October, 1922

UNIVERSITY OF ILLINOIS
AGRICULTURAL COLLEGE AND EXPERIMENT STATION

CLOTHING CLUB MANUAL

BY MARY C. WHITLOCK AND HARRIET M. PHILLIPS

URBANA, ILLINOIS
FOREWORD

To be well dressed is a legitimate ambition; and while it is entirely possible to spend a disproportionate amount of time and money on clothing, the subject may well claim thoughtful attention.

To be sure, clothing is needed for physical comfort, but long ago this ceased to be its only function. It adorns and decorates the human body and enhances or detracts from one’s natural charm. It reflects to a considerable extent one’s character and contributes to one’s enjoyment and self respect. Therefore, it should be the aim of every club girl to be well dressed, not only in order that she may give pleasure to others but in order that she may reflect her best self.

Appropriate, inconspicuous, well-constructed clothing of good design, color, and material can be had for the money which most girls spend for clothing. However, to secure these results in one’s clothing, careful study and planning are required. Thru the work of the clothing projects, club girls will find an opportunity to learn how to be well dressed.

JULIET LITA BANE
State Leader in Home Economics Extension
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SUMMARY OF CLOTHING CLUB REQUIREMENTS

1. Members should be between 12 and 20 years of age.
2. A club should consist of not less than five members.
3. Each club should arrange for—
   a. An adult leader
   b. A corps of officers
   c. Regular meetings
   d. A club picnic
   e. A demonstration team
   f. A club exhibit
   g. An annual report to the State Leader of Home Advisers
4. Each member should complete the work of at least one project. The following projects are offered:

   For Junior Members, 12 to 15 Years Inclusive

   **First Year**
   - Apron holder
   - Apron
   - Patching
   - Stocking darning
   - Nightgown
   - Choice of gift
   - Elective: Bloomers

   **Second Year**
   - Choice of princess slip or underskirt
   - Simple wash dress
   - Choice of gift
   - All of member’s own mending
   - Elective: Bungalow apron

   **Third Year**
   - Choice of smock, middy, or waist
   - Skirt
   - Ten hours of family mending and all of own mending
   - Elective: Fine summer dress

   For Senior Members, 16 to 20 Years Inclusive

   **First Year**
   - Choice of bungalow apron, kimono, slip-over smock
   - Choice of two:
     - Chemise, camisole or brassiere
     - Nightgown, bloomers, underskirt
   - Care and repair of own clothing
   - Elective: Wash dress

   **Second Year**
   - Study of dress design and patterns
   - Choice of middy, smock, waist
   - Skirt
   - Afternoon dress
   - Care and repair of own clothing and 10 hours of family mending
   - Elective: Household article

   **Third Year**
   - Study of economics of dress
   - Made-over garment
   - Wool or silk dress
   - Care and repair of own clothing and 15 hours of family mending
   - Elective: Handmade collar and cuff set

5. Each member should keep a record of the number, kind, and cost of all articles and garments made during the club year.
6. Each member should exhibit one or more articles or garments at a local, county, or state exhibit.
7. Each member should hand in a final report to the local or county leader.

For more detailed information regarding the organization and direction of clothing clubs, address the Home Economics Extension Service, Woman’s Building, Urbana, Illinois.
CLOTHING CLUB MANUAL

By MARY C. WHITLOCK, Associate in Clothing, Department of Home Economics, and
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This manual has been prepared for the use of members of clothing clubs. It contains a description of and the directions for the construction problems which will be met in making the garments which are listed in the clothing projects in the manual for club leaders, "The Organization and Direction of Clothing Clubs."

EQUIPMENT

PERSONAL EQUIPMENT

Complete personal equipment consists of scissors, thimble, tape measure, needles, thread, pins, pin cushion, emery bag, tracing wheel and measuring gage. Because these articles are small and are likely to be misplaced, they should be kept in a small work box or basket. One should be familiar with the use of these tools and be a judge of the quality of each.

Scissors

The blades and points of scissors should be sharp, so that even, clean cuts can be made thru the material; and the points should match well, so that the cut can be made exactly to the desired point.

Good scissors should be used with care. The cutting edges soon become dull if they are used to cut paper, cardboard, buckram or wire. Only cheap, dull scissors should be used for such purposes. Any scissors longer than six inches are called shears. There is need of both a pair of scissors and a pair of shears in any good equipment; scissors are convenient to use for cutting curves and short, straight cuts, but shears give better results for long cuts.

Thimble

A thimble is used to protect the finger and to aid in pushing the needle thru the cloth. If one is right-handed, the thimble is worn on the middle finger of the right hand; if left-handed, on the left hand. Avoid using a rough thimble or one having holes worn in it, for it may pull the material and bend or break the needle.
Tape Measure

A very durable tape measure is one that is made of a double thickness of sateen. The most convenient measure to use is one which is numbered from the opposite ends on the two sides.

Needles

Needles can be obtained in a number of different sizes and kinds. For ordinary work, the sizes range from Nos. 1 to 12, the larger numbers representing the finer needles. Finer sizes for special purposes can be obtained. Some packages contain needles of uniform size, and others contain an assortment of sizes. The most frequent combinations in the assorted packages are Nos. 3 to 9 and Nos. 5 to 10. The beginner often makes the mistake of using too coarse a needle. The needle should be just large enough to carry the thread.

There are many kinds of needles, differing in the length of the shaft and the shape of the eye. The coarse sizes of any kind of needles are longer than the fine sizes of the same kind. The kinds which differ primarily in length (having the same shaped eye) are the ground-downs, between, sharps, and milliners. Those which differ in the shape of the eye are known as crewels and calyx-eyed.

Ground-downs are very short and are used for very fine hand sewing. Between are slightly longer than ground-downs and are used for the same purpose. Sharps are medium in length and are used by most people for general sewing. Milliners are longer than sharps and are especially good for quick basting. Crewels have elongated eyes which easily carry embroidery flosses, darning threads and wool. Calyx-eyed, or self-threading, have specially constructed eyes which are easily threaded and save eye strain. They are not as good for silk thread as for cotton because the silk thread is cut more easily by the sides of the eye.

Pins and Pin Cushions

Pins should be fine, should have sharp points, and should be made from good metal. Steel pins are best to use when working
with silk, for they leave no mark in the material; they rust easily, however, and must be kept free from dampness. An economical and convenient way to purchase pins is in a ¼-pound box. A lightweight pin cushion stuffed with hair or wool will be found useful in fitting, because such a pin cushion may be pinned to the fitter’s dress. A pin cushion that is convenient to use when working at a sewing machine may be made by wrapping several thicknesses of woolen cloth around the arm of the machine.

Thread

Thread is made from cotton, linen, or silk. Cotton and linen thread is numbered, the higher numbers representing the finer threads. No. 150 is used for very fine sewing. The sizes of silk thread are 000, 00, 0, A, B, C, D, E, and EE, the latter being the coarsest. The size of the thread to be used is determined by the nature of the material, for the sewing thread should correspond with the thread of the goods. Size A is good for general stitching, and D is good for heavier work. Size D is commonly used to work buttonholes in heavy material and is sometimes called buttonhole twist. Spools of thread vary greatly in their yardage, and this fact should be considered in comparing prices of different spools.

Emery

A small emery bag is inexpensive and will be found useful in removing rust or roughness from needles. When the hands perspire, the needle becomes sticky and is pushed thru the material with difficulty. Running the needle thru the emery bag relieves this condition.

Tracing Wheel

A tracing wheel can be used to mark construction and decoration lines on materials which will hold the mark of the wheel. It cannot be used on loosely-woven materials or on most woolen cloth, because the marks will not show. Moderately sharp points are necessary in a wheel, since points that are too sharp will cut some materials, and points which are too dull will not mark clearly. Bent points will pull or tear threads of the material.

Measuring Gage

Quick and accurate measuring is made possible by the use of a measuring gage. Gages can be made from lightweight cardboard or from heavy paper. Fig. 46 shows how a cardboard gage should
be cut. To save confusion, a gage should contain only two or three marks. Metal gages can be purchased which have a movable point that can be set at any desired place.

**SEWING ROOM EQUIPMENT**

Altho many club members will have to begin sewing without ideal conditions and equipment, a sewing room should be provided with suitable equipment whenever it is possible.

**Sewing Machine**

Two types of sewing machines are in general use—the automatic, or single-thread; and the lockstitch, or two-thread. The single-thread machine makes a chain stitch and requires about a half more thread than the double-thread machine. This chain stitch can be made very fine and is excellent for thin cotton and linen materials. The ends of the thread must always be fastened, in order to prevent the stitches from ripping. Because of the difference between the right and wrong sides of the stitch made by the chain stitch machine, the stitching must always be done with the right side of the garment uppermost. The two-thread machine makes a lockstitch and has a greater variety of uses because more attachments can be used with it and because stitching may be done on either side of the garment.

The threading, operating, and oiling of the machine, as well as the use of the attachments, are all described in the instruction book which accompanies the machine.

**Cutting Table**

The cutting table should be high enough so that the worker will not have to bend over when pinning or cutting. A smooth, unfinished top made of some soft wood is desirable because it is much easier to use the tracing wheel on soft than on hard wood. In some sewing rooms the cutting table is made in the form of a shelf which can be raised for cutting garments and lowered when the work is completed.

**Sewing Table**

A sewing table should be a comfortable height for a person seated on an ordinary chair. This table also should have an unfinished, soft wood top. If it is impossible to have both a cutting and a sewing table, the cutting table may be used for sewing purposes if a high stool is used that will bring the worker to a suitable height for the table. A stool with a back is more comfortable.
Ironing Board

An ironing board should be stable and well covered. The most stable boards are those which are attached at one end to the wall or those which are on an iron standard. The padding on the board should be thick and smooth. Cotton padding may be used, but a woolen pad is better because of its greater elasticity. The outer covering should be so attached as to be easily removed and cleaned. Covers made with tapes for tying under the board are satisfactory, and some of the patent fasteners on the market are easily adjusted.

A sleeve board and a seam board make careful pressing possible on many parts of a garment where the use of an ordinary ironing board is unsatisfactory.

Iron

Electric, gas, and gasoline irons maintain a continuous heat and should be used in preference to the ordinary flatiron whenever possible. To keep the connecting cord of a gas or electric iron free from the garment, a pliable spring may be tied to the chandelier or any convenient high place and the cord fastened to the spring with a tape.

Any iron should be kept clean and free from rust, starch, and roughness. A small amount of starch can be removed by running the hot iron over a piece of covered wax. If a large amount of starch has collected, the iron must be cooled and the starch scoured off with some fine scouring powder. A knife should not be used to remove starch as there is danger of scratching the iron. To prevent rusting during cooling, allow the iron to cool standing on end in some airy place. When not in use, the iron should be stored in a dry place and should be well covered in order to protect it from dust and dirt.

Yardstick

A yardstick is convenient for hanging skirts and as a guide for chalking long lines.

Dress Form

A good dress form is a great aid in dressmaking and will many times repay its cost. There are three general kinds of dress forms on the market: (1) papier mâché forms which come in all sizes; (2) papier mâché forms which can be adjusted to different sizes; (3) forms made of gummed paper strips which are put together directly on the
person. Each of these kinds has some disadvantages, but any of them will make it possible to fit and hang garments easily and quickly.

