



























- 1  **Garment Assembly & Finishing: Pieces into Products**  
Chapter 12
- 2  **Garment assembly**
  - Pieces + pieces = products
  - Partially assembled pieces are sewn to other partially assembled pieces to create finished garments
  - When assembled, the garments are ready for finishing
    - Includes all the final steps necessary to get a product ready for shipping
- 3  **PIECE ASSEMBLY**
  - As pieces are joined together, the garment begins to assume a readily recognizable appearance
  - Includes the construction of collars and necklines, sleeves, cuffs, waistlines, and waistbands, and linings
- 4  **Construction collars**
  - Necklines w/o collars may be finished by any edge treatment such as facing, binding, or banding
  - Some collars finish all or part of the neckline edge
  - Others require additional neckline finish, such as facing
  - Depends on neckline shape, fabric, and cost
- 5  **Collars**
  - One of 3 types: flat, standing, or rolled (partial or full)
  - Flat collars: inner edge of collar is attached to the neckline edge of garment. Then neckline is finished w/ a binding, facing, stitching, or other edge finish
  - Standing collars: applied to the neckline w/ raw edge of the garment neckline sandwiched between the collar layers, otherwise will require additional edge finishing
- 6  **Collars**
  - Cowl necklines: use soft, lightweight, bias-cut or knit fabrics. Don't use interfacing. Flexible & drapable.
    - Neckline edge is faced after cowl is sewn on, or neckline sewn is finished w/ overedge stitch or flattened w/ a bottom-covering stitch
- 7  **Collars - Quality**
  - Outer edges should be smooth, even flat
  - Points should be sharp and identical in shape & length
  - Any trim is even & w/o pleats or puckers
- 8  **Collars - construction**
  - Constructed either as a single ply or one, two, or three pieces that form a double ply plus interfacing
  - More pieces = more cost (usually)
  - Complex collars usually look better and last longer on complex garments (tailored goods)
  - Simple collars work better on simple garments (such as sportswear)
- 9  **Collars - construction**
  - Collars on coats or jackets often involve joining to lapels
    - The pieces of the garment that roll or fold back above the front closure
  - Gorge line: the seam where the collar and the lapel meet
    - Key area of quality appearance in construction
    - Must accurately match collar to neckline
- 10  **Collars - construction**
  - The FALL on a rolled collar should be long enough to cover the neckline seam of the garment
  - Roll line: where the collar naturally tends to roll
  - Better jackets/coats will have stay tape reinforcement on roll line
  - Should roll naturally – not pressed sharp or in wrong place

- Pad stitching on fine tailored goods make collars hold roll
- 11  **Single-layer collars**
  - Lace or knit collars are commonly single layer
  - Must have adequate body to lie smoothly
  - Low labor cost
  - Overall cost depends on cost of raw materials
- 12  **One-piece collars**
  - Most collars have 2 layers of shell fabric w/ interfacing between
    - May be formed from 1, 2, 3 pieces of fabric
  - 1 piece collars are simple and inexpensive, but somewhat rare
  - Low in bulk – no outer seam – only a fold
  - Cannot be shaped because it must be folded – makes it hard to use
  - Only works for full roll collars (like turtles)
- 13  **Two-piece collars**
  - Most are made of 2 pieces
  - Have an upper and an under collar
  - Sewn together at outer edge using an enclosed seam
  - Require more labor but usually more fabric efficient
  - Under collar may be cut on bias to help roll
- 14  **Two-piece collars**
  - Collars on many men's suit jackets & sports jackets are bluff-edge collars
    - Have an under collar of felt
    - Rolls better
    - Requires no seam allowance on felt (doesn't ravel) and can reduce bulk
    - High-quality jackets have the upper hand stitched to the under collar – makes softer
- 15  **Three-piece collars**
  - Under collar has a CB seam and both halves of the under are cut on bias
  - If the interfacing is woven, it's cut like the under collar
  - Makes the grain of both sides of under collar identical and rolls better
  - Requires more fabric and more labor
  - Mainly high-quality tailored goods
- 16  **Under collar construction**
  - Both 2 & 3 piece construction, the under collar seams should not be seen from the top when the collar lays properly
    - The neck edge should be a well enclosed edge that gets hidden by the roll of the collar
    - The outer edge should be rolled slightly to the underside during construction
      - There may be control stitching specified (top, under, edge) to keep it from rolling out
    - Both also rely on accurate pressing and stitching
- 17  **Under collar construction**
  - Under collars on better garments may be cut slightly smaller in order to force seams under and to help enable collar roll
    - Known as slipping or bubbling
    - Rarely used in mass-produced garments because of skill need to sew together different sized pieces
    - Can also be used on cuffs and facings
    - Really useful for bulky fabrics
- 18  **Setting sleeves**
  - Sleeveless requires something to finish the armhole edges
    - Faced, bound, banded, edge-finish stitched,...
  - Sleeves are either set-in, raglan, or kimonos
  - Asymmetrical armscyes (front to back) provide better fit but increase labor cost
    - Must be more careful about the setting of the sleeve and left vs. right sleeve

