

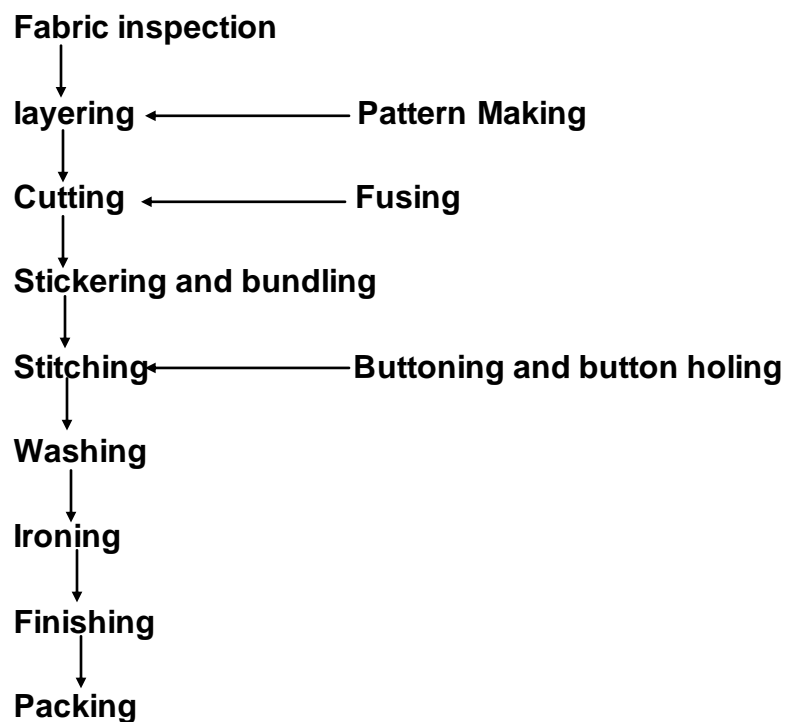
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## 1. Basic Textiles terms

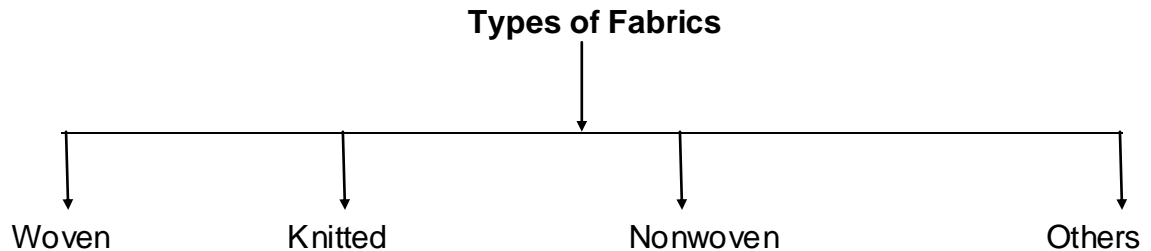
Yarn	Basic raw material for weaving/Knitting
Type of yarn	Single ply, double ply and multiply
Yarn count	Defines thickness of yarn. Higher the count, finer the yarn
Warp	Lengthwise yarn in the fabric.
Weft (filling)	Width wise yarn in the fabric.
Selvedge	Edges of the fabric running lengthwise
Woven Fabric	Woven fabrics are made by using two or more sets of yarn interlaced at right angles to each other.
Knitted Fabric	Knitted fabrics are formed by series of interlocking loops (example: knit wears)
Sewing Thread	Sewing Thread is a type of yarn used for sewing.

## 2. Sequence of Operations in Garment production



### 3. Various types of fabric

**Fabrics:-** Sets of yarns are used for formation of fabric, Fabrics are produced in number of ways which are detailed below:



- Woven Fabric: A woven fabric is composed of two basic series of yarn called warp and weft
- Knitted Fabric: Fabric which are constructed by interlocking a series of loop of one or more yarns by hand or by machine are called knitted Fabrics.
- Non Woven Fabric: It is produced by mixing fibers and making into the form of a thick layer of web of width corresponding to desired width of the fabric.
- Other Fabrics: Braids, Lace, Netting, Felt etc

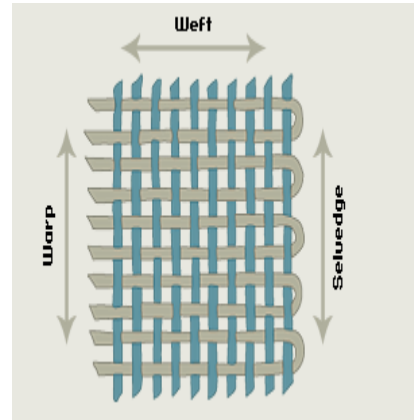
### Parts of Woven fabrics:

**Body:** It is the main portion of the fabric containing the intended fabric design.

**Selvedge:** It is the narrow woven edge portion of the fabric parallel to the warp, made with special strong yarns in a closer construction than the body to prevent unraveling.

**Face:** It is the intended front side of the fabric.

**Back:** It is the intended back side of the fabric.



### Two base knitted fabric structures

#### Weft Knitting :

In Weft knitting loops are made in a horizontal way from single yarn. Intermeshing of loops takes place on a course-wise. Type of weft knits are Plain Jersey Knit , Purl Knit, Rib Knit , Patterned Knits & Double Knits.



#### Warp Knitting:

In warp knitting loops are made in a vertical way along the length of the fabric from each warp yarn. Intermeshing of loops takes place on a wale-wise. Type of warp knits are Tri-cot , Rachel knits. .

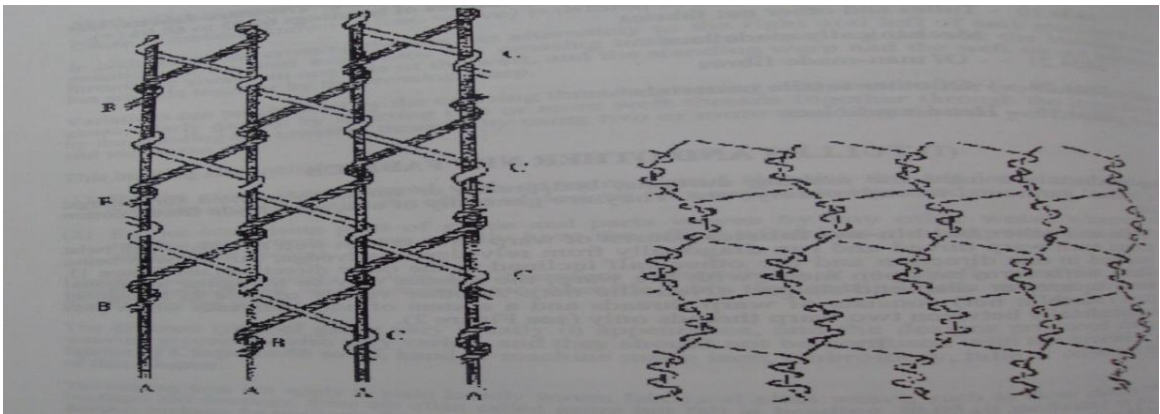


### Lace Fabric

Lace is an ornamental or decorative openwork fabric in which design elements formed by the inter twisting of threads joined either by meshes, usually of regular size & shape, forming an apparent openwork fabric.



### Net fabric



It consists of warp threads with weft threads which twist around each warp thread & run diagonally from selvedge to selvedge. Net fabrics have three series of threads parallel warp threads, mesh threads & binding threads.