Storage Space
A chest of drawers is a valuable addition to any sewing room if system and order is maintained in using it. Separate spaces should be reserved for used patterns, left-over pieces, supplies, and incomplete work.

If no such space can be had, a good-sized box will serve to keep unfinished work clean. A box is also a good thing in which to carry work to and from club meetings, since it will hold both the garments and the box containing the small equipment.

Skirt Hanger
There are many simple and inexpensive skirt hangers on the market. In the absence of a special skirt hanger, a yardstick or a dressmaker’s square may be used to hang skirts.

CLOTH
Cloth is made by weaving on a loom, or by knitting on a knitting machine, or by felting. *Woven cloth* is made by interlacing two or more sets of yarn or thread. The warp threads run lengthwise of the material and are put into the loom first. The woof or filling threads run across the goods, over and under the warp, and, passing around the outer warp thread on each side of the loom, form the selvage. *Knitted cloth* is made by interlocking loops made from one continuous thread or yarn. *Felt* is made by exerting pressure upon masses of warm, moist wool fibers.

Warp threads are usually stronger than woof threads, for they must withstand the strain put upon them in the process of weaving. Garments made with the warp threads lengthwise will hang in prettier folds and will not stretch as much as those in which the woof threads run lengthwise. Ruffles hang more gracefully if cut crosswise of the material, because the woof threads crease more easily than the warp threads. For the same reason, sharper creases may be made in tucks and plaits if they are made lengthwise of the cloth.

Cotton, linen, silk, and wool are the four principal fibers used in the production of cloth. *Artificial silk* has increased in importance as a textile fiber during the last few years; baronet satin, embroidery flosses, tricollette, and many other knitted materials are made from artificial silk.
DIRECTIONS FOR USING THE SEWING MACHINE
FUNDAMENTAL FACTORS FOR GOOD MACHINE SEWING

1. Thread: The thread should vary in fineness with the fineness of the material. The same size of thread should be used on the bobbin as on the spool.

2. Needle: The needle should be just large enough to carry the thread. The point of the needle must be sharp and the needle must be set correctly. A blunt needle will pull threads of the goods, and if the needle is set incorrectly the thread will break constantly.

3. Stitch: The length of the stitch should be in harmony with the thread and the material. Heavy thread and material demand a longer stitch than fine thread and material. The length of the stitch is regulated by a screw or lever (see machine instruction book).

4. Tension: If the tension is perfect, the bobbin and the spool threads lock in the center of the thickness of the cloth and the cloth will not be puckered by the stitching. The tension is influenced by the size of needle and thread, the threading of the machine, the adjustment of the tension screws, and the character of the material. A needle that is too large for the thread allows the thread to slide thru the hole made by the needle, so that the locking shows on the upper or on the under side of the cloth. Incorrect threading of either the spool or the bobbin thread causes loose tension.

If the sizes of the needle and thread are correct, and the threading is done correctly, and still further adjustment of the tension is necessary, it may be made by turning the tension screw. If the bobbin thread is drawn to the upper side of the cloth as it lies in the machine, the tension is too tight; if the spool thread is drawn to the lower side, the tension is too loose. To correct these faults the tension screw is turned to the left to loosen the tension or to the right to tighten it. The weight and the weave of the material determine the tension that should be used. The tension should never be so tight that the stitching draws the material.

EXERCISES IN OPERATING A SEWING MACHINE

1. Have the machine belted but unthreaded and the bobbin out. Place the feet on the treadle. Turn the balance wheel with
the right hand (in the direction given in the machine instruction book) until the treadle begins to move, and continue the treadle motion with the feet. Practice treadling, and starting and stopping, until it can be done easily and smoothly. In stopping, always have the "take-up lever" at the highest point so that the work may be easily removed from the machine.

2. Practice stitching on a piece of paper or cloth with the machine unthreaded. As a guide for straight stitching, lined paper may be used at first, but later plain paper or material should be used. The sides of the presser foot may also be used as guides.

3. Practice turning a corner. Stop the machine when the needle is at its lowest point. Raise the presser foot and turn the work, using the needle as a pivot. Lower the presser foot and continue stitching.

4. Learn to thread and to place and remove the bobbin. Practice threading the machine until each step in the process is perfectly clear.

5. Before beginning to stitch, see that the bobbin and the spool threads are in the proper position, which means that the bobbin thread must come thru the throat of the machine to the upper side and that both the bobbin and spool threads are pulled toward the back of the machine, under the presser foot. To bring the bobbin thread to the upper side of the machine, hold the spool thread in the left hand and turn the wheel with the right, forming one stitch. Pull the spool thread and draw the bobbin thread thru the throat in a loop.

With the threads drawn toward the back of the machine, place the work in position, lower the presser foot and stitch, continuing to practice until straight stitching lines can be made.

6. To remove work from the machine, have the needle and the "take-up lever" at the highest points; raise the presser foot and draw the material toward the back. Cut the threads with the thread cutter, which is on the presser-foot bar, or with scissors. When there is any danger of the stitches ripping, draw the ends of the threads to the wrong side and tie them.

PRACTICE PROBLEM FOR STITCHING

A holder is a good practice problem for machine stitching. Use one oblong piece of wool or cotton cloth 7x13 inches, and a piece of
soft material 6x12 inches for the inside. Place the smaller piece on the wrong side of the larger, with the centers matching. Fold the edges of the larger piece over the smaller and baste; then bring the two short ends together and baste. Stitch close to the outer edge around the four sides. Using the presser foot as a gage, continue stitching inward in rows until the center is reached. A loop of tape may be placed between the ends of the holder before stitching, or a ring may be sewed on the outside for a hanger.

**GENERAL DIRECTIONS FOR HAND SEWING**

1. Always have clean hands.  
2. Sit comfortably erect.  
3. Hold the work at a comfortable height to avoid bending.  
4. Allow the light to fall over the left shoulder, from the rear. To have the sunlight fall directly upon the work or to work in a dim light is hard on the eyes.  
5. When sewing by hand, use a thread from 18 to 27 inches long. If longer, the thread is likely to become twisted and knotted; besides much time is wasted in pulling a long thread thru the material. The length of the thread may be measured from shoulder to shoulder or from the fingers to the shoulder.  
6. Begin temporary stitches with a knot in the thread. For permanent stitches a knot is used only where it will not be seen or cause a shiny spot when the garment is pressed. To make a be-
gaining knot, wind the thread once and a half around the forefinger. With the thumb, roll the thread toward the end of the finger twisting the end, at the same time, into the loop. With the thumbnail draw the knot thus formed to the end of the thread. This may require practice. To begin permanent stitches when the beginning is visible or where for other reasons a knot should not be used, take two stitches, one over the other, from left to right, when the line of stitching is to be from right to left, and vice versa when the stitching is to be from left to right.

7. Fasten temporary stitches with two or three short stitches above the last stitch made. (See Fig. 5.) To fasten permanent stitches, bring the thread to the wrong side of the work and take two small stitches one over the other, placing the needle thru the loop of the last stitch, before it is drawn tight. This makes a finishing knot. (See Fig. 4.)

**STITCHES**

**TEMPORARY STITCHES**

Basting stitches are temporary stitches used to hold together two or more pieces of material until permanent stitches are made. Carefully placed basting threads may be used as guides for permanent stitching. To remove basting, loosen the fastenings, cut the threads in a few places, and pull them out.

**Regular or Even Basting**

Regular, or even, basting is used when careful basting is required. The stitches and the spaces between the stitches are about ¼ inch long. (See Fig. 5.)

**Irregular or Uneven Basting**

Irregular, or uneven, basting is more quickly made than regular basting and is used in joinings where there is little danger of the material slipping. It consists of a long stitch on the upper side and a short stitch on the under side. (See Fig. 5.)

Another form of irregular basting, which is stronger than the stitch just described, consists of a long stitch on the upper side followed by two or more short stitches. This is sometimes called tailor basting.
Side or Diagonal Basting

Side, or diagonal, basting is used especially to hold large pieces together, such as linings to parts of garments. This basting consists of a short, vertical stitch on the under side and a long, slanting stitch on the upper side.

PERMANENT STITCHES

Plain Stitches

Running Stitch: The running stitch is used for gathering, tucking, and seams where little strength is required. It is sometimes used in basting, as in sewing the gathered portion of a sleeve into the armhole.

In the running stitch, the stitches and the spaces are very small and of the same length. The ordinary length of a running stitch is about $\frac{3}{16}$ inch, the exact length depending on the kind of material used.

To make a running stitch, hold the material between the thumb and forefinger of the left hand. Insert the needle with the right hand, the thumb on the upper side of the cloth and at the point of the needle, the first finger on the under side of the cloth close to the point of the needle, and the thimble at the eye of the needle. (See Fig. 7.) Form the stitch by moving the right wrist quickly backward and forward, at the same time pushing the needle with even pressure thru the cloth. Allow the thumb and first finger to move with the cloth away from the point of the needle until they approach the eye. Then place them again at the point of the needle to push the next stitches back on the needle. When the needle is filled with stitches, pull it thru the material and again place it in position to receive stitches. End the running stitch on the wrong side with a finishing knot, except when it is used for gathering. When used for gathering, make a beginning knot on each end of the thread.

Hemming Stitch: The hemming stitch is used to hold edges such as the edge of hems, facings, and bindings. The position of the work over the finger and the direction of the needle in making the stitches are equally important factors in good hemming.
Plain Hemming: When the edge is turned down and basted, lay the work over the first finger of the left hand with the edge to be sewed toward the right hand, as illustrated in Fig. 8. Either conceal a small knot under the hem or, pointing the needle upward, draw it thru the edge of the fold and leave a short end of the thread. Then tuck this end under the fold and take one or two stitches to secure the thread. Pointing the needle toward the thumb of the left hand, run it under one thread of the material and thru the edge of the fold, thus forming a small, slanting stitch. Uniformity of slant and size must be maintained. To fasten the thread, run the needle thru the fold of the hem for about \( \frac{1}{2} \) inch to the right, then, taking a small stitch, run the needle again thru the fold to the end of the stitching. When there is a great deal of strain upon the end of the hemming stitch, a finishing knot should be made in the edge of the hem before the needle is run thru the fold.

Garment Hemming: The hemming stitch used for garments is similar to the plain hemming stitch but is less conspicuous. Start in the same manner as for plain hemming. Taking up only one thread of the material, push the needle thru the fold for about
¼ inch before bringing it out of the fold. Leave the thread very loose between the stitches, so as to avoid a pucker or dent where each stitch is taken. In using this stitch for hemming a skirt, make a finishing knot in the edge of the fold every 4 or 5 inches, so that if the heel is caught in the hem only a few inches will rip.

*Overhanding Stitch:* Overhanding is used to join together finished edges of material in an almost invisible seam which is both flat and strong; for example, in sewing selvages together, sewing on laces, or hemming table linen.

