the Draft**
The calculation used for the distance between points 33 and 34 at the top of the shoulder bust dart is one that is satisfactory for a basic pattern. Of course, as has been pointed out earlier (see Chapter VIII), the opening at the top of the bust dart and the length of the dart are ultimately dictated by the extent of the bust prominences of the figure.
For a relatively loose-fitting topcoat, as well as for a straight-hanging jacket, the bust dart need not be so large as it would be for a fitting style of garment—that is, if we are dealing with a comparatively normal figure; further, a slightly shorter bust dart is usually better in a loose-fitting garment.

**The structure of the draft on Plate LII is arranged so that seam allowances are incorporated in the pattern; turnings are to be allowed at the time of cutting the garment from the cloth.**

**Styles**—As a conclusion to this section of the chapter on topcoats, I have included Figure TS. It depicts three styles of loose-fitting topcoats, a pattern for each of which could be derived from the basic structure shown on Plate LI.
**PATTERN MANIPULATION**

I will now give some details of a particular form of manipulation which may be carried out on a pattern designed for the cutting of a topcoat, similar to the one just described, in which it is required to infuse more "flare."

References will be made to the diagrams on Plate LIII.

Sections 1 and 2 depict the back and forepart of a basic block pattern. Now certain markings will be made preliminary to the manipulation.

Two lines are drawn straight down the pattern. These are A-A on the back and B-B on the forepart. On the former, point C marks the blade position; on the latter, the line B-B is ruled through a position about 1 in. in front of the scye.

On Section 1 the basic scye base is indicated at 1; the dash line running from 2 to 3 indicates the variation for a deep scye coat; on the forepart the basic scye base is at 4 and the deep scye run will be that of 5-6.

The manipulation of the pattern will not necessarily be affected by the type of scye that is adopted.

It is to be assumed that more "flare" is required for the styling of a particular topcoat. We will say it is to have the deep scye.

First of all, the back will be drafted as Section 1, with the deep scye adaptation made as indicated at 2-3. The forepart will be drafted as Section 2, again with the deep scye adaptation, in this case shown by the dash run from 5 to 6.

The back pattern, having been cut as in Section 1, will finally take the form illustrated by the dash outlines on Section 3. Insertion of the extra "flare" is carried out in the following manner.

The pattern is cut right through along the line A-A. Point C is then used as a pivot and the rear portion of the pattern is moved backwards from lower A to 6 (in this case about 1½ ins.). With the same point as pivot, the front part of the pattern is moved from A to 7. The outlines of the back pattern are then marked in as shown by the solid contours.

It will be noticed that this form of manipulation has involved an overlapping of the upper portions of the pattern at the top A of line A-A. The adjustment of this is illustrated on the one small diagrams—Sections 4 and 5.

In Section 4 we see the overlap marked at A and a short line running from point C to the scye curve at D. The pattern is now cut along the line C-D.

The next stage is indicated on Section 5. With C as pivot the front portion of the pattern is moved so that the overlap at A disappears. This means that the back shoulder is now in its original length, the overlap at A being replaced by its equivalent amount between points 11 and 12. At the same time, the pattern will overlap at the scye curve on line C-D, as shown at 9-10. The shoulder-point (13) will pass down to 14 and the
entire upper part of the pattern will be marked in as shown by the solid outlines.

This type of back pattern manipulation is no newer than anything in the way of tocoat "flare" may be—it has been used by cutters for some time. It is simple enough to carry out and it may be employed for loose-hanging jackets as well as for coats.

In two particular ways it is extremely effective. It helps to preserve the shape of the shoulder-seam of the garment; it creates shortness along the back scye curve. The latter in conjunction with the relative length given over the shoulder-blade position. This is an important factor in the fitting of most female figures—the more so in cases of extra prominence of the blades.

Section 6—This shows the forepart pattern, with similar manipulation carried in. The line B-B is cut right through and, with upper B as a pivot centre, the rear part of the pattern is moved from lower B to 8 (in this instance an amount of 2 ins.). The final pattern is then marked in as indicated by the solid outlines.

Another Manipulation

I will now give details of another manipulation of the pattern as designed for the type of tocoat basically like Plate LII. It is interesting and instructive, for the reason that it is exactly the opposite in effect of the one just described. This time, instead of producing extra "flare" in the lower part of the tocoat, we are aiming to make the lower part come closer to the figure and to make the upper part larger. Further, the style required has a slight extension of the shoulder width and a small drop at the shoulder ends. (The latter effect will, of course, require a modification of the sleeve crown—a reduction of height in relation to the amount of the shoulder drop.)