- 19  **Sleeves**
- Symmetrical armscyces speed up production and reduce setting errors but don't fit as well
  - Many children's casual garments & sleepwear, low to moderate priced men's shirts and womenswear w/ loosely fitting armscyces have symmetrical armscyces and sleeve caps
  - Asymmetrical armscyces and sleeve caps are generally found only in better garments
- 20  **Set-in sleeves**
- Fit the body more closely than any other sleeve type
  - Still allow room for comfortable movement
  - Has more complex cutting and construction of both bodice & sleeve than other types
  - Has a shaped sleeve cap that is cut larger than the armscye and must be eased into the hole
  - Makes the cap fits the rounded upper part of the arm
  - Correctly positioned using notches
- 21  **Set-in sleeves**
- Ease makes it fit the rounded portion of the top of the arm
  - Not enough or none will cause tension and wrinkles
  - More will cause fullness or gathers
  - Many low-price garments reduce or eliminate ease because of difficulty in sewing in
- 22  **Set-in sleeves**
- The closer the fit of the armscye & sleeve (the 2 usually coincide), the higher and more extreme the curve of the sleeve cap
    - And the more difficult to ease the sleeve cap into the armscye
  - The looser the fit of the armscye and sleeve, the flatter and more gradual the curve of the sleeve cap
    - And easier to sew in
  - Best if armscye is double stitched – especially lower portion
- 23  **Set-in sleeves**
- Sleeves set too far to back or front results in off-grain sleeve
    - Binds, wrinkles, twists, pulls
  - Sleeves can be set Flat or In-The-Round
- 24  **Set in the round**
- Traditional method
  - Sleeve stitched into a tube
  - Bodice side seam and should seam stitched (armscye is full circle)
  - Tube sleeve is set and stitched into round armscye
  - Armscye seam is continuous
  - More comfortable – especially for tighter garments
  - Look better in dressy and tailored clothes
  - Much more difficult and costly
- 25  **2-piece sleeves**
- A variation of a set-in sleeve
  - Must always be set in the round (no aligned underseam)
  - Usually found in better tailored goods
  - Feature a front and back seam on sleeve that act as dart substitutes and make it fit the natural forward curve of the arm
  - Require more labor as there are more parts
  - Improved fit
- 26  **Set Flat**
- Sometimes called shirt-style sleeves
  - Stitch shoulder seam
  - Stitch sleeve to armscye w/ underseam and side seam open
  - Stitch sleeve underseam and bodice side seam all in one pass

- Much easier and cheaper
- Allows operators to work w/ flat panels longer
- Better for looser garments than tighter ones
- Found in all levels of men's shirts and in loose or low-cost children's and women's sportswear

27  **Kimono Sleeves**

- Simplest to construct
- No armscye – sleeve is cut as one w/ body
- Often has worse material utilization
- Sometimes seams sleeve just outside of the underarm curve area to increase utilization – still kimono
- Often have CF/CB seams too

28  **Kimono Sleeves**

- When they fit close to the underarm, there are many more wrinkles and movement is often very restricted, causing much more strain
- When cut loosely, there will be folds of excess fabric. Will still have some underarm strain
- Should reinforce underarm area w/ stay tape

29  **Kimono Sleeves**


- Sometimes there are gussets inserted in the underarm to aid movement and increase comfort
- Seams must be carefully matched, no pleats, puckers, holes.
- Technically gussets may be in any type of sleeve. More common in kimono