### Categorization of the fabric based on Processing:

**Grey Fabric**

**Bleached Fabrics**

**Dyed Fabrics**

**Yarn Dyed Fabrics**

**Tie and Dye Fabrics**

**Printed Fabrics**

**Printed warp Fabrics**

## Categorization of the fabric based on Pattern:

Plain Fabric

Stripes Fabric

Checks Fabric

Figured- Dobby & jacquard Fabric

Embroidered Fabric

## 4. Some of the common market terms of the fabric used in Garment Industry

2x2	Fabric in which two fold yarn is used in both directions.
2x1	Fabric having two fold yarn in one direction and single yarn in other direction.
Brocade	Rich heavy fabrics woven on jacquard looms having floral or figured patterns emphasized by contrasting surfaces or colors.
Cambric	A light weight closely woven plain weave fabric usually with a stiff finish for giving weight and appearance.
Canvas	Heavy durable cotton fabric made from coarse, hard twisted yarns.
Chiffon	A transparent sheer fabric of plain weave. Yarns used are highly twisted. Usually has a soft finish.
China Silk	A very soft, extremely light weight silk made in a plain weave. Used mainly for linings. Irregularities of threads, caused by extreme lightness and softness of china silk are the characteristics of the fabric.

Corduroy	A ribbed pile fabric with a high, soft luster. Made with extra warp or weft threads. During weaving, the extra filling yarns form loops or floats over the ground threads. After weaving, the loop threads are cut. Threads are then brushed forming a pile.
Crepe	Wide range of fabrics come under this name like crepe de chine, crepe charmeuse, crepe-back satin etc., they have pebbly texture and made with high twist yarn.
Denim	Traditionally a 3/1 warp – faced twill fabric made from yarn-dyed warp and undyed weft yarn.
Drill	A twill fabric of similar construction to denim but usually piece dyed.
Georgette	A fine light weight, open texture fabric usually in plain weave made from crepe yarns usually two ‘s’ twisted and two ‘z’ twisted yarns are used in warp and weft.
Flannel	An all wool fabric of woolen type woven in plain weave or single twill. During finishing, surface fibre is developed so that the weave is partially or completely hidden. They are produced in white or in wool dyed mixtures and is soft.
Flannelette	It is a raised cotton fabric made to imitate true flannel.
Long cloth	A fine plain weave closely woven high count fabric.
Muslin	A lightweight, open cloth of plain weave or simple leno weave.
Organdie	A thin, open and translucent fabric with stiff handle made from cotton, woven in plain weave and given special stiff translucent permanent finish.

Poplin	A durable plain weave class of fabrics having warp yarns that are considerably finer than the weft yarns with about or three times as many ends per inch as picks.
Spun x Spun	Fabric in which spun yarns are used in both the direction.
Tafetta	Crisp fabrics with fine, smooth surface usually made in the plain weave, sometimes with a small crosswise rib. Originally made in silk now made in man-made fibres also.
Texturised yarn	Any yarn modified in such a way that its physical and surface properties have been changed.
Voile	A light weight, sheer fabric of plain weave made from fine yarns of substantially more twist.

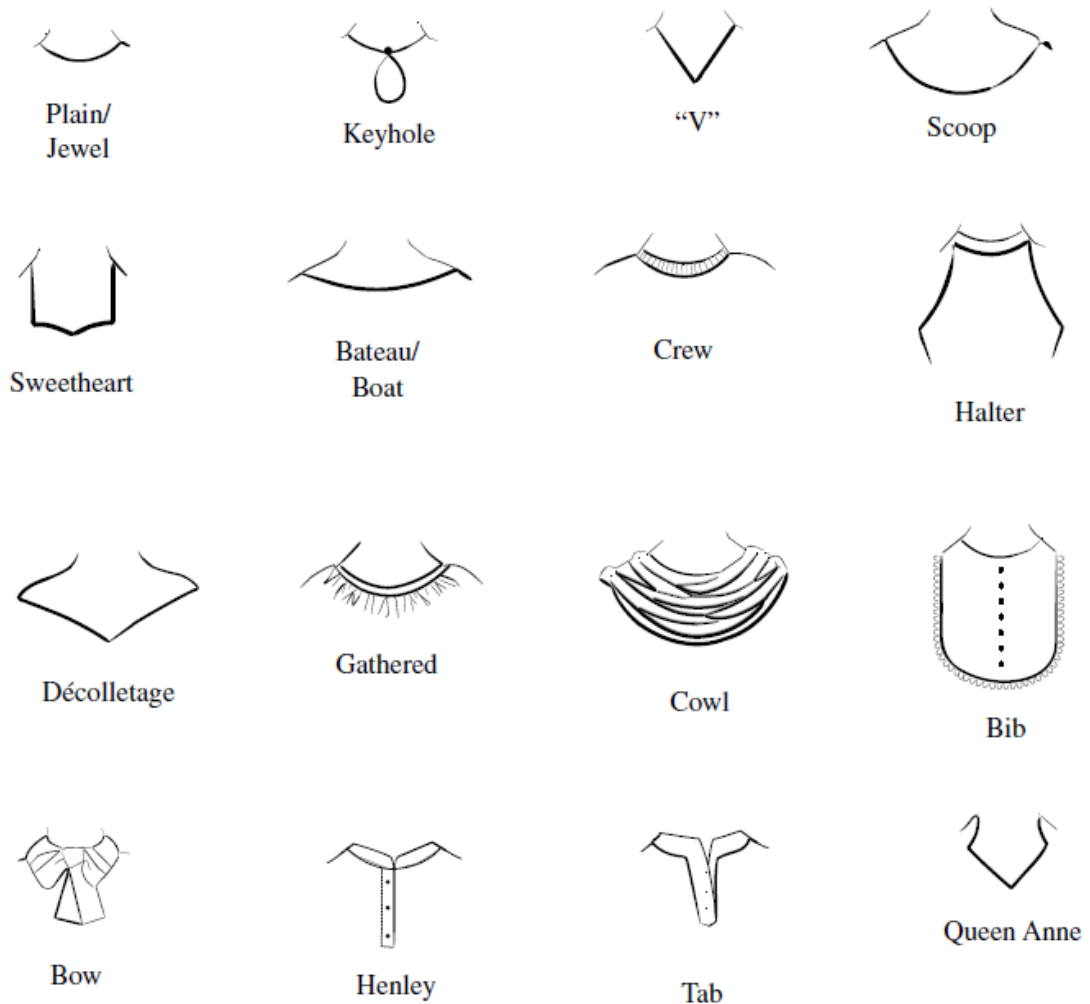
## 5. Introduction to different parts and style of garments

The style of a garment or garment part results from its outline or shape and other identifying characteristics. "A particular style of garment usually refers to the cut of its structural lines in a manner that has become recognized, accepted and named. Some common styles are mentioned below.



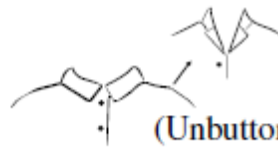
## 1. Neck line

- Ready-to-wear apparel features a variety of neckline shapes and finishes.
- The neckline edge is cut into the desired shape, and the raw edge of the neckline is finished by any edge treatment such as facing, binding, or banding.