References will now be made to Plates LIV and LV. In Diagrams 1 and 2 of those plates the dash outlines are those of the basic pattern part as first drafted.

Plate LIV: Diagram 1—This shows the stages of the back manipulation. The block pattern, as first shown in the draft on Plate LII, has been cut up along lines H-G and G-F. P is marked where line H-G crosses the hip line of the pattern. With P as pivot, swing the pattern to make an overlap at H-15 (say about 1½ ins.) and an opening of 1 in. at G-16. This movement will locate points 17, 18 and 19; also 20 at the bottom. The solid outlines indicate the adapted pattern; the dash outlines 3-4-6 show the block; G marks the blade point.

Diagram 2—Here we see the appearance of the block pattern after the manipulation just described. A dart is now marked out at F-G-17-16, with seam allowance incorporated. The style, as has been noted, features a dropped shoulder end; this is accomplished by extending about ½ in. from 18 to 20, the latter point being about 1 in. below
the level of 18. Another feature of the example garment is a slight "running up" of the back from centre to side-seam. For this effect the hem is marked ½ in. to ⅛ in. above lower 26.

Another feature of the topcoat we are discussing is a half-belt at the back, placed as indicated in the small inset drawing on Diagram 2. The half-belt, with two decorative buttons attached to it, is set in the side-seams at approximately hip level.

**Plate LV: Diagram 3**—The forepart pattern, as originally drafted, is laid down as indicated. Dash outlines B-9-10-11-12 denote the block.

First, line X-B is cut up and the pattern sections are overlapped at X-Y (say about 1 in.) and opened out ¾ in. at B, the terminating point of the shoulder bust dart. The pattern sections are pivoted on point O on the hip line.

Line S-H is drawn from the front-of-scye position. The manipulation is now carried a stage further, to produce the solid outlines O-21-L-N and O-B to the top of the front portion of the bust dart. The opening at B-21 will cause S to move to S'; now mark in from S' to 22 on the "new" scye curve. 22 from S' is about 1½ ins. and a line is drawn straight through from 22 to R at the bottom, passing through point H. The pattern is now cut from 22 to H (or it may be cut right along line 22-R) and a fold or overlap of 2 ins. to 2½ ins. is made at T-R, with H as the pivot.

The rear portion of the forepart pattern may now be marked out in the following manner: First, a dart as 22-H-23, the under-arm as 23-24 and the side-seam as 24-M-25.

**Diagram 4**—This diagram depicts the finished forepart pattern after manipulation. The bust dart has been re-marked, the shoulder has been "dropped" and extended from N to 26, to be in harmony with the back shoulder (calculating for the customary amount of easing in of back to forepart); the bottom of the side-seam has been raised from 25 to 27 so that the side-seam length corresponds with that of the back. The bottom
edge is made almost straight from 27 to the front, as it is a feature of the style to have a comparatively long back and a short front effect.

Special Notes
This manipulation, simple enough to demonstrate with a pattern, may appear a little complicated in the written form. However, it is hoped that readers, and particularly students of ladies' garment cutting, will be able to follow the movements.

It is important to remember that there must be adequate room in the hip region of the garment. It will be noticed that the manipulation of the forepart has not caused any increase in the distance along the hip line from M forward. As a matter of fact, the dart 22-23-H, being open at the top, will help to provide extra room over the pelvic area of the figure—that is the reason for locating H on the line from front of scye, which will, in the majority of female figures today, pass over the most forward and prominent part of the pelvic region.

Different "Lines"—The general effect in the topcoat cut from this manipulated pattern will be a wide upper portion and a correspondingly narrow lower portion; but the "hang" of the garment will be relatively straight.

If it is required to give the "Sack" or "Shift" lines effect—lines that have been in and out of feminine fashion over the last few years—the side-seams on both back and forepart may be slightly rounded in contour. That is, the runs of the side-seams from nothing at top and bottom may be drafted with a bowed effect at the hip region.

Again referring to the back (Diagram 2). Line 19-W locates a position at which a wedge may be inserted at the centre back. The pattern can be cut along this line and the lower portion swung slightly forward, pivoting at 19, thus causing an opening at W. This will give extra length to the centre back and will cause the coat to fall against the back of the wearer's legs slightly—a feature sometimes asked for in this type of garment.