30  **Raglan sleeves**

- Has a characteristic diagonal seam that runs from underarm to neckline
- Sleeve forms part of neckline
- Also set flat or in the round
- Flat – most common
- But if using tubular knit goods, have to sew in the round as there are no side seams

31  **Raglan Sleeves - shaping**

- Sometimes use darts or dart substitutes along shoulders to fit neck and release fullness into sleeve area
- Sometimes the sleeve is 2 pieces – split raglan – seamed down the top of the arm
- Sometimes the neckline is gathered (such as in peasant blouses)
- Sometimes knit fabric is used and stretch is the dart substitute

32  **Adding cuffs**


- Sewn and attached at varying times depending on different factors
- Some fully or partially made during preliminary assembly and attached during main assembly process
- Some fully made and attached during assembly

33  **Cuffs**

- Should be interfaced for smoothness unless made of rib knit & intended to stretch
- Sewn-in interfacing should be caught in a seam or secured at each edge
- Can be made of a single piece of fabric folded lengthwise
- Or 2 separate plies of fabric that are seamed together on the outer edge
- Should lay flat, smooth, have good corners or curves, stitching, etc.

34  **Open-band cuffs**


- Have an opening and require a placket in the sleeve. Usually buttoned closed but can have other closures
- Cuff should lap front over back and fasten on the outer edge of the wrist or arm
- These cuffs are constructed 1<sup>st</sup>, then attached to the sleeve
- Low price garments usually have 1 button, medium – 2, high -1 and many more sizes

35  **Closed-band cuffs**


- Inexpensive – less labor, no plackets or closures
- Often rib knit and attached to knit garments to stretch over body parts
- Woven closed bands must be large enough to fit over any body parts they will pass over as they don't stretch
  - Found in low-quality women's blouses or sometimes around the bottom of puff sleeves
- High-quality are set in the round, others are set flat

36  **Turned-back cuffs**

- 2 ways:
  1. Edge is deeply hemmed and then the edge is flipped back to form the cuff – puts face fabric on both sides of the cuff
  2. Narrow hem the edge and then flip back or roll to form cuff – relies on the back of the fabric to show
- Both methods performed in assembly process
- 2<sup>nd</sup> is more casual

37  **Turned-back cuffs**


- Sometimes have a separate extension applied
  - Usually either because the area is unusually shaped and doesn't turn back well
  - Or a contrasting color is desired
  - Or to save fabric utilization
- Can also create a Flange on patterns for moderately unusual shapes

38  **Waistbands**

- Usually straight, but the waistLINE is curved
- Waistline is usually eased to waistband
- Waistline dips in the back for women and front for men
- Curved waistline fits better but cost more
  - Some manufacturers will straighten to save labor costs
  - Especially in elastic-waisted goods

39  **Waistbands**


- Waistbands should be interfaced for body & smoothness – of adequate weight & stiffness
- Some waistbands are elasticized instead –before they are sewn to the garment if they are a separate band
- End of waistbands may be finished in a variety of ways.
  - Enclosed is the most common but also most costly and most bulky
  - Other methods include serging, turning under...

40  ***Straight waistbands***









- Do not conform to natural curves of body
- But are a lot cheaper to make and are stronger than curved ones
- Confined to locations near the natural waistline
- Usually not more than 1.5 – 2" wide or will stand away from body
- Usually cut with the lengthwise grain going around body for strength

41  ***Straight waistbands***


- A waistband extension provides a place for a closure
- The extension is usually on the underside and the topside is usually even w/ the opening
  - Unless the designer wants to form a decorative tab on the center front
- Can be constructed w/ one folded piece or 2 piece of fabric seamed along the top – with interfacing inside
- 2-piece waistbands typically use fashion fabric for the facing (the inner piece) unless the shell fabric is bulky or a waistband curtain is used

42  **Waistband curtains**

- Are prefabricated waistband facings that consist of firmly woven fabric attached to a bias cut strip of interfacing
- Lower edge of the curtain is bias cut to fit over hips better