**2. Collars** A collar, or any band applied to the garment neckline

- There are three basic collar types:

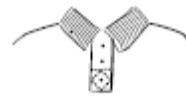


Convertible

(Unbuttoned)



Pointed Shirt  
(unbuttoned)



Polo/Tab



Shawl  
has seam at  
center back



Stand Up



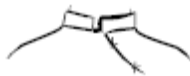
Edwardian



Ascot



Jabot



Mandarin



Turtleneck



Peter Pan



Portrait



Puritan



Chelsea



Sailor



Cowl



Wing



Peaked Lapels

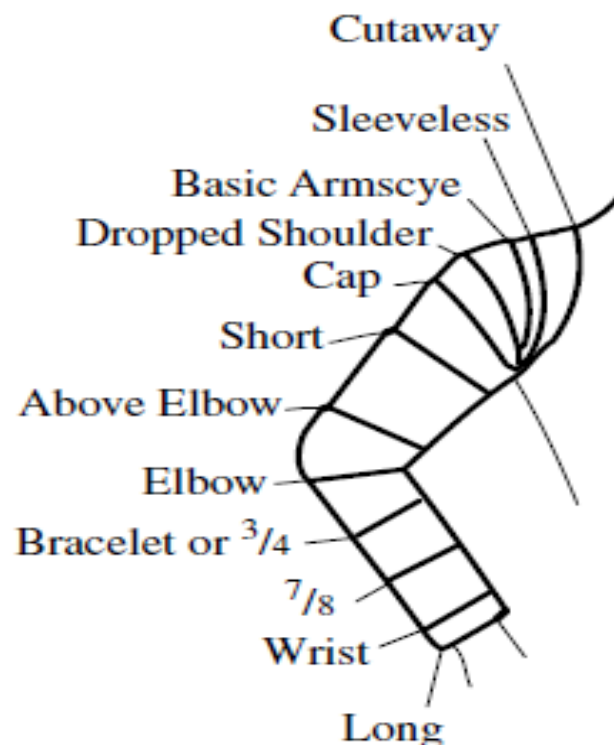
(1) **Flat Collar** - A **flat collar** lies flat or nearly flat against the garment all around the wearer's neck.

(2) **Standing Collar** - A **standing collar** is a band extending straight up from the neckline edge and standing up around the neck

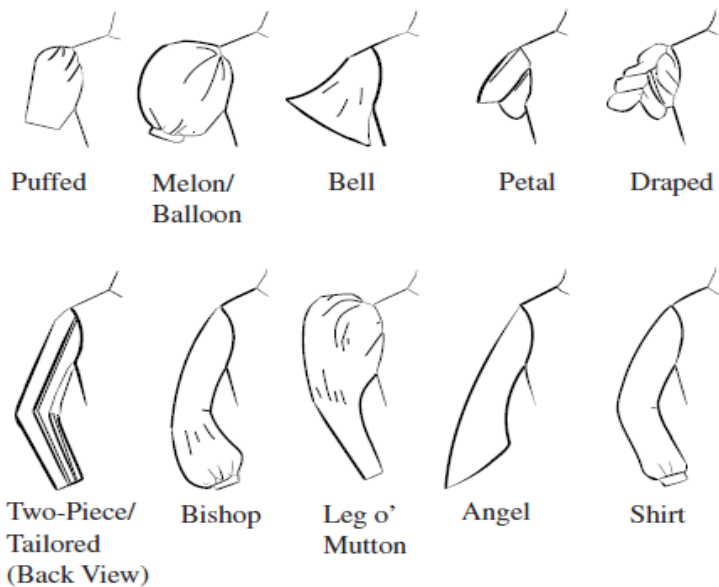
(3) **Rolled Collar (either full-roll or partial roll)** - A **rolled collar** is a band of fabric that rolls fully or partially around the neck. A full-roll collar rolls all the way around the neck; a partial-roll collar rolls at the back of the neck and lies flat or nearly flat at the front of the neck.

## Sleeves

A **sleeve** is a covering for the arm that is attached at or near the armhole, or **arms eye**, area of the garment. Sleeves are functional in providing modesty, warmth, or protection but are equally important for their contribution to the style of the garment

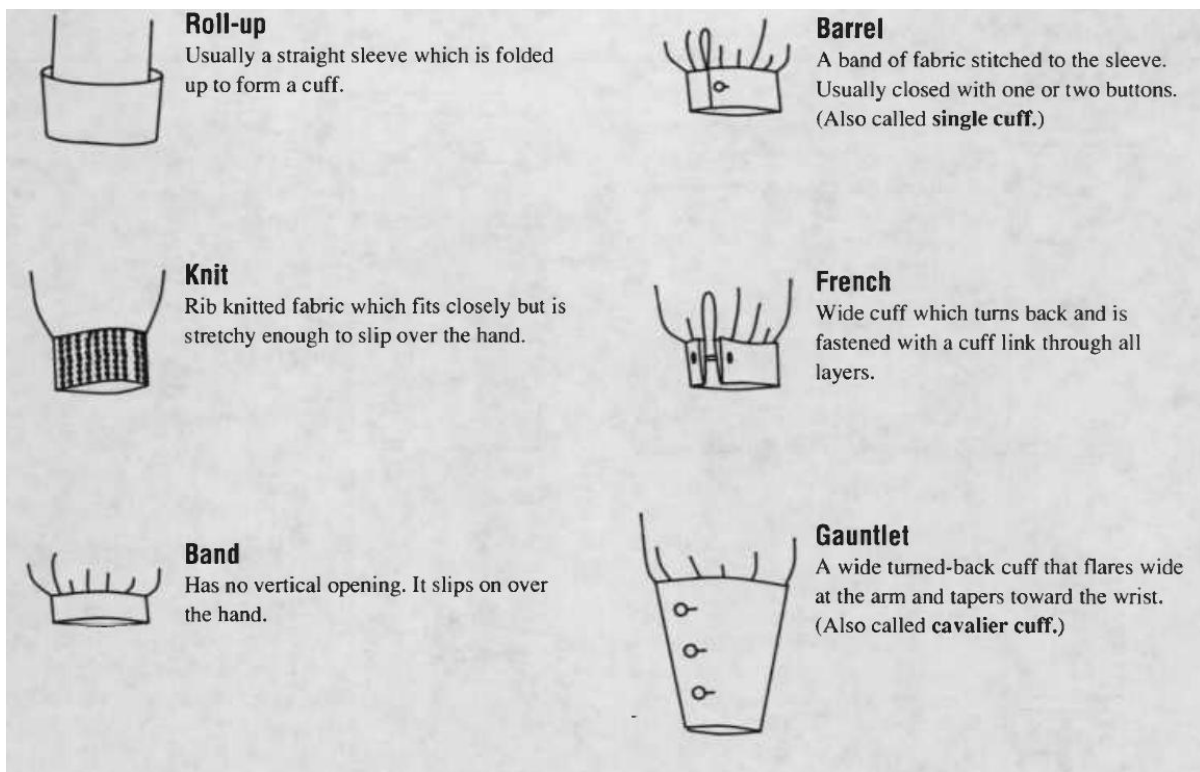


**Some of the common Sleeves Styles**



**3. Cuffs:** Cuffs are the banded or turned-back finishes at the lower edges of sleeve and pant legs

**Open-band cuffs** have an opening so the wearer can fit the cuff band over the hand and then fasten it to fit snugly. Open-band cuffs include the following types:



1. **Barrel cuff or shirt cuff**, the most common type; it is a straight, open-band cuff style. Long-sleeved shirts and blouses usually feature barrel cuffs. The barrel cuff laps and buttons at the wrist.

2. **Convertible cuff**, an open band that fastens with layers superimposed to resemble a French cuff.

3. **French cuff or double-cuff**, The French cuff is constructed like the barrel cuff but twice as wide. Then the cuff is folded back on itself so the cuff is doubled.