RAGLAN TOPCOATS
We now come to the consideration of Raglan style topcoats of which there are many, with various fashion features, in wear at the present time. The basic style of the Raglan—and this can apply to certain jackets as well as to topcoats—is that known as the three-piece. This means that the sleeve portions are in three sections—two to form the top-sleeve and one to form the under-sleeve. A near relative of the three-piece is the two-piece style; in this there are two sleeve portions only, with a seam over the shoulder, continuing into the sleeve itself, and one seam underneath, running from the base of scye. Both styles will be dealt with here.

The main distinguishing feature of the Raglan sleeve is that it forms, in its top portions, the shoulder of the garment for which it is designed. The topcoat draft depicted on Plate LII could be used as a basis for a Raglan. Lines to be taken by the upper sleeve portions could be marked and the sleeve could be drafted accordingly.

In the two examples of the Raglan selected for this chapter I have given only the upper part of the coat sections—this is all that is required for the preparation of a basic Raglan sleeve, either three-piece or two-piece.

The three-piece structure is taken first and it is illustrated by Plate LVI.

**Measures:** 13½ ins. nape-to-back waist hollow; length to fashion; 7 ins. x-back; 36 ins. bust. (As with the loose-fitting topcoat draft for set-in sleeve, it is not essential to include the waist and hips-seat measures for a normal draft. We can, however, take 39 ins. as the hips-seat size for this draft.)

**Drafting scale**—\( \frac{1}{2} \) bust plus \( \frac{1}{2} \) ins.

(Again, this scale will apply to sizes of 36 ins. bust and over; for sizes below 36 ins. bust the half-bust can be used as the scale.)

As with the first topcoat draft, increases necessary have been calculated in the system.

Mark point O (left-hand diagram) and square lines from it as indicated.

1 from O equals one-quarter scale plus 3½ ins.
2 from O equals waist length.
3 is continued to hem and if desired mark hip or seat line 8 ins. below 2.
4 is midway O and 1.
Square across from these points.
5 from O equals one-sixth scale minus \( \frac{1}{2} \) in.
6 from 5 equals \( \frac{1}{2} \) in.
Shape back neck from 6 to O.
7 from 4 equals x-back plus \( \frac{1}{2} \) in.
8 is squared from 7 on to depth of scye line.
9 from 1 equals two-thirds scale.
10 from 9 equals 3 ins. as a maximum quantity, but one-sixth scale below 36.
11 from 1 equals one-half bust plus 2 ins.

Once again, as with the first topcoat draft, it will be seen that extra has been allowed across back, scye, and front for ease.

12 is squared up from 10 and located on top construction line.
13 from 12 equals one-twelfth scale minus \( \frac{1}{2} \) in.
14 is $\frac{1}{2}$ in. above 4.
Draw straight line from 13 to 14.
15 is squared up from 7 on to line 13-14.
16 from 15 equals $\frac{3}{4}$ in.
Draw ordinary shoulder-seam from 16 to 6.
17 from 13 equals back shoulder length minus $\frac{1}{2}$ in.
18 from 17 equals $\frac{1}{2}$ in.
Draw forepart shoulder from 13 to 18.
19 from 9 equals $1\frac{1}{2}$ ins. for front of scye.
Shape the standard scye from 18, through 19 and 7 to 16, deepening $1\frac{1}{2}$ in. between 8 and 9.
20 is squared from 11, but the height is not fixed until the neck-point has been advanced beyond 19.
21 is a continuation of line 13-14 and equals one-sixth scale from 20.
22 from 20 equals one-sixth scale plus $\frac{1}{2}$ in.
Shape neck as shown and add lapel to taste.
23 is squared from 11.
24 from 23 equals $\frac{1}{2}$ in.
Draw centre front line from 11 through 24 to hem.
Add $2\frac{1}{2}$ ins. button-stand for single-breasted front.
25 is located at the point where armhole crosses the normal depth of scye line.
26 is squared from 25 on to waist line.
Add 1 in. at 26 for side-seam of forepart and $\frac{1}{2}$ in. for back.
Continue side-seams and complete bottom edge in the manner indicated on Plate LII.
27 is midway 9 and 11.
28 from 21 equals $1\frac{1}{2}$ ins.
29 is 2 ins. below 27.
30 is swept from 28, the pivot is fixed at 29 and the distance from 28 to 30 corresponds with the quantity from 13 to 21.
31 is $\frac{1}{2}$ in. above the deepened scye and locates front pitch.
32 is $\frac{1}{2}$ in. below 7, i.e. one-half the amount scye has been lowered.
33 is $1\frac{1}{2}$ ins. below 32 for dropped hindarm pitch.
34 from 21 equals 1 in.
35 from 28 equals $1\frac{1}{2}$ ins.
36 is swept from 35, the pivot being fixed at 29.
Shape front section of the shoulder from 34 to 35 and 36 to 31, adding about $\frac{1}{2}$ in. of round between 36 and 31.
These two sections should form a continuous "run" when the shoulder bust dart is closed at 35 and 36.
37 from 6 equals $\frac{1}{2}$ in.
Shape back shoulder from 37 through 32 and 33 to bottom of scye.