Baste together the two edges to be joined. Hold the material between the first finger and the thumb of the left hand, with the edges lying along the first finger. To begin the stitch, draw the needle thru the nearest edge of the cloth, leaving a short end of thread; then put the needle thru both thicknesses of cloth and sew over the end of the thread. Point the needle directly toward the chest in order to give the proper slant to the stitches. Take shallow stitches and do not draw them tight nor crowd them. When a new thread is necessary, bring the short end of the old thread thru the farthest edge and insert a new one as before. Both threads will lie together and will be held down by the next stitches. Finish by sewing back over a few stitches, as illustrated in Fig. 11.
Stitching Stitch: The stitching stitch is used where there is need of strength, as in seams.

Begin the work as for any permanent stitch. Then take a short stitch back on the upper side of the cloth and a stitch twice as long forward on the under side. When the thread comes to the upper side, make a stitch back to meet the one already made and repeat as before. On the upper side the effect is that of a series of short stitches, resembling machine stitching. On the under side the stitches overlap, each one being twice as long as those on the upper side. (Fig. 12.)

Backstitch: The backstitch is used where there is need of a strong stitch which can be made more quickly than the stitching stitch. The backstitch is not quite so strong as the stitching stitch.

Start in the same manner as for the stitching stitch, but make the stitch on the under side three times as long as that on the upper side instead of twice as long. When the thread comes to the upper side, make a stitch back half way to the last stitch, and repeat as before. On the upper side the effect is the same as the running stitch; on the under side the stitches overlap, each one being three times as long as those on the upper side. (Fig. 12.)

Combination Stitch: The combination stitch is stronger than the running stitch, but less strong than the back or stitching stitch. Make one backstitch followed by two or three running stitches, and repeat this combination of stitches.

Overcasting Stitch: Overcasting is used to finish the raw edges of seams, especially in woolen and silk materials. The stitch may be made over one or more thicknesses of material.

Start with a small knot concealed between the edges of the seams, or on the wrong side if a single edge is being over-overcasted. Working from right to left, draw the needle thru the material from the under to the upper side, pointing the needle to the left. The stitches should be about $\frac{1}{8}$ inch deep and $\frac{1}{4}$ inch apart and should lie smooth, without drawing the edge of the cloth. A uniform slant is necessary for a well-made stitch.
Decorative Stitches

Outline Stitch: This stitch is used for outlining shapes in embroidery, and for line decoration.

Hold the work along the first finger of the left hand. Bringing the needle thru at the left end of the line, insert it a short distance ahead on this line and make a short stitch back thru the material. The stitch back is made either slightly above or slightly below the line, but the direction should remain the same throughout the work. The thread should be thrown on the same side of the needle each time a stitch is made. The length of the stitch may vary according to the requirements of the design. For example, when a very substantial line is needed, the outline stitches may be made very close together. This stitch resembles a back stitch turned wrong side up, that is, the lapping effect is on the right side of the material and the short stitches with spaces between are on the wrong side.

Blanket Stitch: The blanket stitch is used for finishing cut edges, as in woolen blankets, flannel articles, or doilies, and for line decoration.

Work from left to right, holding the edge of the cloth downward. To begin the stitch, take two or three running stitches from the edge up into the cloth. Hold the thread under the thumb of the left hand and insert the needle directly above the last running stitch at right angles to the edge or line of decoration, bringing the needle thru the loop. Insert the needle the desired distance away for the next stitch and proceed as before. When a new thread is necessary, end the old one on the wrong side with a knot and begin the new thread as before, inserting the needle thru the loop of the last stitch.

Suggestions for variations of this stitch will be found in Fig. 14. The blanket stitch is often confused with the buttonhole stitch. The purl, or edge, of the stitch will serve to differentiate the two, as the blanket stitch has a single purl and the buttonhole stitch has a double purl.

Catch Stitch: This stitch is used for line decoration or to hold down the unturned edge of a hem or the edges of a seam in flannel.
Work from left to right on two imaginary horizontal lines. Draw the needle thru from the under to the upper side on one of the lines. Make a small stitch on the other line from right to left at the proper distance for the slant desired. On the first line to the right at a similar distance, make another stitch. Continue in this manner, making the stitches the same length and the same distance apart.

*Chain Stitch:* This stitch is used for line decoration.

To begin the stitch, point the needle upward and make a few running stitches. Holding the thread under the left thumb, insert the needle in the same hole thru which it just came and take a short stitch downward pulling the needle thru the loop thus formed. Each loop comes over the loop just formed and holds it down.

*Feather Stitch:* The feather stitch is also used for line decoration; it is a variation of the chain stitch.

Begin the stitch at the top of the line with two or three running stitches upward. Holding the thread under the left thumb, take a short stitch downward on the right of the line, bringing the needle thru the loop. Continuing to hold the thread under the thumb of the left hand, throw the needle to the left of the line and take a short stitch downward on this side thru the loop. Continue working in this manner, first on the right and then on the left side of the line of decoration. This stitch may be varied in the slant used and in the number of stitches made in a group. Either vertical or slightly diagonal stitches are correct and one, two, three, or more stitches may be grouped on each side of the line.

*Lazy Daisy Stitch:* This stitch is used to make leaves and petals of flowers.

Beginning at the center of the flower, draw the needle thru from the under to the upper side and make a single, long chain stitch out from the center. Fasten the end of the chain stitch in position with a small stitch over the end of the loop, bringing the needle up at the center for the next petal.
French Knots: French knots are used to form a line decoration, to make the centers of flowers and for mass decoration.

Draw the needle thru from the under to the upper side at the point where the knot is to be made. Wind the thread around the point of the needle one or more times and insert the needle close to the point where it came thru. Hold the threads on the needle firmly with the left thumb and draw the needle thru to the under side. The knot will be left on the surface of the material.

Basting Stitch: Basting stitches are used for line and mass decoration. They are made in parallel rows either with the stitches directly under one another or with the stitches and spaces alternating. See Fig. 16.

Hemstitching: Hemstitching is used for decoration along hems, or for a line decoration, or for outlining rectangular shapes. Its use is limited to the direction of the warp and woof threads.

Measure the desired space for the hem and draw the threads for the open space. The number of threads to be drawn will be determined by the weight of the material and the width of the hemstitching desired. Baste the hem in place, having the folded edge lie exactly along the lower edge of the drawn space. Place the hem over the first finger of the left hand and insert the needle as for hemming. (Fig. 18.) Place the needle from right to left under four or five threads of the drawn space and pull the needle thru; again pass the needle around these threads, this time bringing it up thru the edge of the hem. Draw the thread tight, and repeat for each stitch. These stitches will draw the threads of the material close together along one side of the open space. Double hemstitching and diagonal hemstitching are variations of plain hemstitching.
Satin Stitch: This stitch is used for solid embroidery, such as petals, leaves, monograms, or geometric shapes. It consists of parallel stitches made close together across a design. If the design is to be padded slightly before embroidering, use some of the thread with which the design is to be worked or ordinary darning cotton. Make a few loose stitches in the center of the design in an opposite direction to the final stitch or make a few chain stitches in the center for padding. The satin stitches should be made close together so that neither the padding nor the cloth will show thru. To start the embroidery, make a few running stitches in the center of the design and bring the needle out on the nearest edge of the design; then insert it on the opposite edge, bringing it up again on the nearest edge. Repeat until the design is filled.

Fig. 18.—Hand in position for hem-stitching

FASTENINGS

HANDMADE BUTTONHOLES

Handmade buttonholes are beautiful when they are carefully made, and may very well be considered a part of the decoration of the garment. To make them successfully, a thorough understanding of the buttonhole stitch and the different steps involved is necessary. Buttonholes should be practiced until satisfactory ones can be made before making any on a garment.

There are two kinds of handmade buttonholes: round-end, which have a fan at one end and a bar at the other; and square-end, which have a bar at each end.

Position

The arrangement of buttonholes should be considered from the point of view of design and use. The size of the buttonholes should be in good relation to the space they occupy. Small buttons are attractive in groups of three, five, or more, while larger buttons
are better placed separately. Buttonholes should be carefully cut so that the centers of each group will be on a straight line. At least \( \frac{1}{4} \) inch should be allowed between the end of a buttonhole and the end of a band. Wherever there is a great deal of strain, as in a petticoat band, the round-end buttonhole should be worked so that the round end will take the strain. Where there is no strain, as in a shirt waist plait, a square-end buttonhole is used, generally in a vertical position.

Size

The size of the buttonhole is determined by the size and the thickness of the button. For a flat button, the buttonhole is cut a very little longer than the diameter of the button. If a spherical button is used, the buttonhole should be about \( 1\frac{1}{4} \) times the diameter.

Size and Length of Thread: A thread sufficiently long to work the entire buttonhole should be used, for it is difficult to join threads neatly. For a buttonhole of average length, a thread 27 inches long will probably be enough. Thread which is about the size of the threads of the material should be used.

Position of Work and Direction of Stitch

The buttonhole is held along the first finger of the left hand. The stitch is usually made from right to left, altho in some cases it is made from left to right. A round-end buttonhole should be started at the end away from the edge of the garment; a square-end buttonhole may be started at either end.

Steps

The five steps in making a buttonhole are: (1) cutting; (2) stranding or out-lining; (3) overcasting; (4) buttonholing; (5) barring.

**ROUND-END BUTTONHOLE**

A round-end buttonhole is used where there is strain upon the end of the buttonhole, as in bands. It is made in either a horizontal or vertical position.

(1) *Cutting*

A buttonhole should be cut along a warp or woof thread, for it is much harder to work on an uneven or bias edge. If it is necessary
to make a buttonhole on the bias, the cut may be stayed by basting a lengthwise strip on the wrong side of the material. When the cut is at right angles to the edge of a garment, the buttonhole scissors may be used. These scissors have a screw which can be set so that buttonholes may be cut exactly the desired size. If the buttonhole is to be parallel to the edge it is better to use ordinary sharp-pointed scissors. A buttonhole can be cut with ordinary scissors in two ways: (1) Insert the scissors at one end of the place for the buttonhole and cut along a thread to the other end; (2) fold the material in the center of the space for the buttonhole and cut in from the fold on a thread, making the cut half the desired length of the buttonhole.

(2) **Stranding or Outlining**

Insert the needle a few threads above the end of the cut which is farthest from the edge of the garment, as shown in Fig. 19, position a, step 2. Leaving about \( \frac{1}{2} \) inch of thread, bring the needle out at b, and make a second stitch from a to b. The width of this stitch determines the finished width of the buttonhole and therefore should be no deeper than is necessary to keep the edges of the buttonhole from raveling. In closely woven materials, this stitch should be three, four, or five threads deep on either side of the cut. Turning the work around, place the needle the same distance below the end of the cut at c, and bring it out at d. Turning the work to its original position, insert the needle at a, and return it at b, thus bringing the needle in position for overcasting.

(3) **Overcasting**

Since buttonholes are usually made thru two or more thicknesses of material, the edges should be overcasted to hold them together and to prevent them from raveling while the work is in progress. Make three overcasting stitches on each side of the buttonhole, bringing them just inside the stranding thread. From the last overcasting stitch bring the needle out at b, in position for buttonholing.