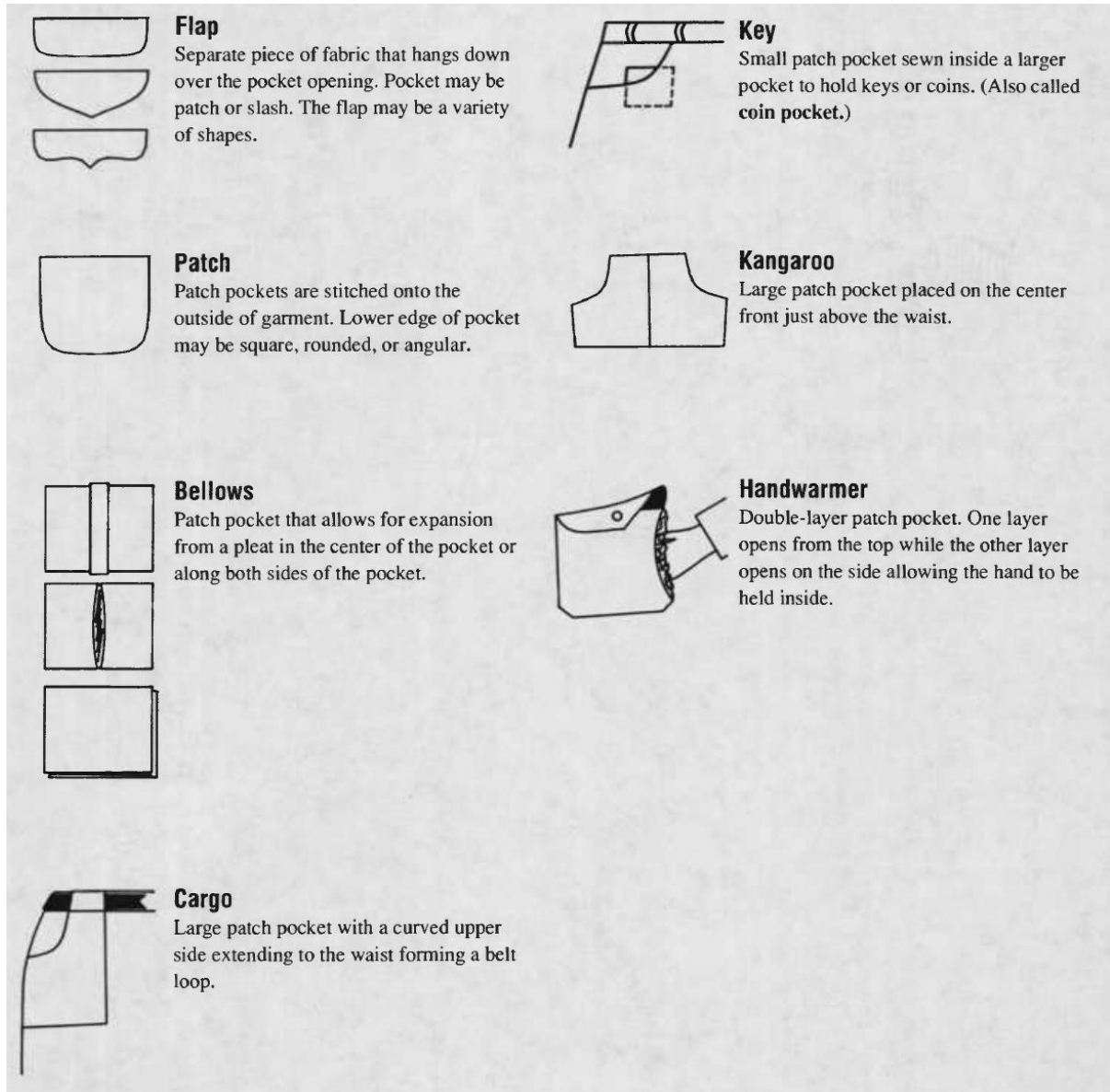
A **closed-band cuff** is an unbroken ring of fabric large enough to fit over the arm. **Turned-back cuffs** on sleeves and cuffed pants are formed by turning back or rolling up the lower portion of the sleeve or pant leg.

4. **Pockets** A pocket is a small pouch or bag sewn onto or into a garment and used to carry small items. The four basic types of pockets are

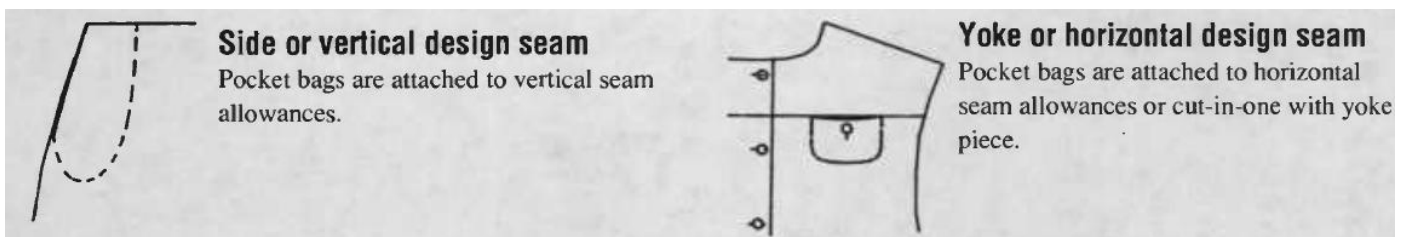
#### 1. **Patch Pockets**

Patch pockets or applied pockets are pieces of fabric attached, like a patch, to the outside of the garment.

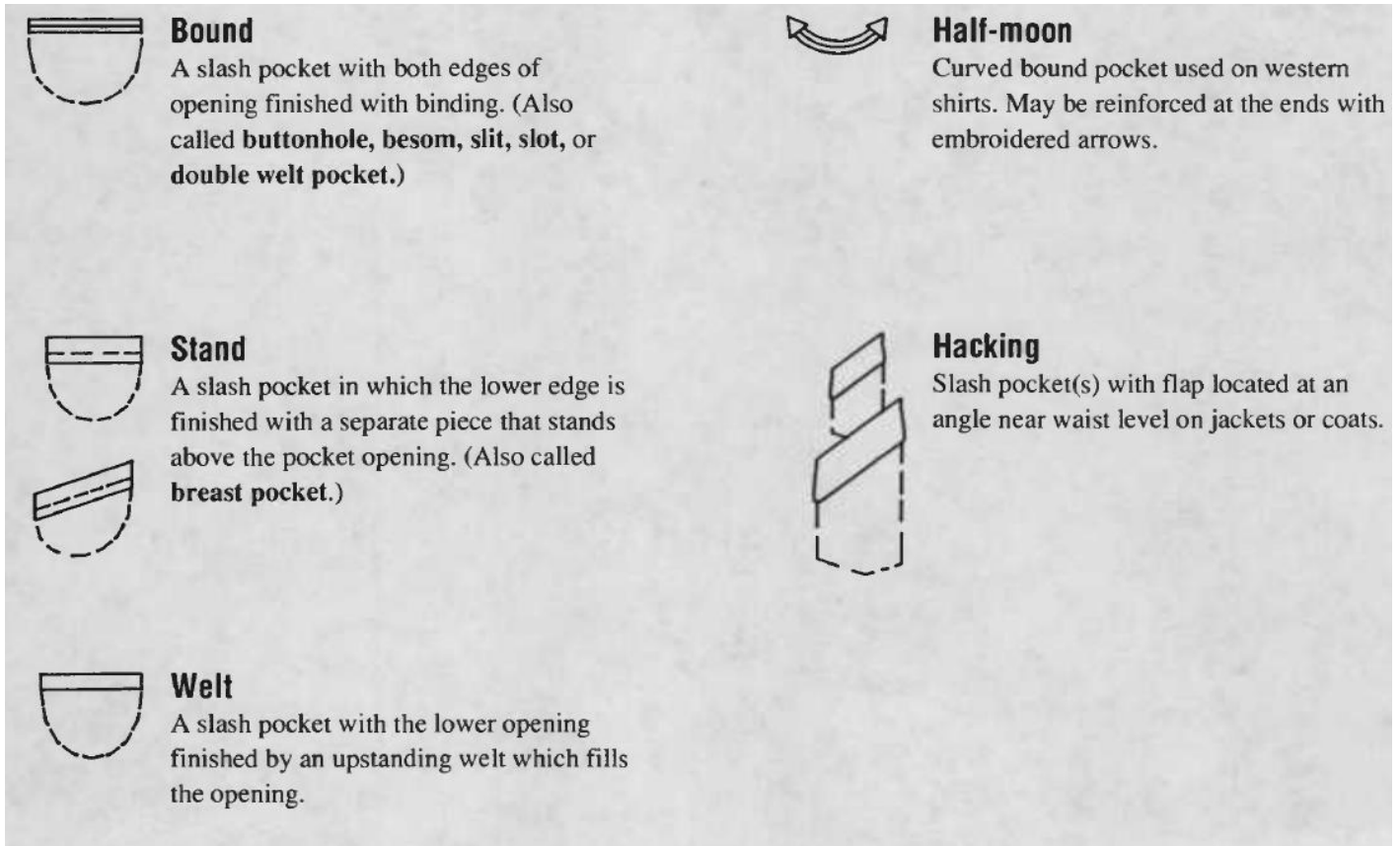
Some of the Patch Pockets are



1. **In-seam Pockets** - pockets are inserted in a seam such as side seam or yoke seam. The pocket hags are attached to the seam allowances and are not visible from the outside.