**The Sleeve Portions**

**Right Diagram**—This shows the first basic structure for the sleeve. It is, with certain modifications, the same as that shown on Plate XXVIII in Chapter VII.
1 from O equals the distance from 32 to level of deepened scye below 8.
2 from 1 equals the combined distances of 32 to 16 and 18 direct to 31 less $1$ in.

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*Designing and Cutting Ladies' Garments*
3 is midway O and 2.
4 from 3 equals 2 ins.
5 from 2 equals distance 32 to 33 at scye.
6 from 1 equals the under scye quantity measured from 31 to 33.
7 from 1 equals half the forearm length.
8 from 7 equals 1 in. for hollow of normal forearm seam.
9 is squared from 1 and equals one-sixth scale.
Square from 7 and 2, then complete the lower section of sleeve as usual, making the half cuff about 6½ ins. to 7 ins. wide or as desired.
10 to 11 is the first sweep which is pivoted from 1 and equals the combined quantities of 34 to 35 and 36 to 31.
11 to 11 is the second sweep, which is pivoted from 2 and equals 37 to 32 minus ½ in.
12 to 12 shows the third sweep cutting through the first and second, thus making points A and B equal to 6 to 16 less ½ in. from 4.
Having made the three sweeps and located A and B, proceed to fill in the various curves as follows.
Hollow ½ in. between A and 1.
13 from A equals 1 in. and corresponds with the distance from 21 to 34 at neck.
14 from B equals ½ in., this is added to make up for the ½ in. taken off the second sweep which was made at 11 to 11 on the centre diagram.
15 from 14 equals ½ in. and corresponds with the distance from 6 to 37 at back neck.
Hollow the back section ¼ in. between 14 and 2, then continue to 5.
Now shape the shoulder dart from 13 to 15 to 3, taking special care to get correct "run" as shown on the diagram.
16 is ¼ in. beyond 1 and is added to make a false forearm.
Make a special note of the "run" of seams at B to 14, 14 to 15, and 13 to A.
Continue shoulder dart seam through the centre of top-sleeve.

Two-piece Style
Patterns for Raglan topcoat with the two-piece style of sleeve may be drafted in very much the same way as that adopted for the three-piece, so far as the basic structure is concerned. The particular features of the style which require special attention are the formation of the sleeve sections and the deepening of the armhole or scye. The latter is made considerably deeper than the scye for the three-piece style of coat.

References will now be made to Plate LVII which shows the system for drafting the two-piece pattern parts.
Add 2½ ins. beyond centre front line for button stand and complete lapel as shown or as desired. 25 is midway between 8 and 9.
26 is squared from 25 and located on waist line. For the side-seam location, draw lines from 25, passing out ½ in. for the back and 1 in. for the forepart at 26. Continue to the required length. Bottom edges will be completed as described earlier.
27 and 28 are halfway between 25 and 26 locating top of side-seams.
29 is 1 in. below 13 and ½ in. out from 12.
30 from 6 equals ⅜ in.
Shape forepart scye from 29 through front pitch to 27 adding ⅝ in. of round between 29 and 19, whilst making a slight hollow between front pitch and 27.
The back is drawn from 30 through 7 to 28, adding a slight round just above 7 and hollowing between 7 and 28.
Both back and front seams should be nicely curved, avoiding sharp bends—even if it means going away a short distance from any particular point.