(4) **Buttonholing**

The buttonhole stitches should be the same depth as the stranding stitch. To make the stitch, insert the needle thru end of the
cut at b. Draw the threads from the eye of the needle, from right to left, under the point and pull the needle thru the cloth, bringing the purl to the cut edge of the buttonhole. The purl of this stitch is very strong, and upon examination will be found to contain a knot. Continue these stitches to the opposite end of the buttonhole, leaving one thread of the material between the stitches to prevent crowding the purl. At this end, make a fan of five or seven buttonhole stitches, all the stitches starting from end of cut but spreading outward as the sticks of a fan. Draw the purl of the fan stitches slightly upward, thus forming a round hole. The fan makes a strong end in the buttonhole and also provides a place where the shank of the button can rest. Continue the buttonhole stitches along the other side, back to the first end.

(5) Barring

The first end of the buttonhole is finished with a bar, which consists of three plain stitches the full width of the buttonhole, covered with five blanket stitches. To make the bar, first take the needle to position a, from the last buttonhole stitch. Then make two stitches from a to b, ending with the thread at a. These two stitches, together with the one stitch made in stranding, form the three stitches which are the foundation of the bar. Over these three stitches make five blanket stitches, holding the work so that

Fig. 19.—Steps in making handmade buttonholes: (1) Cutting, (2) outlining, (3) overcasting, (4) buttonholing, (5) round-end buttonhole, fan and bar, (6) square end buttonhole, two bars
the purl will be turned toward the button-
hole, and taking the middle blanket stitch
thru the material. Carry the thread thru
to the wrong side and end it with
a finishing knot.

SQUARE-END BUTTONHOLE

When there is no need for either end of the buttonhole to be
especially strong, a square-end buttonhole is used. These button-
holes are finished with a bar at each end and are usually made in
a vertical position. The outlining, or stranding, is the same as for
round-end buttonholes except that a second stitch is made from c
to d, thus completing the four sides of the rectangle. There is no
change in the method of overcasting. The buttonhole stitch is
made along one side to the end, where a bar is made. Then the
buttonhole stitch is continued to the other end, and another bar
completes the buttonhole. (Fig. 19.)

BOUND BUTTONHOLES

Bound buttonholes are made of material instead of thread, and
they are durable and ornamental as well as useful. They can be
made in any material but are especially good in thick cloth in which
it is difficult for the average person to make good looking handmade
buttonholes. Bound buttonholes can be placed either crosswise or
lengthwise according to the demands of the garment. One-half
inch or more should be allowed between the end of the button-
holes and the edge of the garment. Bound buttonholes are finished
on the wrong side with a facing, which may be a continuation of the
cloth of the garment or a separate piece sewed on for the purpose.

Buttonholes made in loosely woven materials need to be rein-
forced with a strip of some thin, closely woven material, a little
wider than the completed buttonholes. Shrink the reinforcement;
then place it on the wrong side of the material, under the place for
the buttonhole. (1) Mark the width and exact position of the
buttonhole with basting stitches, which should be made thru both
the garment and the reinforcement. (2) Cut the binding piece 2
inches longer than the buttonhole and about 2½ inches wide, and
baste it directly over the buttonhole mark with the right side of
the binding against the right side of the garment. (3) On the mark
for the buttonhole, stitch (with the machine) a perfect rectangle
the length and the width of the desired buttonhole. (4) Cut
Fig. 21.—Bound buttonhole (wrong side of garment): (1) Marking (reinforcing strip basted in place), (2) bias material for binding buttonhole placed on right side, (3) stitching, (4) cutting, (5) drawing material thru to wrong side, (6) binding basted in place, (7) binding trimmed and catch-stitched together for pressing, (8) facing hemmed in place.

along the center of the rectangle to within $\frac{1}{8}$ inch of either end, and from these points, cut directly into each corner. The cut must run exactly to the stitches in the corner but not thru them.
(5) Draw the binding strip thru the cut to the wrong side. Fold the binding evenly over the cut edges on the wrong side and lay the fulness at the ends of the buttonhole in a box plait. (6) Hold this binding permanently in place with stitching made by taking a small stitch on the right side in the crease and a long stitch on the wrong side. The box plaits also should be held in position with several small stitches. Trim off the surplus material to within ¼ or ½ inch of the stitching. (7) Catch-stitch the edges of the buttonhole together and press carefully. (8) Fold and baste the facing of the garment in position and cut it directly over the opening of the buttonhole. Turn in the cut edges and hem them to the binding. Again press the buttonhole.

The nature of the material in which the buttonhole is being made determines whether the cut edges of the seam are turned into the buttonhole or away from the buttonhole when the binding is fastened permanently over them. If the material is firm and reasonably heavy, the edges can be turned away from the buttonhole; otherwise they should be turned into the buttonhole to add strength and body to the binding piece.

**LOOPS**

Thread loops are sometimes used as buttonholes for small buttons on fine material and also to take the place of an eye for a hook. To make the foundation of the loop, make small stitches in the material from 1/8 to ¼ inch apart, or take several 1/8 or ¼ inch stitches thru the material. Both methods are shown in Fig. 23. Blanket-stitch over these threads until the space is filled with stitches.

Cloth or braid loops are used for larger buttons. Insert the ends of the loops in a seam on the edge of the garment or turn the ends of the loops under and fasten them securely to the wrong side of the garment with over-and-over stitches.
Position

To mark the position of a button on a garment, lay the buttonhole over the place where the button is to be fastened and stick a pin or needle thru the buttonhole at the exact place where the center of the button is to rest. If a round-end buttonhole is being used, place the center of the button directly under the fan end of the buttonhole. If a square-end buttonhole is used, place the button under the middle of the buttonhole.

Two-hole Button

1. **Position:** Sew the buttons on the garment so that the holes of the button are parallel with the buttonholes. Then the edges of the buttonhole will not be spread apart by the threads which hold the button.

2. **Method of Sewing:** For sewing on buttons a heavy single thread is preferable, altho a finer double thread can be used. Make a knot in the end of the thread and take a small stitch on the right side of the material, directly under the center of the button. Bring the needle thru to the right side of the button and back again thru the button and the material to the wrong side.

All buttons which do not have a shank must be sewed on so that a thread shank is formed. To make the stitches loose enough to form a shank, run a pin under the first stitch on the top of the button and make all successive stitches over this pin. When sufficient stitches have been made to secure the button, bring the needle out under the button, remove the pin and wind the thread around the loose stitches until the space
between the material and the button is filled, thus completing the shank. Fasten the thread on the wrong side of the garment with a finishing knot. The length of the shank is determined by the thickness of the cloth in which the buttonhole is made. It is sometimes necessary to place something thicker than a pin, such as a match, over the button in order to have the shank long enough to allow the garment to slide under the button without puckering.

**Four-hole Button**

If a four-hole button is used, the stitches may cross at the center of the button or they may lie parallel. An attractive way to sew on a four-hole button is to make the stitches appear like a crow's foot, as shown in Fig. 24. The same directions are followed in sewing on four-hole buttons as are given for two-hole buttons.

**Shank Buttons**

Button shanks should be strong and smooth. A weak shank will pull out easily, and a rough or sharp shank will cut the threads holding the button. The stitches holding the button are made thru the material and the shank. They should not be pulled too tight or the material will be puckered.

**SNAPS**

An understanding of the numbering of snaps is an aid in buying them. Since each manufacturer has his own system of numbering, no generalization can be given which will apply to all cases. Some makers use small numbers for the large sizes, running to the higher numbers for the finer sizes, and others reverse that order. Many companies print the range of sizes on the card which holds the snaps. This information, together with the trade name of the snap, is necessary to be sure of securing the size desired when ordering by number. Use buttonhole twist or strong thread in sewing on snaps and make several over-and-over stitches in each hole, running the needle under the snaps from one hole to the next. Fasten the thread on the wrong side of the garment with a finishing knot.

**HOOKS AND EYES**

In general, hooks are of two kinds—those which have a hump to prevent the eye from slipping out easily, and those which do not have a hump. Both metal and thread eyes are used with hooks.
The thread eyes have been described under *Loops*. The two types of metal eyes are round eyes and long, or peet, eyes. *Peet eyes* are used when the round eye might be too conspicuous and when one edge of the part to be fastened may overlap the other. *Round eyes* can be used in almost any place but are most frequently used where the two edges being fastened should just meet without lapping, as on the ends of inside belts and the edges of some linings. When round eyes are used on edges that just meet, they are extended beyond the edge $\frac{1}{8}$ inch and the hooks are receded $\frac{1}{8}$ inch.

Use buttonhole twist or coarse, strong thread for sewing on hooks and eyes. Fasten hooks with five or more stitches in each of the round ends and make the same number of stitches under the hook ends. Make five or more stitches in each round end of the peet eyes. Fasten the ends of the round eyes with five or more stitches each and take the same number of stitches on either side, just next to the round ends to keep the eye from lifting upward. In every case the thread should be fastened on the under side of the garment with a finishing knot.

**SEAMS**

**PLAIN SEAMS**

Plain seams are used where the selvage forms the edges of the seam, or when some finish will be used to keep the cut edges from raveling, or where no finishing of the cut edges will be necessary. Plain seams are used in the construction of garments and articles of all kinds. Lay the two right sides of the material together with the sewing lines even; pin at right angles to the seam and baste. Stitch close to the basting, using machine or hand stitching. Clip
and remove the bastings threads. Finish the edges if necessary and press them open flat or both to one side.

Finishes for Plain Seams

If there is any possibility of the edges fraying, they should be finished with one of the following methods:

1. Overcasting the edges singly or together. (Fig. 28.)
2. Binding with straight or bias binding, singly or together. (Fig. 29.)
3. Pinking the edges by hand or machine if the material will not ravel. (Fig. 30.)
4. Folding the edge of the seam over and stitching close to the fold. The edge should be folded so that when the seam is pressed open the raw edge will lie next to the garment. (Fig. 31.)
5. Folding the two edges of the seam toward each other and overhanding the the folded edges. This method is used only in thin materials and is sometimes called a false French seam.

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**FRENCH SEAMS**

French seams are small, neat, and strong, and no stitching shows from the right side of the article. They are practical for thin materi-
ial such as is used in corset covers, waists, nightgowns, petticoats, and lingerie dresses. A French seam has been described as a seam within a seam.

Place the two wrong sides of the material together and baste on the seam line. Stitch \( \frac{1}{8} \) inch *outside* this basting. Remove the basting, trim the edges to a little less than \( \frac{1}{8} \) inch from the stitching and crease both edges to one side. Turn the material so that the two right sides are together, creasing the edge directly on the line of stitching. Baste \( \frac{1}{8} \) inch from the edge and stitch close to the basting. Remove the basting and press the seam.

A French seam should be even throughout its length, seldom more than \( \frac{1}{8} \) inch wide when finished, and should show no ravelings along the seam on the right side.

**FELL SEAMS**

Fell seams are strong, flat seams which show one or two stitchings on the right side of the material, depending upon whether the finished seam is on the right or wrong side of the article. Fell seams are especially good for garments of the type of tailored waists, bloomers, petticoats, and sport clothes.

**Stitched Fell**

Decide whether the finished seam is to be on the right or the wrong side of the material and place the two right or wrong sides together accordingly. Baste on the seam line and stitch close to the basting, taking care to have the upper side of the stitch on the upper side of the seam. Cut off the under edge to within \( \frac{3}{16} \) inch of the stitching.
Crease both edges flat in the direction the seam is to be turned. Fold the upper edge over the lower, baste to the material and stitch very close to the folded edge. Remove bastings and press the seam. A stitched fell seam should be approximately \( \frac{1}{4} \) inch wide when finished and of even width throughout its length.