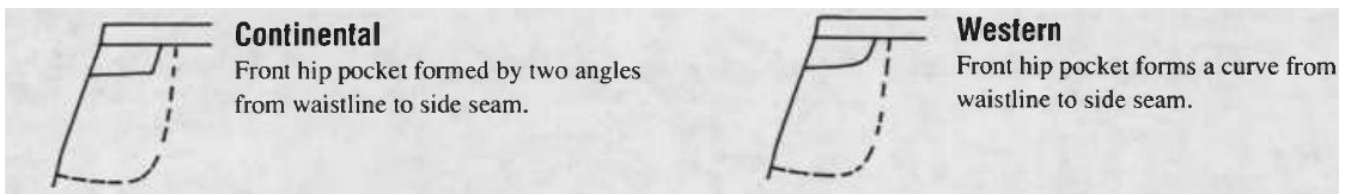


2. **Slash Pockets**- Slash pockets are made around an opening cut in the garment.



### 3. Front hip Pockets

It is a variation of the in-seam pocket in which the garment front is shaped and faced to the front pocket bag. The inner pocket bag fills in the cutaway portion of the garment front.



## 6. Tools for Pattern Drafting

1. **Working Surface** – A flat working surface is required for pattern making. This surface should have polished or laminated top.
2. **Paper** – White paper or strong brown paper is required for pattern making.
3. **Pencils** – Hard pencils are used for pattern drafting and colored pencils are used for outlines.
4. **Marker Pen** – Marker pen is used for writing instructions.
5. **Curved Rules ( French Curve)** – French curve is used for drawing long curves.
6. **Set- Square** – It is also useful for pattern making.
7. **Compass** – Compass is used to draw circles.
8. **Shears/ Scissors** – Scissors are used for pattern cutting.
9. **Measuring Tapes** – It is used for measurements.
10. Rubber, Scotch Tapes, Scales are also used for pattern making.



## 7. METHODS OF PATTERN MAKING

A basic pattern can be prepared by one of two methods: (1) by drafting (2) by draping fabric on a model or on the person concerned.



## DRAFTING

Drafting may be defined as a system of drawing patterns on paper with mechanical precision, on the basis of body measurements. This is an effective and economical method which can be learnt easily unlike draping which requires a model, a lot of fabric and considerable skill. This is also called as flat pattern designing.

### TYPES OF PAPER PATTERNS

#### 1. Standardised paper pattern:

- Paper pattern prepared using standardised body measurements are standardised paper patterns.

#### 2. Individual Paper pattern.

- The measurement of a particular person is taken and pattern is prepared using ones individual measurements.
- The pattern prepared for a particular person will not suit other persons. These are usually done at home and at some tailoring shops.

#### 3. Block paper pattern:

- Generally these are made with standard sizes with thick cardboards. The garment made out of these block patterns will fit for those who have measurements equivalent to that of the standardised body measurement.
- In garment industry these type of pattern will be helpful to cut bulk amount of garment in less time.

#### 4. Graded paper pattern:

- Pattern of five consecutive sizes (for eg. 30", 32", 34", 35", 38" chest size) are marked in one single pattern.
- The required size according to the individual body measurement is traced separately, cut and used.

#### 5. Commercial paper pattern:

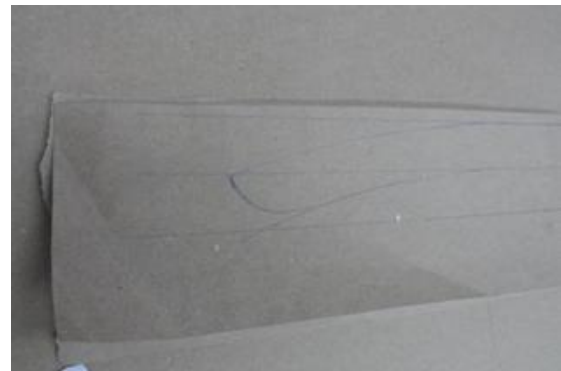
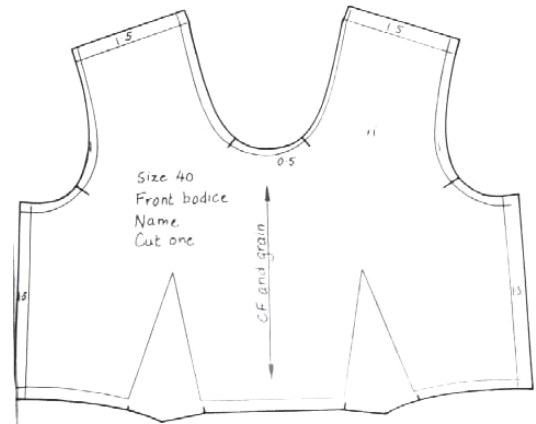
- Commercial patterns are usually done on tissue paper. Since tissue paper is not bulky, it allows many pieces of pattern to be packed compactly in an envelope. In commercial patterns Seam allowances are included for safety.

- Good patterns are carefully labelled with the following information(ie) the pattern size name of each pattern (back, front, sleeve etc), number of pieces to cut from each pattern piece etc.,.

## CONTENTS OF PAPER PATTERNS

A paper pattern should contain the following information as given:

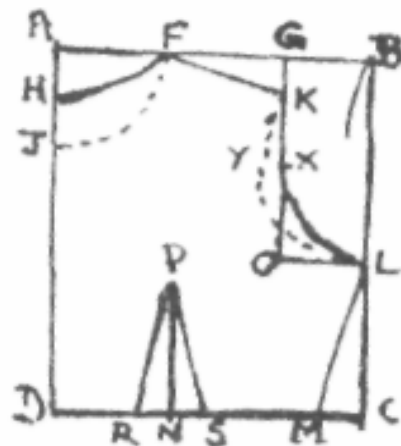
- Name of the block e.g bodice front, back, sleeve, skirt, collar, yoke, pocket, etc.
- Grain line on each pattern piece
- Size e.g. 32, 34, 36, 38, etc
- Centre Front or Centre Back
- Style number or code number of the pattern
- Pattern piece e.g skirt front or back
- Cutting information – how many pieces to be cut e.g cut 1, cut 2, cut on fold.
- Notches – marks needed to help in assembling of garment.



## STEPS IN DRAFTING

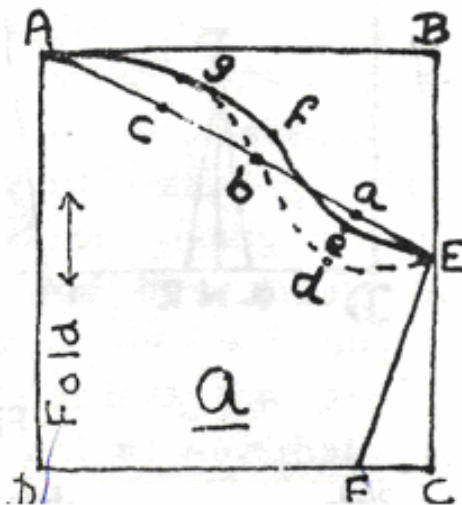
Here we are showing an example for drafting a bodice pattern of a child (7 years old) of sample measurements as: Chest 24" waist length 10 ½", waist 23", back width 11", sleeve length 5".