The Sleeve Portions
Right Diagram—Square construction lines O-2-15-16, 1 from O equals the distance from 7 to 8 at scye.
2 from 1 equals the combined distance of 7 to 16 and 18 to front pitch.
3 is midway between O and 2.
4 from 3 equals 2 ins.
5-5 is the first sweep made from 1 and equals the distance from 29 to front pitch.
6-6 is the second sweep, it is pivoted from 2 and equals the distance from 30 to 7 minus ⅜ in.
7-7 is the third sweep, this is made from point 4 and equals the distance from 13 to 18 at forepart shoulder.
Now these sweeps locate points A and B.
8 from A equals 13 to 29 at neck.
9 from B equals the ⅛ in. that has been deducted from sweep number 2.
10 from 9 equals the distance from 6 to 30.
Complete top section of sleeve as already explained in the explanation of the three-piece style.
11 from 1 equals the distance from front pitch to 27.
12 from 11 equals one-half the distance from 25 to 27.
13 from 2 equals the distance from 7 to 28, plus ⅜ in.
14 is marked up from 13 and equals 11-12.
Shape from 12 to 1 for the front section of deepened scye and 2 to 14 for the back portion.
The measurements from front pitch to 27 and 7 to 28 should be taken around the curves in both cases and not measured straight from point to point. This will give the extra length that is required at these parts.
15 is squared from 2 and equals hindarm measurement if this is available.
16 from 1 equals the forearm length.
17 and 18 from 16 equal one-quarter of cuff width in each direction.

19 and 20 are the same as 17 and 18.

Draw straight line from 12 to 17 and hollow the under-arm seam $\frac{3}{4}$ in.

Now draw another line from 14 to 20 and hollow this so that it corresponds with line 12-17.

The centre seams are drawn from 8 and 10 to 18 and 19, overlapping about $\frac{3}{4}$ in. below 3 so that both seams form continuous lines from top to bottom.

The overlapping starts near point 4 and terminates a few inches below line 1-13.

Now check the length of 20 to 14, making it correspond with 17 to 12. A slight hollow is made between 17 and 18 and a similar round between 19 and 20.

* * * * * * *

**Note:** The two drafts of Raglan topcoats are constructed to a net system. All seams and turnings are to be allowed when the garments are being cut from the cloth.
Seam Allowances, Inlays, etc.

Nearly all the drafts presented in this book are rendered net—all the seam allowances, the turnings, hem margins and inlays have been left out. This means, as has been stated earlier, that these additions, as we may term them, will have to be made at the time when the particular pattern parts have been cut out, their construction lines remaining and the various balance marks or notches indicated where they are required, and the cutting from the cloth is about to take place.

As the parts are laid on the cloth and their outlines chalked round, the additions referred to will be marked out separately—that is, there will be outlines marked beyond the lines prescribed by the boundaries of the cut-out pattern parts.

The amounts allowed for seams will vary according to the type of make-up that is to be adopted when the garments are tailored. The minimum will be \( \frac{1}{8} \) in.; a common allowance is \( \frac{1}{4} \) in.; there are also allowances of \( \frac{1}{2} \) in. and \( \frac{3}{4} \) in.

Additions for inlays will vary from \( \frac{1}{8} \) in. to 2 ins.; hems, or lower turnings, sleeve cuff up-turns from 1 in. to 2 ins. or 3 ins. Variations of this kind are dictated by the normal customs of particular tailoring houses and the experienced practice of designers and cutters.

Types of Material

There is also the matter of materials to be taken into account. Some fabrics, particularly those of a loose-textured character, are inclined to fray at the edges of seams and inlays; therefore it is prudent to make larger allowances for these. Again, very lightweight cloths—those containing a proportion of mohair, silk, or alpaca and certain man-made fibres—have the tendency to fray. Inlays and seam allowances on the parts of garments cut from such materials should be relatively generous.

It can be added that seams and turnings in such garments should always be serged or over-sewn along their edges. All the high-class couture and ladies' tailoring houses insist on this precaution being taken in their workrooms.

There is such a wide variety of places where seam allowances and inlays are located, all conditioned by the design of the garment involved, that it would be wearisome to the reader if I even attempted to list them all, I will simply give some indication of typical examples and will state some standard amounts for them.

Seam Allowances

The two garment parts shown on Plate LVIII will serve to indicate one very generally adopted form of making seam allowances and hem up-turns.