**Hemmed Fell**

Hemmed fells are sometimes used in undergarments. They are made on the wrong side of the garment. Place the right sides of the pieces together and proceed as for the stitched fell seams, but use the hemming stitch instead of the second machine stitching.

**HEMS**

A hem is a finish for an edge made by turning it one or more times to the right or wrong side of the material and fastening the loose edge with some stitch. For quick, accurate work a measuring gage should be used (see Fig. 46). The pinning of the final width of a hem is an important factor in the success of the finished work. The following method is one way to secure the desired results: If the hem is in a single piece, as in the bottom of a curtain, place the first pins in the extreme ends of the hem. Next place pins in the center, quarters and eighths, always inserting the pins at right angles to the edge. If the hem is in an article composed of more than one piece, consider each piece as a unit and follow the same method of pinning as for the single piece. If there is fulness to be held in, this method will insure its even distribution.

**PLAIN HEM**

In thin material, a plain hem is composed of two folds to the right or wrong side of the article, the first fold from \( \frac{1}{8} \) to \( \frac{1}{4} \) inch and the second fold any desired width. When the hem is made in places where the stitching should be nearly invisible, use the garment hemming stitch. In other places, secure the edge of the hem with the plain hemming stitch, machine stitching, or a decorative stitch.

In medium-weight material, the first fold of the hem is sometimes stitched close to the edge to hold it flat, before it is hemmed to the garment. Many materials are so heavy that the first turning of the hem is omitted. If the raw edge of this hem will ravel, finish it with a binding or a narrow facing of some thin material and hold the edge in position with the garment hemming stitch. If the raw edge will not ravel, pink it and catch-stitch the pinked edge to the garment.
SHAPED HEMS

The upper edge of a hem may be cut in scallops, points, rectangles, or in any other shape. In undergarments, these shaped edges are usually finished with a simple decorative stitch. In outer garments, bindings, pipings, cordings, and stitching are frequently used as a finish for the edge. Shaped hems may be turned to the right or to the wrong side.

The lower edge of a hem may also be shaped, in which case the under side is applied as a facing.

FRENCH HEMS

A French hem is a narrow edge finish, resembling a French seam on the wrong side of the material, and showing no stitching on the right side.

This finish is especially good for circular or straight edges around the neck and armholes of undergarments.

Fold a very narrow hem on the right side of the garment. Turn the entire hem back to the wrong side, creasing the garment even with the first fold of the hem. Baste the hem in this position and overhand the folded edges together. If lace is to be sewed on the edge, place it on the right side of the garment with the edge even with the folded edges. One basting and overhanding will be sufficient to hold both the hem and the lace.

NAPERY HEMS

Napery hems are most satisfactory for tablecloths and napkins. Fold the hem of any desired width to the wrong side of the article. Turn the entire hem back to the right side, creasing the material even with first fold of the hem. Baste the hem in this position and overhand the folded edges. Remove the basting and press the hem flat. If the overhanding stitches are shallow and are pointed in the proper direction (see page 17), very small, straight stitches will show slightly on the right side of the article. When the article is
laundered, these stitches will entirely sink in between the threads of the goods and become invisible.

**ROLLED HEMS**

Rolled hems are used when a very narrow, inconspicuous finish is desired, as on collars, hankerchiefs, and some ruffles. To make a rolled hem, the fingers should be clean and slightly moist. Start at the right end of the cloth and roll the edge between the thumb and first finger of the left hand, making the roll small and tight. Roll the material for about one inch in advance of the needle. To begin the stitch, insert the needle under the roll and pull thru all but 1/2 inch of thread, which should be tucked under the roll. Make the stitches by inserting the needle in a slanting position either over or under the roll. For the usual rolled hem, the stitches should be from 1/16 to 1/8 inch apart. Greater care must be exercised in rolling a bias edge than a straight edge because the bias edge stretches easily. It is sometimes necessary in hemming a bias edge to draw the stitches a little tight in order to have the edge retain the original shape.

A rolled hem may be used to finish and gather the top of a ruffle for a dainty garment. To do this, roll about one inch of the top of the ruffle, place the stitches as for any rolled edge and then draw the thread until the ruffle has the desired fulness. Proceed in this way until the entire ruffle is finished. Attach the rolled top of the ruffle to the garment with the overhanding stitch.

**BIASES**

Any edge or fold of material which does not follow a warp or woof thread is said to be on the bias. Bias edges are classed as either true or garment biases, depending upon the angle at which they
cross the warp and woof threads. A true bias is one which is on the diagonal of any square which might be drawn on a warp or woof thread. Any other bias piece is called a garment bias. Among the many uses for bias pieces are bindings, facings, pipings, and decorations. Care must be used in working with any bias edge to keep it from stretching when stretching is not desirable.

**CHARACTERISTICS OF BIASES**

Bias edges or pieces may be stretched easily, thus becoming longer and narrower, or they may be held in to occupy a shorter space without showing any fulness, in which case they also become wider. These characteristics make bias pieces especially good for finishing circular edges. Garment biases will not stretch as much as true biases, nor can they be held in as successfully.

**True Biases**

**CUTTING OF BIASES**

Fold the piece of material so that the warp threads lie parallel to the woof threads. Press slightly the fold thus made, in order to mark a crease for cutting. Open the material and cut on the crease. Cut the strips along this bias edge, using some measure to secure uniform width. The bias cutting gage which comes with every set of machine attachments is good for cutting narrow bias pieces. A marking gage may be used for wider strips, or a chalked line may be followed on firm material. Another help in cutting pieces of even width is to cut a few inches of the strip and turn it back on the cloth to act as a guide, repeating this process until the end is reached. The ends of the strips should be cut along warp or woof threads.

**Garment Biases**

When there is not enough material to cut a true bias, a garment bias may be used, altho it is not so satisfactory for a circular-edge finish as a true bias. Fold the material so as to have a strip which is as nearly a true bias as possible. Measure and cut as described above.

![Bias strips: (1) Material folded on true bias, (2) bias pieces in position for joining, (3) bias pieces joined, (4) seam pressed open, (5) seam trimmed](image)
JOINING OF BIASES

In joining biases, hold the pieces, one in each hand, so that the high points are toward the inside as shown in Fig. 37. Move the hands so these points approach and pass each other, bringing the ends of the pieces together. The points must extend the depth of the seam beyond the pieces if the edges of the finished strip are to be even. Baste and stitch parallel with the ends, from one point of intersection to the other. Trim the points and surplus material from the seam, crease it open and press. Match carefully materials which have a definite right and wrong side or any design.

FACINGS

A facing is a piece of material so attached to an edge that it shows only from one side of the article. Facings may be straight, bias, or shaped. They are used in many ways—as edge finishes, false hems, decorations, etc. A facing is cut once the finished width plus two seam allowances.

BIAS FACINGS

After a bias facing of sufficient length has been cut, place it on the right or wrong side of the garment, depending upon whether the finished facing is to be on the right or the wrong side. Baste a \( \frac{1}{4} \)-inch seam, keeping the edges together and holding the bias piece (1) even with the garment on straight edges, (2) a little full on concave curves, and (3) a little taut on convex curves. Stitch close to the bastings thread. Remove bastings and crease the seam toward the garment. Turn the facing to the other side, creasing exactly on the stitching, and baste close to the folded edge. Turn in the outer edge enough to make the facing the same width thruout its
length; baste close to this fold and fasten the edge with some permanent stitch. On a concave curve, the second fold of the facing may require a little stretching to make the facing lie smooth and on a convex curve it may need to be held in a little.

Sometimes it is not desirable to have the stitching which holds the facing to the garment show, as in a facing on a loose armhole. In this case the loose edge of the facing may be folded once and stitched and the stitched edge tacked to the garment occasionally. In material that will not ravel, the edge is sometimes pinked and tacked loosely to the garment.

**STRAIGHT FACINGS**

Straight facings are suitable for straight edges or for garment-bias edges. A straight facing will help to prevent the stretching of a garment bias. The most frequent use is for plackets and other openings. Cut the facing lengthwise and attach it in the same manner as a bias facing.

**SHAPED FACINGS**

Often it is desirable to have the threads in a facing exactly match the threads of the part to be faced. In this case, lay the pattern or the garment on a piece of material and cut the facing the same shape and on the same thread as the part to be faced (see Fig. 65).

Both edges of this facing may be plain or the outer edge may be cut in any shape desired. A shaped facing is attached by the same method as a bias facing, especial care being given to matching the threads.

**BINDINGS**

A binding is a piece of material attached to an edge in such a way that when finished it shows from both sides of the article. Bindings may be either bias or straight and are used for edge finishes and decorative purposes. If the second stitching of a binding is to be made by hand, the binding should be placed on the right side of the material and turned to the wrong side for finishing. If the second stitching is to be done by machine, the binding should be placed on the wrong side of the material and turned to the right side for finishing. A binding is cut twice the finished width plus two seam allowances.

**BIAS BINDINGS**

Bias bindings are cut and joined in the same manner as any bias piece. They can be used on any edge but they are especially useful in binding circular edges. The rule for holding bias bindings on curves is the opposite of the rule for holding facings on curves;
bindings should be held a little full on convex curves and a little taut on concave curves. On straight edges, hold the binding just even with the edge. In binding a square corner, allow plenty of binding so that the corner will not be drawn out of shape.

Place the binding with the right side to the right side of the garment, and baste a seam the desired distance from the edge. Stitch close to the bastings. Crease the seam out on the binding. Turn in the outer edge and fold the binding over so that the second fold comes directly on the first stitching. Baste this fold and secure it with some stitch, usually the hemming stitch.

Sometimes the material is so thick that the second fold of the binding should be omitted. In this case, finish the outer edge of the bias piece with a binding of thin material or by pinking before attaching it to the garment. Fasten the binding in place over the edge, with machine or hand stitching made from the right side, in the crease made by the first seam, or with stitching made from the wrong side which does not come thru to the right side.

**STRAIGHT BINDINGS**

Straight bindings are most frequently used for plackets and to finish seam edges. A straight binding is also useful as a stay to prevent a garment-bias seam from stretching.

Cut the material lengthwise; place and attach according to the directions given under *Bindings*. Sometimes straight silk or cotton seam binding is used. This has finished edges and is folded in the middle lengthwise and sewed over the cut edge with the running or machine stitch.

**PLACKETS**

Any opening in a garment which enables one to slip on fitted parts easily is called a placket; for example, the openings above cuffs and below skirt bands. There are many types of plackets, each being finished in a different way and adapted to a particular type of garment.

**HEMMED PLACKETS**

Hemmed plackets are used in garments in which there is fulness, such as full petticoats, slips, and children's dresses. These plackets are easily made and do not necessitate the attaching of an extra piece of material.

If the opening is not a continuation of a seam, cut a slit the desired length, from 10 to 12 inches being the usual placket length in skirts for adults. On the left side of the cut, make a narrow hem measuring \( \frac{3}{8} \) to \( \frac{1}{4} \) inch at the top of the placket and running to
nothing at the bottom of the placket. On the right side of the cut, make a wider hem—\(\frac{1}{2}\) to \(\frac{3}{4}\) inch wide—and uniform throughout its length. Crease the wide hem crosswise at the bottom of the placket to make a guide for stitching. Fold the right side over the left side the width of the wider hem, thus forming a plait at the bottom of the placket. Baste the bottom of the placket in this position and stitch on the crosswise crease. Draw the ends of the stitching threads to the wrong side and tie them.