**Bodice pattern** For children, back and front pattern can be drafted within the same rectangle because it is not necessary to make the front larger than the back. Construct rectangle ABCD with the following measurements:



Start Pattern Drafting

- $AB = \frac{1}{4} (\text{bust} + 5'' \text{ ease allowance}) = \frac{1}{4} \text{ bust} + 1 \frac{1}{4}'' = 7 \frac{1}{4}''$ ,
- $AD = BC = \text{back waist length} + \frac{1}{2}''$ .
- Mark  $AG = \frac{1}{2} \text{ back width} = 5 \frac{1}{2}''$ ,
- $AF = \frac{1}{12} \text{ chest} = 2''$ ,
- $AH = 1''$ ,
- $AJ = \frac{1}{12} \text{ chest} + \frac{1}{4}'' = AF + \frac{1}{4}'' = 2 \frac{1}{4}''$  and  $GK = 1''$ .
- Connect HF with a bold line as shown. This is the back neck line.
- Connect JF with dotted line as shown. This is the front neck line.
- Connect FK with a straight line. This is the shoulder seam.
- Mark  $BL = \frac{1}{4} \text{ chest} = 6''$ .
- Draw GO parallel to and equal to BL.
- Mark  $KX = \frac{1}{3} KO$  and  $XY = \frac{1}{2}''$ .
- Connect KXL as shown with a bold line. This is the back armscye line.
- Connect KYL as shown with a dotted line. This is the front armscye line.
- Mark  $CM = \frac{1}{2}''$ . Connect LM. This is the side seam
- For dart, mark  $DN = \frac{1}{2} DM - \frac{1}{2}''$  and  $NP = CL - 1''$ . Mark R and S.  $\frac{1}{2}''$  on either side of N and connect RP and SP.



### BASIC SLEEVE PATTERN

In Fig, AD is on fold and is equal to sleeve length.  $AB = \frac{1}{4} \text{ bust} - \frac{1}{4}''$  (for adults this was  $\frac{1}{4} \text{ bust} - 1 \frac{1}{2}''$ ). Mark  $BE = \frac{1}{2} AB$  and  $DF = \frac{1}{2} \text{ lower arm} + \frac{1}{4}''$ . Connect AE. Divide it into 4 equal parts and mark a, b, c. Mark  $cg = \frac{1}{2}''$ ,  $bf = \frac{1}{4}''$ ,  $ae = \frac{1}{4}''$  and  $ad = \frac{1}{2}''$ . Connect AgfeE (back arms eye line) and AgbdE (front arms eye line). Cut out the sleeve and label it as explained under adult's sleeve.

## 8. Draping

Draping is the manipulation of fabric on a three dimensional form by a designer to obtain perfect fit and harmony between the fabrics and design of the garment and the silhouette (outline or shape) of the individual. There are three common terms used to describe this technique-**draping**, **toile** and **modeling**. A fourth term is sometimes used namely **moulage**.

### STEPS IN DRAPING

#### Stage 1:

- Drape the uncut length of dress fabric over the stand.
- Observe its natural characteristics, i.e. the ways it falls, its handle, texture and weight etc.
- Do not cut into the fabric, but pin to hold where necessary.

#### Stage 2:

- Substitute dress fabrics; To model the entire garments in the actual fabric is ideal, but unfortunately it makes experimentation expensive. For this reason, use a fabric with similar properties which has been left over from a previous collection.
- Alternatively, the non-draped parts of the garment can be modelled in muslin with just the draped sections made in the actual fabric. When draped designs for checks or stripes, mark in the position of the lines on the muslin to get the effect of the fabric and to match the lines along the seams.

### Stage 3:

- Tape your stand: centre front, centre back shoulders, seam lines, style line, neck lines, waist, hip and bust line and position and direction of drapes. (The horizontal and vertical balance lines help the drapes to hang correctly)



### Stage 4:

#### Select and prepare the material:

- Prepare the garment material since the whole garment is cut, allow enough material to cover both sides of the stand for each section.
- The draping quality of the warp and weft grain should be the same in order to match both sides of a drape.
- Allow plenty of excess material beyond the outer edges of the stand and mark in the centre vertical line and the warp grain with a contrasting thread.



### **Stage 5:**

Place and pin material onto the stand in the following way:

- A full toile is required, but need to model one side only, except for asymmetric designs where both sides must be modelled.
- Line up the vertical central thread with the centre front line of the stand, and pin. To avoid injury to the fabric, use very fine pins, e.g. silk pins, and keep pinning to a minimum.
- Mould the fabric around the stand as desired, allowing the excess fabric to fall freely into the area.
- Where required the fullness of the drape to be placed. Use drapes in place of darts.
- The drapes can be continuing along the out edges of the stand and be allowed to fall forwards or backwards into a cascade of drapery or be caught up into a seam line etc.

### **Stage 6:**

All the details should be indicated with pins rather than chalk and pins should follow the direction of any darts, tucks, seams etc.,

### **Stage 7:**

Remove from stand.

### **Stage 8:**

Press: Do not press over pins as they will leave an impression in the fabric.

### **Stage 9:**

- True all lines of check details. The rough design now needs to be trued in order to establish the correct grain line and to ensure that the armhole, underarm sears and shoulder are the same length. Both sides although perhaps not the same shape on the left and right side if the design is asymmetric.
- When a symmetric full toile is modelled, the left and right side will not be exactly the same. Therefore, choose the better side and fold that side over on

the centre line on the double to transfer shape and details. Transfer all markings with thread.

**Stage 10:**

Check seam allowances.

**Stage 11:**

Make up and press

**Stage 12:**

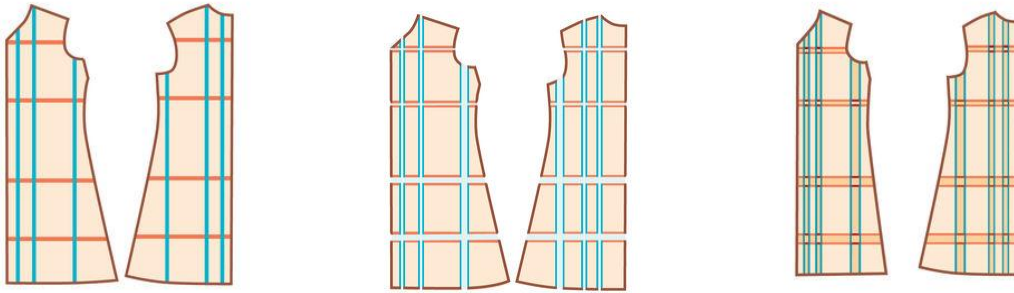
Places on stand are model and check for any discrepancies.

**9. GENERAL PRINCIPLES FOR PATTERN ALTERATION**

- A far as possible make changes within the pattern by slashing and spreading or slashing and lapping. Patterns can also be altered by redrawing the edges of the pattern. (This is the method adopted for altering garments at the time of fitting.) But the first method is by far the best in altering paper patterns.
- To preserve the original grain line, make all slashes and folds parallel or perpendicular to the grain line (to centre front line, centre back line etc.)
- Where there are darts, make changes between the tip of the dart and the outside edge.
- If an alteration in length is made along one edge of the pattern, take care to make an identical alteration in the adjoining edge. For example, if back shoulder seam is shortened then front shoulder seam should also be shortened.
- When tucks or darts are used for making a pattern smaller, remember that the width of these should be just half the amount to be removed.
- When decreasing or increasing the width of pattern pieces, if only half the pattern (half back or half front) is used, subtract or add only one fourth of the total adjustment to be made. For example, if waist measurement has to be increased by one inch, add ¼" to the half back pattern and the same amount

to the front pattern. If only a front or back section needs adjustment, add or minus half the amount of the adjustment to the respective section.