- Often used in men's slacks, sometimes in women's better slacks
- Curtain is attached to the rgt & lft halves separately and then the CB is seamed to make alterations at the waist easier
- Most costly type of waistline finish
- 43  **Contour Waistbands**
  - Shaped to fit the curve of the body
  - Usually required when the waistline is lowered
  - Lower material utilization and higher labor, not as stable, but fit better
  - Best if a waistline stay is used along top edge
- 44  **Shoulder Pads**
  - Should be carefully positioned to follow body and garment shape
  - Lined garments: attached between garment & lining
  - Unlined: tacked to the shoulder and armscye seams
  - Don't tack too tight or too loose
  - Tacks should be inconspicuous
- 45  **Shoulder Pads**
  - Must take care to prevent shifting, bunching, rolling
  - Removable w/ Velcro is good – IF Velcro is appropriate for fabric
    - Hook side should be attached to pad, loops to garment
- 46  **Applying linings**
  - Can be lined to the garment edge or have linings attached at garment hems and facings
  - Lined-to-the-edge: lining is an exact duplication of the garment
    - Raw edges are bound or finished by the enclosed seam joining the garment & lining
    - Best to use control stitching to keep the lining edges from showing on the outside of the garment
    - Self-fabric linings are the least noticeable – but only appropriate for lightweights
    - Small sleeveless garments are often lined to the edge – too small to be faced
    - Small individual parts are also often lined to the edge
- 47  **Applying linings**
  - Most garments NOT done that way
  - Most linings do not exactly duplicate garment
    - Cut narrower and shorter than garment
    - Sewn to facings
    - Hemmed shorter than garment
  - Should be large enough not to distort the hang or movement of the outer garment
  - May intentionally cut lining smaller to absorb strain of wear
    - Fitted skirts
    - full or pleat skirts – cut smaller to reduce bulk
- 48  **Applying linings**
  - Ease pleats: pleats added in linings of jackets and coats to provide room for movement across body
    - Often at CB, sometimes at armscyces
    - Can also have horizontal pleats in sleeve linings
  - Sometimes a strip of stretch fabric is inserted in CB of active sportswear linings to allow ease w/o bulk
- 49  **Bagging the Lining**
  - Most common & least expensive method of lining a fully attached lining
  - Lining and garment are completed constructed separately
  - Then sewn together, right sides together, except for a small hole to turn it through (hole makes it a weird shaped bag)
  - Turned through and hole stitched up
- 50  **Lining attached at armscyces**

- Lining attached around armholes to keep it from floating around in some moderate and most higher-priced items
- Lining body and sleeves are constructed separately
- Lining is sewn around outer edges & armholes, then sleeves and sleeves to armholes
- Sometimes lining is bagged as one, then tacked to armholes
- In highest priced goods, the armholes are attached by hand

51  **Free-hanging linings**


- Linings are fully attached to jackets (and short upper body garments like vests and corsets)
- They hang free from dresses, skirts, pants, and coats – most anything that hangs past the hipline
- So that the lining doesn't inhibit the movement of the garment where it is more likely to twist up
- Enclosed linings on lower body garments and dresses are often regarded as suspicious in quality by consumers (might be hiding something)

52  **Free-hanging linings**

- French tacks or swing tacks (thread chains) are often used to secure hems of free-hanging linings to hems of garments
- Should be about 1.5" long
- Made of thread chains or strips of fabric similar to belt loops, or ribbon
- Allow the garment and lining to move separately, but keeps the lining from crawling up

53  **PRODUCT ASSEMBLY & FINISHING**

- When all major pieces of the garment are joined
  - Garment is a product, but not a FINISHED product
  - Many detail operations have to be completed to finish garment
  - Including:
    - Buttons, buttonholes, snaps, hooks & eyes, decorative stitchings, trims, wet processing, & finish processing

54  **Applying buttons/Button placement**


- Buttons are the most common garment closures
- A buttons should be positioned at each horizontal stress point (bust/chest, waist, hip levels)
- Failure to do so creates gaps in the opening
- Sometimes in wrong place due to cost (trying to use less buttons)

55  **Button placement**








- Sometimes button at hip level of shirts is eliminated
  - Saves money as it is not seen when tail is tucked
  - Eliminates bulk
- BUT its presence
  - Preserves a straight, undistorted CF line
  - Helps keep the shirttail tucked
- 7 button fronts higher quality than 6 button

56  **Button placement**

- Generally don't place a button at the waistline as it interferes w/ the waistband
- Should not be positioned on the hem
  - Traditionally 4-6 inches from hem
  - Except sleeves – those are no more than ¾" from bottom of sleeve
- Extra buttons sometimes provided
  - Can be on hang tag or sewn to garment
  - Makes a visible sign of quality