CONTINUOUS PLACKETS

Continuous plackets are finished with straight or bias bindings and are usually used for openings in fine material. No stitching shows on the right side of the garment when this placket is used. The binding is usually cut lengthwise of the material; sometimes, however, if the finished placket is narrow, as in a short, inconspicuous placket in the sleeve of a fine waist, the piece may be bias. The binding for a continuous placket should be a little longer than twice the length of the placket, and the width of the piece should be twice the desired width of the finished placket plus two seam allowances. The usual finished width of a continuous placket in underwear is from \(\frac{5}{8}\) to \(\frac{3}{4}\) inch. The binding is placed on the right or wrong side of the garment, depending as in other bindings upon whether the second stitching is to be made by hand or by machine.
The method which follows assumes that the placket is to be stitched by machine the first time and hemmed by hand the second time, and that the opening is not a continuation of a seam. Cut a slit in the garment 10 inches long. Place the right side of the binding on the right side of the garment with the edges of the cut and the binding even. Hold the garment uppermost and begin bast- ing a narrow seam with a thread which can be left in permanently. Baste to within one inch of the end of the placket, and then with the same thread stitch by hand to the end, lowering the edge of the garment gradually to the line of stitching so that at the end of the placket a very small amount of the garment is caught in the seam (see Fig. 40). In stitch- ing around the end of the placket be careful not to pucker the gar- ment. Continue the hand stitching one inch from the bottom on the other side, and gradually draw the edge of the garment again to the edge of the piece. Baste to the top of the placket.

Stitch by machine close to the basting to the point where the hand stitching begins, placing the garment side next to the presser foot. Here allow the machine stitching to run off toward the edge, since it is difficult to stitch here by machine and since the hand stitching will hold the placket at this place. Begin the machine stitching again at the basting on the other side and continue to the top.

Remove bastings. Crease the seam flat on to the binding; also crease the binding crosswise at the bottom of the placket. Fold over the outer edge of the binding and pin the folded edge directly on the first stitching, matching carefully the crease at the bottom. Baste and hem by hand. When a band is placed on the garment, the left or underside of the placket is usually extended into the opening and the right or upper side of the placket is folded back under the garment.

If the placket is a continuation of a seam, the binding is placed
on the right side of the garment. The hand stitching at the bottom of the placket may be omitted, if desired. The seam of the garment should be clipped at the bottom of the placket to allow smooth finishing.

**MODIFIED CONTINUOUS PLECKETS**

A modified continuous placket consists of a binding on the left or under side and a facing on the right or upper side. It is used when it is desirable to have as few thicknesses as possible because of the weight of the material.

Follow the directions for the continuous placket thru the directions for the first stitching, usually, however, placing the piece on the right side of the garment. Remove the bastings, crease the seam flat on to the piece on the left side of the placket, and also crease the piece crosswise at the bottom of the placket. Baste the folded edge of the left side in place and stitch as for a continuous placket. Continue the crease made in the middle of the piece to the end of the right side.

Fig. 41.—Continuous placket (wrong side)

Fig. 42.—Modified continuous or faced placket: (1) Extra thickness cut away, (2) placket ready for last stitching (wrong side)
Cut away the material on the right side of the placket to $\frac{1}{4}$ inch of the middle crease and to $\frac{3}{2}$ inch of the bottom crease (see Fig. 42). Turn this facing flat on the garment. Baste close to the fold on the edge of the opening and also baste the folded edge of the piece to the garment. Stitch this last edge by machine or hem by hand. Stitch across the bottom of the facing on the right side of the placket.

**TWO-PIECE PLACKETS**

Two-piece plackets are used when there is not enough material for a modified continuous placket, or when it is desirable to use two kinds of material. A binding, or extension, is made by the piece on the left side and a facing, or lap, by the piece attached to the right side.

Cut these pieces according to the directions for cutting bindings and facings, and about one inch longer than the opening to be finished. Apply them as any bindings or facings are applied and fasten the ends of the pieces together at the bottom of the placket with machine or hand stitching. The ends may be bound, overcasted, or turned in toward each other to keep them from raveling.

**TAILORED PLACKETS**

Plackets in heavy materials are finished in a variety of ways, depending on the kind of material and the nature of the garment. There are two common ways of making plackets in skirts and dresses made from heavy materials: (1) finishing with the two-piece placket described above when the seam of the garment is narrow, and (2) finishing with the seam itself when the seam is wide enough for the purpose. When a seam having a special finish is to be made, such as a tuck seam, the stitching should continue upward on the right side of the placket.

1. When an ordinary seam has been left in the garment, finish the placket as described under *Two-Piece Plackets*. A variation of the general method is sometimes made in the case of very heavy materials and those which will not ravel, as follows: Finish the left side with a piece of material which is just the desired width plus
one seam allowance. Attach it with a plain seam on the left side of the skirt and allow it to extend under the right side. Pink or bind the outer edge. Finish the right side with a facing, but pink or bind the free edge and leave it loose instead of turning it under and stitching it as an ordinary facing. Usually when this method is used it is best to place a piece of seam binding or selvage under the position of the fastenings to act as a reinforcement.

2. Where a wide seam is allowed in the skirt, finish the placket with the seam, the edges of which are bound or pinked. Fold the upper lap back along the seam line as a facing and place a piece of seam binding under the lap near the fold as a reinforcement for fastenings.

- Cut the seam on the side of the extension piece slightly below the placket and almost to the seam stitching in order to allow the piece to extend smoothly under the lap. Finish the outer edge with pinking or binding. Place a piece of seam binding on the under side of this extension also, to act as a reinforcement.

Fig. 44.—Tailored plackets: (1) Placket as applied to wool, (2) placket made with a seam
SPECIAL PLACKETS

Special finishes for plackets are devised to meet special conditions. In thin dresses the narrow selvages may be snapped together. In georgette, tulle, and other dainty materials a line of machine hemstitching may be placed where the placket opening is to be and the hemstitching cut, leaving a picoted edge on either side of the opening.

TRIMMINGS

There is such a variety of ways and means of trimming garments that it will be impossible to do more than mention some of them in this manual. Trimmings vary from season to season as much as, if not more than, color or structural design in dress.

Directions for smocking, beading, braiding, cording, and many other standard trimmings may be found in the various needlework magazines and textbooks on clothing.

LACE

Two or three centuries ago all lace was made by hand, and many beautiful laces were designed and made by lace workers in various countries. Today most of the lace on the market is machine-made. The design and characteristics of the original handmade laces have been imitated as nearly as possible in the machine-made products and the old names are still used to describe them. Some of the names of familiar laces are Valenciennes, filet, cluny, and torchon. It is wise to devote a little time to learning to differentiate between the handmade and machine-made laces, for there are times when the machine-made laces suit the purpose perfectly and there are also times when one desires a handmade or so called “real lace.” The purchaser should be independent of the sales person’s word as to kinds and qualities of lace. Some laces, such as crocheted and tatted laces, are very easily made and make attractive finishes. Lace is made in the form of edging, insertion, and all-over patterns.

Any lace, whether made by hand or by machine, may be good or bad, depending upon the quality and color of the thread and the design of the lace. Slightly cream-colored or slightly grayish laces are better than pure white. Those laces which are of good quality and which have good color and a simple design should be selected. The frequent criticism of tatted lace is that there is seldom a simple flowing design and that the edge of the lace often has too pronounced curves.
Attaching Lace

The overhanding stitch is most commonly used to sew lace to finished edges such as plain, French, or rolled hems. To attach lace to a finished edge, baste or hold the lace slightly full on the right side of the garment and overhand the edges of the garment and lace together.

Lace may be sewed on a raw edge in several ways. One method is called whipping. Prepare the lace and edge for whipping by sewing the edge of the lace on the right side of the article $\frac{3}{16}$ inch from the edge of the material, with a small running stitch. Then on

the wrong side, finish the raw edge with small whipping stitches; always draw the thread from the right-hand side, thus rolling the edge over. To applique lace (literally "put on") use an over-and-over stitch on the edge of the lace and into the material, or some decorative stitch over the edge of the lace and thru the garment. Trim the material off from the under side and either finish the edge with whipping or leave it unfinished.

In sewing lace around curves or corners, allow plenty of lace in order to avoid drawing the material out of shape.

**EMBROIDERY**

Embroidery which is used to decorate a fabric is made either by hand or machine. Handmade embroidery usually consists of one or more of the stitches given under *Decorative Stitches*. So called "solid work" is made with the satin stitch.

Machine-made embroidery is made as an edging, an insertion, or in an all-over design. Edgings are attached with stitched fell seams, French seams, or as facings. An embroidered insertion or beading may be sewed to the garment with a French seam, by overhanding, or by whipping the edges to the garment. An all-over embroidery may be used in the same manner as plain material.
Mitering Embroidery or Lace

When embroidery or lace is attached as an edging or inserted around a corner, there is fulness in the edging that must be disposed of in some way. One way is to miter the corner. To do this, fold under the surplus material left in the corner so that the fold runs diagonally from the inner corner to the outer edge. Make a plain seam along the crease, cut off all but \( \frac{3}{8} \) to \( \frac{1}{4} \) inch of the embroidery or lace, and overcast the edges. A hemmed fell seam may be made here altho this, of course, means that one row of stitching will show on the right side.

If mitering is done in this way, the crease shows a very definite line. To make the mitering less conspicuous, cut around portions of the design so that the line follows the design rather than a straight line from corner to corner, and fasten the edges with the overhanding stitch.

RICKRACK AND STICKEREI BRAID

Rickrack and stickerei braid may be used as edge finishes and decorations. When used to finish an edge, turn the edge of the material to the right or wrong side, twice if it frays or once if it does not. Baste the braid over the fold and stitch twice to hold the edges in place. Rickrack may be incorporated as a part of crocheted lace.

TUCKS

Tucks are folds lifted and sewed in material; they vary in width from less than \( \frac{1}{16} \) inch to several inches. The beauty of tucks depends upon their arrangement as well as upon their size.

Tucks may be distributed evenly or in groups, the groups usually being composed of an uneven number of tucks. Single tucks or groups should be spaced carefully and with reference to the principle of design, following the Greek law of proportion. (Two lines or spaces are more interesting and subtle when the one is between one-half and two-thirds of the other.)

To measure the necessary amount of material to allow for tucks, multiply twice the desired width of the tucks by the desired number of tucks. Use a measuring gage to secure an even width in making tucks. The measuring gage should show the depth of the tucks, the space between the tucks, and the space between groups, if the tucks are arranged in groups. To mark the fold for a tuck, make a series of pin holes in the cloth along the edge of the gage. If the material will not show pin holes, tailors’ chalk can be used to make the marks. When tucks are sewed by hand, use a running stitch,
ending on the wrong side of the garment with a finishing knot. When the tucks are stitched by machine, draw the ends of the thread to the wrong side and tie them.