Section A is a complete half-back and the actual outlines of the sewing-in chalk marks are denoted by the dash contours. In this case there is a margin of \( \frac{1}{4} \) in. outside those dash contours at the centre back-seam, the shoulder-seam and the side-seam. At the back neck there is an inlay of \( \frac{1}{4} \) in. and at the hem there is an up-turn of \( \frac{1}{4} \) ins.

Section B depicts a sidebody, with the \( \frac{1}{4} \) in. seam allowance marked at the side-seam, the under-arm seam (in this kind of design) and at part of the scye curve. There is a very small inlay (\( \frac{3}{8} \) in. in width) at the top of the side-seam and the hem up-turn is \( \frac{1}{4} \) ins., as for the back (Section A).

The seam allowances will be required on all parts that are to be sewn together in the make-up of a garment of any particular design; inlays will be allowed at parts where these are required and
where they can be placed without the likelihood of inconvenience in tailoring operations.

**It should be remembered that if inlays are made too wide, particularly those which are situated along seams which must carry a certain amount of shaping as dictated by the style of the garment in which they are employed, they are certain to cause make-up difficulties.**

Further, when larger than usual seam allowances are made on the garment parts preparatory to a first fitting these can be reduced in extent after that fitting has been carried out and when the parts are being re-marked for the tailor.

These notes on the subject of allowances will, I hope, be of guidance to the younger and less experienced reader of this book. They have at least conveyed what I might call the principles of the matter; and though these are not directly a part of pattern designing and cutting they are closely related to those activities.

**Short Direct Measures**

The taking and application of certain short direct measures have been discussed at some length in this book, though example of their use has not been dealt with in anything like full detail. This is deliberate, for the purpose of the present volume is to set out the basic principles of pattern drafting and to relate them to garment design and figure type.

In undertaking to do this I have tried to make explanations as simple as possible, without ignoring certain rather intricate aspects of the general subject. My intention was to give the reader some reliable bases from which to work and to encourage him (or her) to do some thinking on the whole business of measuring, figure observation and pattern drafting.

The second part of this work, which is already being prepared, will contain detailed explanations of direct measure application and will explain and illustrate various designs of garments for which patterns can be designed and drafted on certain of the basic systems contained in the present volume. Throughout this volume I have endeavoured to explain things fully, to give alternative arrangements for certain technical operations, and—most important—to define reasons why certain things are done in the construction of a pattern draft.

* * * * * * *
METRIC MEASURES

This mode of closing the book has been forced upon me by the statement which appeared in the Press—just as I had completed my work—that in the course of the next few years we shall be adopting the metric system of weights and measures. Instead of our yards and inches we shall be using metres, centimetres and millimetres.

For those who would like to make some preliminary experiments in the translation of our present measures to those of the metric system, I have prepared the following notes. Use of a measuring tape which has inches on one side and centimetres on the reverse side will assist the user in this matter. All the drafts in this book can be rendered by means of the metric system.

It will be found that in certain dimensions the centimetres and millimetres will work out more or less evenly to the number of inches, or to fractions of inches. Where this does not occur fractional inch dimensions can be taken to the nearest millimetre. Where there are very small differences it is quite satisfactory to assess the metric fractions (or wholes) at the nearest amount in the fractions and wholes now used by cutters—that is, quarter-inches, three-eighths of inches, half-inches, three-quarters, etc.

The table below shows the translation of all the main proportions that are derived from the graduated square that is now in common use.

<table>
<thead>
<tr>
<th>Fraction</th>
<th>Equals</th>
</tr>
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<tbody>
<tr>
<td>1/16</td>
<td>4 cm. 3 mm.</td>
</tr>
<tr>
<td>1/8</td>
<td>8 cm. 5 mm.</td>
</tr>
<tr>
<td>1/4</td>
<td>17 cm.</td>
</tr>
<tr>
<td>3/4</td>
<td>34 cm.</td>
</tr>
<tr>
<td>1/16</td>
<td>3 cm. 2 mm.</td>
</tr>
<tr>
<td>1/8</td>
<td>6 cm. 4 mm.</td>
</tr>
<tr>
<td>1/4</td>
<td>12 cm. 7 mm.</td>
</tr>
<tr>
<td>3/4</td>
<td>25 cm. 5 mm.</td>
</tr>
<tr>
<td>2/1</td>
<td>38 cm. 2 mm.</td>
</tr>
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