57  **Button Attachment**

- Secure attachment is very importance
- Buttons are usually sewn, but can be attached other ways
- Stitch is similar to a ticket tack

- Can have highly automated machines w/ hoppers of buttons and positioning feet
- 58  **Button Attachment**
  - Buttons sewn TOO tightly are more likely to fall off – more susceptible to abrasion
    - Also distort the fabric, especially bulky fabrics
  - Generally, the higher the number of stitches used, the more secure
  - Type of stitch is also important
    - Chainstitch vs. lockstitch
- 59  **Button Attachment**
  - Some buttons mechanically attached
    - Security of attachment even more important as consumers cannot fix a mechanically applied button that falls off
    - These tend to be more securely attached
    - Primarily used on heavy-duty apparel (jeans)
  - Buttons should also be in registration (orientation, upright)
    - Some machinery automatically does this
- 60  **Applying eyed buttons**
  - The stitches are normally parallel to the buttonhole for eyed buttons
    - Prevents distortion of the hole
  - 4-eye buttons are more secure than 2-eye buttons (more stitches and attachment points)
    - 4-eyes are usually stitched as 2 independent pairs of stitching
    - But can be stitched in a square, arrow, or cross (strongest)
  - Metal and shell buttons work better w/ large thread size and high stitch count as the buttons have sharper edges that can cut the stitches
- 61  **Applying eyed buttons**
  - Wrapped THREAD SHANKS can be used to help prevent buttonhole distortion in heavy or bulky fabrics
    - Buttons are sewn on more loosely then the stitches between the button and the fabric are wrapped w/ the thread to create a shank or post of thread
    - Allows button to float above fabric
    - Button tends to stay on longer
    - Special machines to do this – but more expensive
    - Don't put thread shanks on non-functional buttons – they'll flop over
- 62  **Applying shank buttons**
  - Require the body fabric to be folded in exactly the right spot in order to machine stitch button on
  - Shank is best parallel to buttonhole
  - Shank helps button rise above fabric and hole
  - Very heavy fabrics may require a thread shank in addition to button shank
  - Some shanks are sharp and require heavier thread and more stitches
  - Some attached w/ toggles OR mechanically attached
- 63  **Button Area Reinforcement**
  - Interfacing should be used in button areas to reinforce buttons
    - Otherwise the buttons will likely eventually tear through
    - 2 plies plus interfacing is ideal
  - In most garments, the application penetrates all plies plus interfacing
  - Some may not penetrate facing or vice versa, not penetrate face if sewn on inside
    - Not as secure and requires more skilled labor
    - Must be done manually.
    - Most costly
- 64  **Backing buttons**
  - When buttons are under heavy strain or if they are on very light fabric, backing buttons may be used to support them



- A flat, eyed button
- Absorbs the stress that would normally be put on the fabric
- Increases quality & durability
- Sometimes squares of fabric or ribbon are used for same purpose

#### 65 **Buttonholes**

- Primarily functional, but CAN be decorative
- Need to be smooth, even, secure
- Should be long enough to easily slip over button
- Not so long that button keeps popping out
  - Size is usually diameter of button, plus thickness
  - Rough or unusually shaped buttons sometime require more length to make easier to button/unbutton
- Sometimes these may require a snap to act as the functional closure w/ the button sewn on top for decoration

#### 66 **Buttonhole reinforcement**

- Should be reinforced w/ interfacing
- w/o interfacing, buttonholes may stretch or ripple or tear
- May be a strip or individual pieces
- May also reinforce the stitching w/ cording (Corded Buttonholes)
  - Creates a decorative, raised effect
  - Absorbs some of the stress and helps prevent stress

#### 67 **Buttonhole direction**

- Horizontal buttonholes tend to stay buttoned better
  - Button fits into the end of the hole, which absorbs the stress
  - But require more fabric than vertical ones
- Buttons in vertical buttonholes tend to slip out
  - Especially large ones
  - Or on tight clothing
- Coats, jackets, neckbands, cuffs, pants plackets (button flies), and waistbands tend to use horizontal buttonholes

#### 68 **Buttonhole direction**

- Vertical buttonholes are appropriate when aesthetics is important
- Or when the area is loosely fitted and has little stress
  - CF button band closures – look more attractive
- Horizontal doesn't work well on knits because of the knit fabric construction – Vertical is better