**BUTTONS AND BUTTONHOLES**

Buttons may be obtained in a great variety of materials and may be used in an endless number of ways for decorative purposes. When buttons are used for decoration only, no shank is necessary. Both handmade buttonholes and bound buttonholes are frequently used as a decoration as well as a method of fastening. For the making of buttonholes, see pages 22-26.

**BANDS, BINDINGS, AND PIPINGS**

Straight and bias bands made of the same or of contrasting material form an effective trimming for garments. Again, much thought should be given to the relation between the width of the bands and the spaces between them. The folded edges of bands may be finished with plain or decorative stitches, hemstitching, or machine stitching.

Bias and straight bindings are among the most important of garment trimmings. These have been discussed on pages 39-40.

A piping is a fold of bias material inserted to show a narrow line of contrasting color or material on a seam, on a line of decoration, or on an edge. Cut the bias pieces twice the finished width plus two narrow seam allowances. Fold the strip in the center lengthwise. Pipings may be inserted between the garment and a facing or lining, in which case no stitching shows along the edge; they may also be inserted under a band or a folded edge and held by the stitching, which will show along the edge of the garment or band.

**HEMSTITCHING**

See page 21 for directions for making hemstitching by hand.
Machine hemstitching and picoting also make attractive finishes and trimmings for garments. In preparing material for hemstitching, mark the line for stitching with an uneven basting stitch, using thread the same color as the material. To make a picoted edge cut thru the middle of the line of hemstitching. To prepare seams for hemstitching, baste them as plain seams and then baste both edges flat to one side.

**RUFFLES**

Ruffles are used as trimming in a variety of places and ways. Both bias and crosswise ruffles are satisfactory, but a bias ruffle hangs in prettier folds. However, it is difficult to finish the lower edge of a bias ruffle without stretching the edge. Ruffles can be made from embroidered or lace edgings, in which case the edge of the ruffle is already finished.

**Cutting**

If ruffles are to be made of material, cut them on crosswise threads or along a bias edge. Cut the average gathered ruffle 1½ times the length of the space it is to occupy. Ruffles may be more or less full than this proportion, however, if it is desirable.

**Seaming and Marking**

Join the pieces of the ruffle with very small French seams, or with overhanded seams. Divide the ruffle into halves, quarters, and eighths, and mark these divisions with thread or pins.

**Finishing the Edges**

*Bottom Finish*: Ruffles can be finished with hems, picoting, rolled edges, lace, and in many other ways.

*Top Finish*: (1) The tops of some ruffles are finished before the ruffle is attached to the garment. They can be hemmed or picoted, or the top can be turned over once before the gathering is done, in which case the top forms a heading above the gathering ¼ inch or more in width. (2) The tops of other ruffles are covered in some way after the ruffle is attached to the garment. The various ways of attaching ruffles are discussed below.

**Gathering** (See also page 36)

Ruffles may be gathered by hand with the running stitch or by machine. In either case the gathering thread should be a little longer than the space which the ruffle is to occupy so that it can be wound around a pin in stroking the gathers. The ruffling attachment if properly adjusted makes attractive ruffles, or a long stitch and a loosened tension may be used, the lower thread being drawn to gather the ruffle. (See page 66 for stroking of gathers.)
Attaching Ruffles

Before attaching a ruffle to a garment, the garment should be divided into halves, quarters, and eighths. The corresponding marks on the ruffle should then be placed to these marks on the garment. This will insure an even distribution of gathers.

Ruffles with Headings: Place the ruffle with marks matching and sew to the garment exactly on the gathering line. Machine stitching or some simple decorative stitch may be used for this purpose.

Ruffles without Headings: (1) A ruffle may be attached in a French or a fell seam, the construction of which has already been described under Seams. The ruffle acts as one part of the seam in either of these seams. (2) A ruffle may be sewed to the edge of the garment by a seam or sewed flat on the garment and the seam covered with a facing or a piece of insertion or braid. (3) A ruffle may be attached under a tuck. To do this, make a crease on the right side of the garment 3/4 inch from the edge where the ruffle is to be sewed. Along this fold, measure and stitch a 1/4-inch tuck. Place the wrong side of the gathered ruffle to the wrong side of the garment, with edges even. Baste and stitch a 1/4-inch seam. Turn this seam up toward the tuck and flatten the tuck down over the seam. Baste and stitch close to the edge of the tuck.

Fig. 47.—Attaching ruffle under a tuck: (1) Tuck stitched on right side of garment, (2) gathered ruffle stitched in place (note position of tuck), (3) tuck in place over ruffle (finished effect similar to a stitched fell)

REPAIRING

Tears and holes in articles may be mended in either of two ways: (1) by weaving in new warp and woof threads where tears or small holes have occurred, which process is called darning; or (2) by covering a hole with a piece of material, which method is called patching. Careful repairing will lengthen the life of a garment considerably, and the sooner the repairing is done after the need is discovered, the less time and effort will be consumed in the process.
Tears should always be darned and small holes may very often be darned. Knitted fabrics such as stockings and underwear are darned, as well as woven cloth. In darning, one or both sets of threads must be replaced. The darning thread should match as nearly as possible the thread of the material.

**Cloth Darning.**

If possible, darn cloth with its own warp or woof threads raveled from some edge or piece. If these threads are not strong enough, use a silk or cotton thread which matches the material as closely as possible. Sometimes it is better to split the thread into parts, using only one strand for the work. Work on the wrong side of the cloth. To form a guide for the darning stitch, mark with a basting thread a line just outside the area to be darned.

Use a small running stitch in darning and have the stitches in each row alternate with those of the preceding row. Leave the threads loose at the end of each row of stitches to allow for the stretching of the material. Hold the edges of the tear flat and smooth by having the stitches go over and under the opposite edges in one row and under and over them in the next row.

Darning is used in repairing the three most common forms of tears—straight, diagonal, and three cornered. A special kind of darning is used for a small hole where ordinary darning would be conspicuous because of the surface of the material. Thin or worn spots, too, can often be darned or reinforced to prevent a hole wearing in the cloth.

1. **Bias or Diagonal Tear:** In a bias cut, both the warp and the woof threads are severed, so both sets of threads must be replaced. As shown in the illustration, the stitch should follow the threads of the cloth. Mark the outline of the repairing as

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Fig. 48.—Cloth darning: (1) Diagonal tear, (2) straight tear, (3) corner tear
before; replace the warp threads and then the woof threads. Be careful not to stretch the bias edge.

2. *Straight Tear:* This tear is usually across only one set of threads, and only those which are torn need be replaced. Outline the space to be darned with a basting stitch, having this space extend \( \frac{1}{4} \) to \( \frac{1}{2} \) inch above and below the cut, to make the repairing strong. Make the running stitch as shown in Fig. 48, paying particular attention to the placing of the stitches on the edge of the cut and to the loops at the end of each row of stitches. Remove the bastin g stitches and press the darned place.

3. *Three-Cornered Tear:* This tear is also called a hedge or an angle tear. Both the warp and the woof threads are severed, sometimes exactly lengthwise and crosswise of the material and sometimes slightly bias. Outline the space to be darned as before. Darn in the warp threads from one end to the corner of the tear and then replace the woof threads in the same manner. In the corner of the tear will be a square darn with the new warp and woof threads interlacing.

4. *Small Hole:* A small hole in any material where the weave shows plainly may be darned as stockings are mended. When the surface of the material hides the weave, as in broadcloth, velvets, and many other materials, the following method is used. Cut the edges of the hole even and fit a piece of the material of exactly the same shape into the hole, matching the nap or design. On the wrong side, darn thru the back of the material, over the edges of the hole and the fitted piece thus holding the piece securely in place.

**Stocking Darning**

Holes in stockings are repaired by darning with soft threads that match the stocking. Darning thread is made from either dull or mercerized cotton and wool, in a variety of colors. Since stockings are knitted, each loop on the edge of the hole should be carefully caught to prevent the starting of runners. Legs of stockings should be darned from the wrong side and feet from the right side, in order that the smoother side of the darn will be on the outside of the leg and

![Fig. 49.—Stocking darning](image)
on the inside of the foot of the stocking. In darning, the hole may be held over or between the fingers or over a stocking darning. Whatever method of holding is used, care must be taken not to stretch the hole.

1. **Worn Places:** When a thin spot shows in the stocking, a few rows of darning will often reinforce the spot so that the hole does not appear. It is much wiser to watch stockings carefully and do this kind of repairing than to wait until the threads break.

2. **Holes:** The stocking should be darned while the hole is still small. A beginner should outline with a basting thread a diamond shape around the space to be darned. Cut off any uneven or rough edges. Start at the right side of the hole and place the lengthwise stitches. The same rule holds true as for cloth darning regarding the edge of the holes; that is, as the stitches approach the hole have them go under one edge of the hole and over the opposite edge, alternating the next row. Leave a loop of thread at the end of each row to allow the stocking to stretch over the foot without tearing the darned place from the stocking. After the lengthwise threads are in position, place the crosswise stitches, interweaving these threads with the ones just placed. Continue until the space is filled. The finished darn should be smooth; the edges of the hole should lie flat, and the hole should be filled with plain weaving of the darning threads.

**PATCHING**

Holes that are too large to be darned are repaired by replacing the portion that is gone with a similar piece of material. There are certain fundamental principles for all patching which must be observed: (1) The worn place around the hole must be cut away so that the hole is made the shape of a square or oblong. (2) The patch should be the same weight and color as the garment. For example, if the hole is in a garment that is worn thin or faded, a piece of similar weight and color should be used for the patch. Some people tack a small piece of the material to the inside of wash dresses when the dress is being made so that every time the dress is washed the extra piece of material is washed also. Thus there is available for patching a piece of material the same color as the dress, when the need for it occurs. (3) Warp and woof threads, plaid or figures of any kind, and nap must be matched.

There are many kinds of patches, but the most common are the hemmed patch and the overhanded patch. The various textbooks on clothing will give many other methods of making these patches than those which follow.
Hemmed or Set-On Patch

The hemmed patch is strong and is used on garments and articles which are often laundered or which are subjected to hard wear. Hence it is commonly used on household linens, undergarments, and house aprons.

Cut away the worn portion of the garment around the hole until a square or rectangle is formed. To do this, start at one side of the hole and cut on a thread until the torn part is cleared; turn at this point and cut on another thread until the torn part is again cleared. Continue cutting in this way until a rectangle is formed. From each corner of the hole clip diagonally outward for $\frac{1}{8}$ to $\frac{3}{16}$ of an inch, and turn the edges of the hole to the wrong side, keeping the fold along a thread of the goods.

Cut the patch large enough to cover the hole easily. Pin and baste the patch on the garment, with the right side of the patch to the wrong side of the garment, matching the threads and the design of the cloth. Hem the edge of the garment to the patch with fine hemming stitches. On the wrong side, trim off the patch to within $\frac{1}{2}$ to $\frac{3}{8}$ inch of the edge of the hole. Turn the edge of the patch under $\frac{1}{8}$ inch to the wrong side of the garment. Baste and hem in position. Remove bastings and press.

Overhanded or Set-In Patch

The overhanded patch is very neat and less conspicuous than a hemmed patch; it is used more often for outer clothing. It is less serviceable, however, for it is joined to the opening with only one seam, and each corner is held by a single stitch. It is seldom used on articles that have to stand constant laundering.