- When the pattern alteration involves slashing and spreading, it is necessary to keep a sheet of paper beneath and to pin or stick to it the spread-out parts so that they will thereafter remain in position. On spreading or lapping after slashing, some edges of the pattern become jagged. These must be trimmed after drawing the new seam lines.



## 10. PATTERN GRADING

- It is very much helpful in the garment industry starting from a pattern drafted from a particular size you can make patterns of other sizes by grading.
- Grading is a method of enlarging or reducing a pattern of a particular size proportionately to some other size.
- To properly fit a pattern to a range of sizes, each pattern piece needs to be graded, or systematically increased or decreased. Generally, a middle-sized pattern (typically a size 12) and grade it up for larger sizes and grade it down for smaller sizes (see one pattern, three sizes).

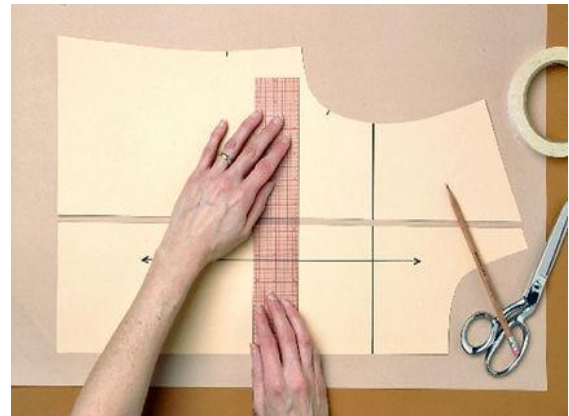
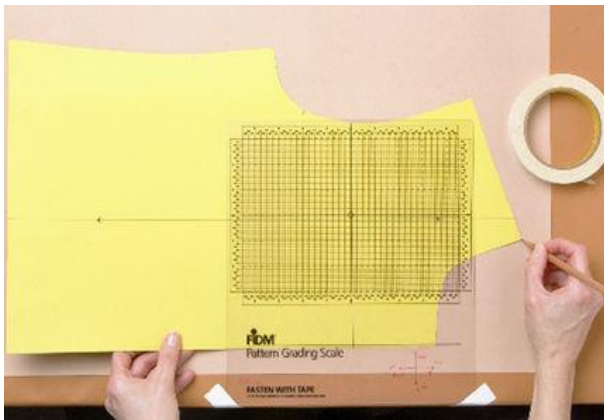
**One pattern, three sizes** A base size 12 pattern (left) can be graded up to a size 16 (center) using the cut-and-spread method, and similarly graded down to a size 6 (right) by cutting and overlapping along specified cut lines.



## Methods of grading

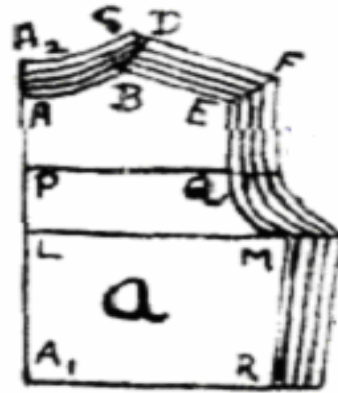
There are three basic methods of grading: cut and spread, pattern shifting, and computer grading. No one method is technically superior and all are equally capable of producing a correct grade.

**Cut-and-spread method:** The easiest method, which is the basis of the other two methods, is to cut the pattern and spread the pieces by a specific amount to grade up, or overlap them to grade down. No special training or tools are required-just scissors, a pencil, tape, and a ruler that breaks 1 in. down to 1/64.



**Pattern shifting:** Pattern shifting is the process of increasing the overall dimensions of a pattern by moving it to a measured distance up and down and left and right, (using a specially designed ruler) and redrawing the outline, to produce the same results as the cut-and-spread method.

**Computer Grading**, is the fastest method, but tends to be an investment intensive and only larger manufacturers can afford. However, sophisticated home computer software is becoming affordable.



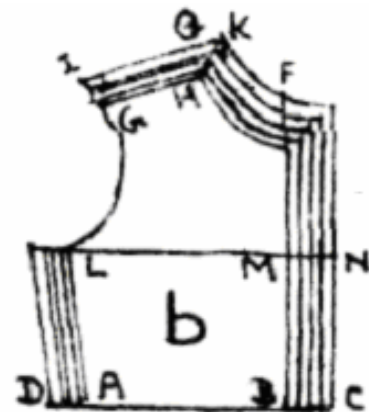
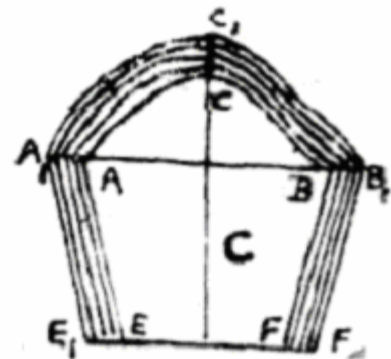
## MANUAL GRADING

### MANUAL GRADING THE BACK BODICE:

- Take the 32" size back bodice pattern (without seam allowance) and trace its outline on a larger sheet of paper.
- Extend the centre back line A1 A by one inch and mark four points at 1/4 intervals. (These represent bust sizes 32" to 40" at 2" intervals), Label the last point as A2.
- Mark C one inch vertically above B. Mark  $CD = \frac{1}{2}$ " and connect DB. Divide DB into 4 equal parts, and then connect these points to the points marked above centre back line as shown.
- Now draw DF parallel to the shoulder line BE, with  $DF = BE + 1$ ". This will be the shoulder line for 40" size.
- Connect F to the original shoulder point E. Mark three points which divide EF into four equal parts, and join them to the corresponding points on BD by lines which will be parallel to DF.
- Next, draw the horizontal line LM from the underarm point and mark P as the midpoint of AL.
- Draw PQ as shown. Extend this line one inch outward and mark 4 points 1/4" apart.
- Now extend bust line LM and waist line A1R and mark points  $\frac{1}{2}$ " apart. Connect all the Points marked as shown in the figure

## GRADING THE FRONT BODICE

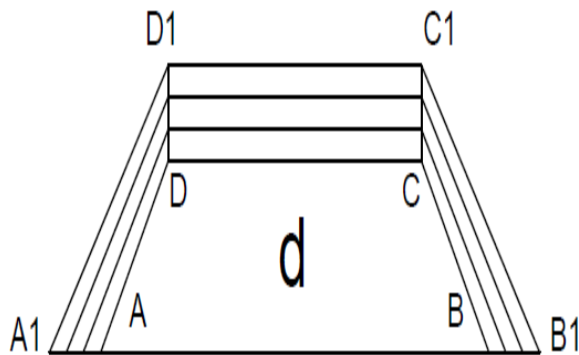
- Take the 32" size front bodice pattern and trace its outline on a larger sheet of paper. Extend waist line AB beyond B and mark four points  $\frac{3}{8}$ " apart. Label the last point as C. Similarly extend bust line LM to LN and mark points  $\frac{3}{8}$ " apart on MN. Connect CN and corresponding points and extend these four lines upwards.
- These are the centre front lines of the various sizes. Extend line BA beyond A and mark four points  $\frac{1}{8}$ " apart. Label the last point as D. Similarly extend line ML and mark four points  $\frac{1}{8}$ " apart.
- Connect all the corresponding points to form the side seam lines of the various sizes.
- On the shoulder line, rule vertical lines upwards from G and H and mark off four points at J" intervals along each of these lines.
- Label the highest points as P and Q respectively. Connect PQ and extend it on to either side by and mark points I and K. IK is the shoulder line of size 40. Connect GI and HK as shown. This gives the angle for shoulder increase.
- Rule the shoulder lines for the in between sizes by connecting the points marked earlier, and extending them on to either side as shown.
- Extend centre front line upwards and mark off four points  $\frac{1}{8}$ " apart.
- Label the highest point as F and connect KF as shown.
- Connect corresponding points to form the neck lines and extend the lines to meet the centre front lines.