#### 69 **Buttonhole placement**


- Garments lap where buttons and buttonholes are used
- The part beyond the button is the UNDERLAP
- The part beyond the buttonhole is OVERLAP
- Width of the extensions is determined by the size of the buttons
  - Usually the size of the buttons plus  $\frac{1}{4}$  to  $\frac{1}{2}$ "
  - Large buttons may require even slightly larger extensions
- In US, Women lap right over left and men left over right

#### 70 **Buttonhole placement**


- Buttons and holes should be spaced the same distance
- Buttonholes should be placed on the straight-of grain for durability
- Horizontal holes should extend  $\frac{1}{8}$ " beyond the CF, CB, or lap line & extend into body of fabric
  - Corresponding button should be located on exactly the same level and exactly on the CF, CB, or lap line

#### 71 **Buttonhole placement**


- Vertical buttonholes are located exactly on CF, CB, or lap line
  - Corresponding button should also be exactly on CF, CB, or lap line but 1/8" below the top edge of the buttonhole

72  **Thread buttonholes**


- Most buttonholes are made of thread
- Made w/ special programmable machines usually – stitch & cut hole
- Generally the denser the stitches, the more durable
  - Prevents fabric from fraying
  - Density is a direct clue to quality
- Lockstitch buttonholes are more durable than chainstitch

73  **Thread buttonholes**


- Some fabrics damaged by too-dense buttonhole stitching (knits)
  - Still must be completely surrounded by stitches to prevent fraying/raveling
- Most thread buttonholes are rectangular
  - Zigzag stitches w/ bar tack ends

74  **Thread buttonholes**


- Oval and Keyhole buttonholes
  - Special shapes
  - Have rounded ends for the button to ride in
  - Used on tailored jackets & coats, waistbands & pocket flaps of jeans & slacks
  - Created w/ machine zigzag stitches or w/ machine stitches that simulate the handworked buttonholes (purled edge)
  - Plain zigzag not as durable and purled edge
  - Can also be made w/ a strand of gimp under the stitching or w/ buttonhole twist for strength

75  **Thread buttonholes**


- Hand-worked buttonholes
  - Another type of thread buttonhole
  - Increasingly rare
  - Very expensive
  - Not stronger or any way functionally superior to machine buttonholes
  - Just influence perceptions of quality due to high labor

76  **Fabric buttonholes**


- Much less common
- High-priced
- High-labor
- Include bound, slit, faced slit, inseam, & fused

77  **Bound buttonholes**

- Looks like a tiny double lip welt pocket and made much the same way
- Usually rectangular and has 2 lips of fabric that meet in the middle
- Lips should meet but not overlap
- Hole should be perfect rectangle (or whatever shape)
- Good for heavy fabrics because it doesn't compress fabric
- Very high labor – even automated

78  **Slit buttonholes**

- For fabrics that can't use thread buttonholes w/o the stitches weakening it (leather, vinyl...)
- When the raw edges don't ravel
- A rectangle of stitching w/ a slit in the center
- OR a rectangle cut out of the fabric w/ two narrow strips of fabric glued onto the back as lips (looks like a bound buttonhole)


79  **Faced slit**

- Sometimes found in high-price European clothes

- A faced slash in the fabric
- Requires more steps than a thread buttonhole, but less than a bound buttonhole

80  **In-seam buttonholes**

- Rare because it is limited to where a seam crosses EXACTLY where a buttonhole is needed
- Operator leaves a portion of seam unstitched to create the buttonhole
- Smooth and inconspicuous
- Not as strong

81  **Fused buttonholes**

- Limited to thermoplastic fabrics
- Formed by embossing fabric w/ a hot die shaped like the desired buttonhole
- Cuts slit at same time
- Used in vinyls and other film fabrics – more durable than stitched holes in this type of fabric
- Mainly confined to low price lines and raingear types of goods

82  **Button loops**

- May substitute for buttonholes
- When in series, should be evenly space and identical in size
- Can use presized, prespaced looping
- Loops are decorative as well as functional
- Not as strong as holes, not as tight
- Short wide loops work better than long skinny ones
- Both ends must be fully secured
- Buttons must be carefully aligned w/ loops

83  **Applying snap fasteners**

- Most frequently used on children's clothing
  - Simple and easy to release and handle
  - Don't withstand as much stress as buttons
- Stud portion usually attached to overlap (bulkier)
- Socket portion usually attached to underlap
- Must be aligned

84  **Snap fastener placement**

- Placement determined same way as for buttons
- Concealed snaps are placed similarly, but placed nearer to the garment opening (1/8 – 1/4" from the edge)
  - Never seem from outside of garment if correctly place

85  **Sew-on snaps**

- Many sewn on by machine
- Number and type of stitches affects serviceability of snap
- All 4 holes on each part should be stitched securely
- Hand-sewn are used primarily when automation not justified

86  **Sew-on snaps**









- Edges that overlap require snaps sewn on flat
- But abutting edges usually use hooks & eyes
  - Can use a snap socket extended from the edge by a thread chain
  - But only on high-price lines

87  **Mechanically attached snaps**

- Using pneumatic machine or a kick press or can be manually attached w/ a die and hammer
- Fabric should be adequately interfaced or reinforced
- Doesn't work in bulky or loosely woven areas or uneven areas
- Best for medium to heavy-weight fabrics

88  **Snap tape**

- Must align both sides

- Stitching will be visible, so must be good
- 89  **Applying hooks & eyes**
  - For those that join abutted edges, hook should be 1/16 – 1/8" from the edge of the opening
    - Hook end toward the opening edge
  - If closure laps, hook should be attached to the overlap and the eye attached to the underlap
  - If eye is curved, it is place w/ the curve toward the opening edge of garment
  - Should not be visible from outside of garment
  - Takes less stress than buttons, but more than snaps
  - larger: more stress. Smaller: less stress
- 90  **Sew on hooks & eyes**
  - Concealed hooks & eyes must be sewn on carefully so stitches don't show on outside
  - Best to have several stitches for durability
  - Ideal to stitch down hook end too
  - Those under stress should be reinforced/interfaced
- 91  **Mechanically attached**
  - Large hooks & eyes may be mechanically applied
  - Used most frequently on waistbands
  - Attached through the unfinished waistband
  - Prongs of the hook and eye are bent over metal reinforcing plates to hold them in place
  - Then the waistband is completed
  - Looks neat
  - Only attached to 1 layer of waistband and pull layers apart
  - May stitch around area to help prevent this
- 92  **Applying Misc. Closures**
  - Hook & Loop tape (Velcro)
    - Recommend hook side on underlap and loop side on overlap
    - Machine stitch through all plies for durability
  - Drawstrings
    - Require one or 2 openings in casing to pull ends out
      - 2 withstand stress better
    - Tie or cap ends to prevent "escape"
    - May be stitched in place halfway through casing
- 93  **Applying Misc. Closures**
  - Grommets & Eyelets
    - Used for threading drawstrings or other purposes
    - Mechanically attached similarly to snaps
    - Most suitable for medium to heavyweight fabric
    - Area should be reinforced w/ interfacing or multiple plies of fabric
- 94  **Finish pressing**
  - Assembly is complete
  - Garments requiring garment dyeing, treatment for wrinkle resistance, or special-appearance finishes (stonewashing) sent off to wet processing
  - If they have already been wet processed or don't need it, they progress to Finish Pressing
- 95  **Finish pressing**
  - Can make or break a garment
  - Lousy pressing can practically destroy a high-quality garment
  - Great pressing can hide flaws in a low-quality garment
  - Shouldn't have shine, scorching, melting, clamp marks, water marks, unplanned creases, pleats, wrinkles, or pressed through seam or hem marks
- 96  **Finish pressing**

- Inseams and side seams of pants and shorts should be pressed seam on seams w/ a smooth center crease
- Skirts and dresses shouldn't have any creases
- Shirts and jean jackets should have a crease running down the sleeves
- Tailored jackets and coats should NOT

97  **Finish pressing**

- Pressing smoothes the garment and enhances the workmanship
- Helps the garment fit smoothly
- High quality garments also underpressed (pressed at key points during construction)
  - This is higher labor and sometimes eliminated

98  **Finishing**

- After pressing, any other need finishing touches are added
  - Such as belts, accessories, advertising labels
- Final inspection is conducted
- Garments are sent to fold and pack
- Then subjected to a final audit
- NOW COMPLETE