## GRADING OF BASIC SLEEVE

- Take the sleeve pattern of bust size 32" and trace its outline on a sheet of paper.
- Extend line AB one inch beyond B to B<sub>1</sub>, and one inch beyond A to A<sub>1</sub>.
- Between A<sub>1</sub> and B<sub>1</sub> mark points at ¼ inch intervals. Extend the centre line one inch beyond C to C<sub>1</sub>. On C<sub>1</sub>C<sub>1</sub>, mark points ¼ inch apart.
- Extend line EF one inch beyond F to F<sub>1</sub> and one inch beyond E to E<sub>1</sub>.
- Between E<sub>1</sub> and F<sub>1</sub> also mark points ¼ inch apart.
- Now connect the respective points.

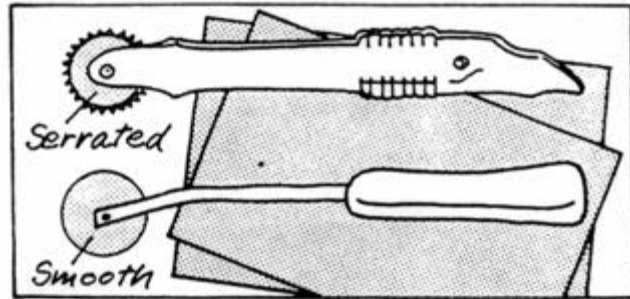
## GRADING OF BASIC COLLAR



- Take the collar pattern of bust size 32 inch and trace its outline on a sheet of paper.
- Extend the line A to A<sub>1</sub>, B to B<sub>1</sub>, C to C<sub>1</sub> and D to D<sub>1</sub>.
- Between A<sub>1</sub> and B<sub>1</sub>, C<sub>1</sub> and D<sub>1</sub> mark points at ¼ inch intervals.
- Connect the respective points.
- The outermost pattern is that of 40 inch size, next one 38 size, next 36 size and so on.

## 11. PATTERN MARKING

- Marking should be done as soon as the garment sections have been cut and before the pattern pieces have been removed.



- Pattern symbols to be marked include **darts, pleats, tucks, and matching circles**. Beginners should also mark seam lines.
- In some situations, marking a seam line is important to even the most experienced sewer.
- Always test the marking method on a fabric scrap before using it.

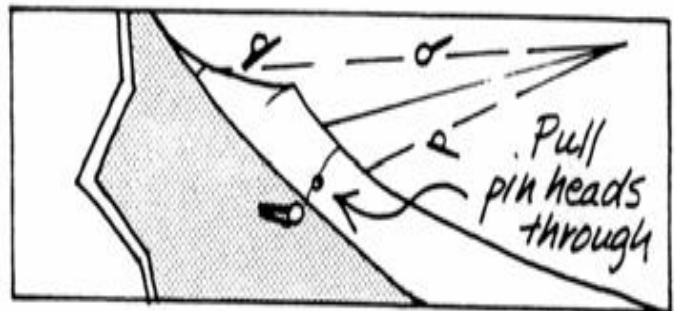
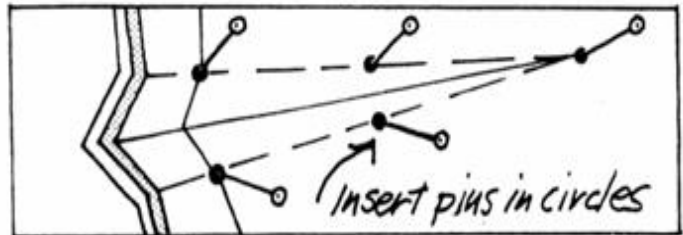
### Tracing wheel and dressmakers TRACING PAPER MARKING METHOD

- It is suitable only for firmly woven fabrics. It is especially good for woven linings and interfacing. It is not appropriate for Sheers or light colours as marking may show through to the right side.
- Knits or stretch fabrics as marking will not be accurate because of the stretchiness of the fabric.
- Woollens may be too thick for tracing to transfer well.
- In case of Silk/silk-like or napped fabrics also the teeth from the wheel may pick or mar the fabric.

## Tailor's tacks marking method

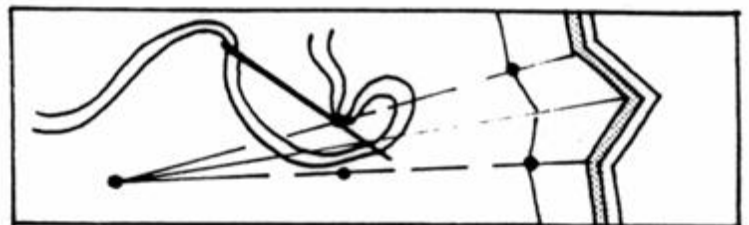
This method takes a lot of time but is the best choice for delicate fabrics. Tailor's tacks are used to mark circles on high quality fabrics and fabrics that are loosely constructed.

- Use a hand needle with double thread (unknotted).
- At each circle (dot on pattern) take a stitch through both fabric layers forming a 1-inch loop, leaving about 2 inches of thread at the beginning and at the end.
- Gently pull off the pattern piece, be careful not to disturb loops.
- Pull the two fabric layers apart.
- Clip the thread between the two layers of fabric, so each layer has a marking.



## PIN MARKING METHOD

- Insert pins into all circle markings on the pattern.
- Turn garment piece over and insert another pin where the first pin is. This marks both garment pieces when pattern has been cut on double-thickness.
- Unpin pattern pieces from the fabric and pattern.



- Pull garment sections apart. Insert pins into fabric while or immediately fold to form dart, matching pins.

### Tailor's Chalk, Dressmaker's Pencils, Soap Slivers Marking Method

- Tailor's chalk, dressmaker's pencils, and soap slivers are primarily used for marking widths, such as hems and seams since they only mark one layer at a time. Each of these easily rubs off.
- Soap slivers can be used in place of tailor's chalk or dressmaker's pencil.
- Marking pens should be washable. Pens are used the same way as tailor's chalk, marking pencils and soap slivers. Fabric marking pens may or may not wash out and soap slivers are ideal, especially for washable fabrics

## 12. Fabric Consumption

Before calculating the fabric consumption, one needs the followings information as mentioned below:

- 1) Measurement chart with technical specifications.
- 2) Style Description.
- 3) Fabric Description.
- 4) Fabrics width/weight.
- 5) Washing shrinkage if any.

This formula to calculate fabric consumption is as under :

$$\text{Formula} = (\text{Length} \times \text{Width}) / (\text{Fabric width} \times \text{Fabric Unit})$$

Here,

**Length** = length of the specific parts + allowance

**Width** = width of the specific parts + allowance

**Fabric width** = Fabric width (after considering the shrinkage allowance). Say, fabric width is 45" & the shrinkage allowance is 1", Then the Fabric width will be (45"-1") = 44" in the formula.



**Fabric unit** = Fabric calculation unit, here it will be 36 in order to calculate the consumption in Yards.

***Now to calculate the consumption of a Shirt (front part)***

Center front length = 32"+1" (Sewing allowance) = **33"**

Width (Chest) = 24" + 1" (Sewing allowance) + 3" Pleat (1.5X2) = **28"**

Consumption = Length X Width / Fab width X Fab Unit

= 33" X 28" / 44" X 36"

= 924" / 1584"

= 0.5833333

= **0.59 Yards. (For front part)**