Prepare the hole in the garment by cutting away the worn portion to a square or rectangular shape, always keeping the cut
edge on a thread of the goods as described under hemmed patch. Clip diagonally outward from the corners of the hole $\frac{1}{4}$ inch, and crease the edges to the wrong side, basting them in position if the material will not hold the crease easily.

![Figures 1-4](image)

Fig. 51.—Overhanded or set-in patch: (1) Right side, patch basted in position on wrong side, (2) edges of garment and patch folded for overhanding, (3) right side finished, (4) wrong side finished

Cut a piece of material for a patch large enough to cover the hole easily. Place this patch on the garment, with the right side of the patch to the wrong side of the garment, matching perfectly the thread and design. Baste in position.

Next mark the outline of the hole on the patch. This may be done in several ways. If the material will hold a crease, crease the patch along the four sides of the hole. If the material does not crease easily, use chalk or bastings to mark the size of the hole.

Remove from one side of the hole the bastings which holds the patch and garment together. Fold the garment back to the right side of the material and fold the patch on the marked line to the wrong side of the material. Overhand these two folded edges with small stitches. Continue the overhanding, removing the bastings from one side at a time.
Crease the seam open flat and trim off the patch to within $\frac{1}{4}$ inch of the hole. Clip out the surplus material of the patch at the corners, overcast all the edges, and press.

GARMENT CONSTRUCTION

Various problems of construction which are general in nature have been discussed in the foregoing pages. Each garment presents its own specific group of problems, however, and altho it is not the purpose of this manual to describe the making of specific garments, an attempt will be made to bring together some common information for certain types of garments and to describe some construction processes which have not been previously mentioned.

STANDARDS OF CONSTRUCTION

Design

Every under and outer garment made should be planned according to the principles of design. They should be good in line, mass, color, and texture. The individualities of each person should be studied and the costume planned to fit the need. Undergarments should harmonize in line and texture with the outer garments with which they are to be worn.

Technic

Many costumes which are good in design have been ruined by bad workmanship.

1. Cleanliness: Keep the original freshness and new look in materials while working with them. All light material should be folded in a clean cloth when left for any length of time and should be protected from the worker's dress by an apron. If the hands perspire, they should be washed frequently and dusted lightly with powder.

2. Construction: Each step in construction should be carefully considered in order to be sure that the proper methods of making and finishing have been selected for the particular material and garment. Straight stitching, perfect tensions, mastery of hand sewing, and care in the placing of fastenings are a few of the things which are necessary for success in garment making.

3. Pressing: The necessity for careful pressing in garment construction cannot be overestimated. Most people should press the garment at the completion of each step, so that when the gar-
ment is finished only a slight general pressing will be needed. If all pressing is left until the garment is completed, many places cannot be reached to press them properly.

PATTERNS

Beginners in garment making should depend largely upon patterns for guides in cutting garments. One will very soon accumulate a number of patterns, some of which are practically standard from year to year, such as the plain kimono blouse, the tailored blouse, the two-gored skirt; and the one-piece dress. If these patterns prove satisfactory, other dresses may be designed from them, using the originals as foundations. After sufficient skill is acquired one may make patterns, following some system of drafting. This method requires more time and skill than the average person possesses, however, and the drafting of patterns really belongs in the field of the specialist.

Commercial Patterns

There are many commercial patterns on the market, ranging in price from 15 cents to $2. Some fashion companies publish magazines devoted exclusively to styles, such as the Elite, Royal, and Fashionable Dress. Other magazines, such as Vogue, Harper's Bazaar, Ladies Home Journal, Good Housekeeping, Delineator, Pictorial Review, and Woman's Home Companion, devote sections in their publications to fashions. Other companies reach the public thru newspapers. A more expensive pattern than those mentioned above may be obtained from stores and companies who make a specialty of making a pattern from a person's own measurements.

Any company which issues commercial patterns employs trained designers who drape the new costumes on what they consider an ideal figure. The first pattern is then taken to the pattern makers and different sizes of the pattern are made and reproduced for sale. In each case the original costume is draped on an ideal figure. As a matter of fact, companies differ greatly in what they term the ideal figure. As a result of this difference of opinion, their patterns vary as to the placing of the seams, the length of shoulder lines, the fulness and in many other ways. This information may explain the fact that certain kinds of patterns fit one person better than do others. It is simply because one's own figure is more like one company's model than another's. A good policy is to try various kinds of patterns until the one best suited in line and which requires the least fitting is found, and then to use that make of pattern.
Selection of Pattern and Cloth

In selecting a suitable pattern, it is just as necessary to apply the principles of design to the problem as when actually planning an original garment. Analyze the lines and spaces carefully to see whether they are appropriate to one's height and weight and personality. For most people a conservative style is better than the extreme of fashion.

After considering the garment as a whole, study the picture to see that the details really are as one desires them to be. It is easy to select a pattern and discover too late that it has kimono sleeves when one wants set-in sleeves, or that some other detail is not as one had supposed it to be. Mistakes like this should be avoided because few patterns can be exchanged.

Always purchase the correct size when possible. Patterns may be altered according to the directions which follow, but it saves time not to have to make unnecessary alteration, such as enlarging or making smaller an entire pattern.

On the envelop containing the pattern is printed information regarding the amount of material necessary to make the garment. Study this information carefully. Most patterns show two or three views of the garment, which differ in such details as length of sleeves, shape of collar, over skirts, and panels. Choose the view which represents the garment as it is to be made and then refer to the information given for that particular style. More material of a narrow width is of course required than of a wider width. Be guided by this information in purchasing the material.

Interpretation of Patterns

Remove all pieces from the envelop and compare them with the chart for the purpose of seeing that all the necessary pieces are present and that there are no duplicates. Study the picture and chart and select the pieces of the pattern which are to be used. Place all those which are not wanted back in the envelop. Somewhere on the envelop or chart is a brief description of the appearance and the meaning of all the perforations appearing on the pattern. Read this description and then study the pieces to be used. It will be found that all perforations may be placed in two classes: placing perforations, or those which help in placing the pattern correctly, and making perforations, which will help in constructing the garment. Classify all the perforations in one of these two groups so that the pattern may be placed with no mistakes and the making perforations may be understood.
Testing of Patterns

Some indication of the size and fit of the pattern may be obtained by pinning the pattern together and trying it on. Test the following measurements:

- Fulness in bust and back
- Length of front and back
- Sleeve length, inside and outside measurements
- Waist
- Hip
- Skirt length

Altering of Patterns

1. To Make a Pattern Larger: If a pattern is too small across the bust, the chest, the back, and the length of the shoulder, it must be made larger throughout. Beginning at the center shoulder, cut the front and back of the pattern parallel with the center front and center back. Spread the pieces apart evenly to give the required width.

   To give fulness thru the bust and the waist line without affecting the length of the shoulder, cut on the same line as before almost to the shoulder and spread the pattern the desired distance at the waist line.

   To lengthen a waist pattern, cut the pattern on a line midway between the armseye and the waist line, and place the pieces the necessary distance apart.

   To make a sleeve longer, cut the pattern half-way between the armhole and the wrist and spread; or cut at the middle upper arm and the middle lower arm in order not to alter the elbow. To make the sleeve larger around, cut the pattern from the highest point of the shoulder straight to the wrist and spread.

   To make a skirt longer, cut the pattern just below the hip line. To add width, make the allowance on the straight side of the gore or slash on a line parallel to the straight side of the gore and spread the pieces evenly apart.

   To add fulness to the skirt without affecting the waist measure, slash the pattern on a line parallel with the straight edge to within 4 or 5 inches of the waist and spread the lower edge the desired distance.

2. To Make a Pattern Smaller: In each case make a tuck on the same line as indicated for enlarging the pattern.

Placing of Patterns

Before any individual pieces are pinned on the material for cutting, lay all the pieces of the pattern on the material in order to-
Fig 52.—Alteration of patterns
ascertain where they may be placed to the best advantage. If it is necessary to be economical in cutting, the placing will be more difficult and will require more time than when one has plenty of cloth. When the best plan is decided upon, pin the separate pieces of the pattern for cutting.

The placing perforations indicate the relation of each piece to the warp and woof threads, specifying those pieces which are to be cut on a lengthwise or crosswise fold or that part of each piece which is to be on the straight of the goods, either lengthwise or crosswise. There are, however, other factors besides an understanding of the placing of perforations that must be considered in cutting the material to the best advantage. Some of these points are explained by the cutting charts issued with some patterns, but others are not. The following points are true for all kinds of garments:

(1) When a piece is to be cut with the edge on a fold, move the material so that the fold is just far enough from the edge to allow the pattern to be placed on the goods. If this method is followed, the remaining piece of cloth will be as large as the two pieces that would have been left if the fold had remained in the middle of the material.

(2) The large end of each piece, such as the bottom of a skirt gore or the front of a waist, should be placed toward the end of the material if there is no definite up-and-down to the material.

(3) Wherever possible, cut two similar pieces together, such as two fronts or two sleeves. Often, however, the material will cut to better advantage otherwise. In such case, cut one piece first; then without removing the pattern, turn the first piece and the pattern over on the cloth, placing them so that the two right or two wrong sides of the material are toward each other with the pattern between them. In this way one is assured of a left and a right piece. This method should be used especially when there is a right and a wrong side to the material. A design or a nap with a definite up-and-down further complicates the problem. In placing the second piece in this case be sure not only that the right or wrong sides are together but also that the design runs similarly in both pieces.

(4) For any part of a garment which is to be double, such as cuffs and collars, great care must be used to see that the direction of the warp and woof threads is the same in both pieces. If the direction of the threads is different in the two pieces, it will be difficult to press the double portions and have the pieces lie smooth, since bias or crosswise pieces will stretch more in ironing than will lengthwise pieces.
Cutting and Marking of Material

After pinning the pattern in place, cut each piece carefully, using long, even strokes of the shears on straight edges and short strokes on curves. Greater seam allowance than the pattern calls for is often necessary, especially on shoulder, armhole, and hip seams.

Any making perforation should be transferred to the cloth to help in the construction of the garment. All seam and decorative lines, plaits, notches, and many other marks come under this heading. In addition to the perforations shown on the pattern, center marks and sometimes quarters and eighths should be made in the pieces. The means for transferring the perforations are thread, tailor’s chalk, tracing wheel, scissors, and pencil. Each of these will be discussed separately.

1. *Thread*: Threads are easily placed in material, are sufficiently permanent, and enable one to mark several pieces at once. There is some confusion of terms in sewing, and the name given to one method of marking with thread is an example. Tailor tacking is the name given to threads so arranged as to mark construction or alteration lines, and the same term is also used to designate stitches used to hold belts, panels, and many other parts of garments loosely to the garment. To avoid misunderstanding in this manual tailor tacking type 1 refers to those tacks used to mark perforations, and tailor tacking type 2 refers to those which hold parts of a garment together.

Tailor tacking type 1 is made as follows: Using a rather long double thread, take 2 small stitches in each of the perforations, leaving a loop between the stitches. After removing the pattern, carefully pull the two pieces of cloth slightly apart and clip the thread between the pieces, leaving the cut threads in both pieces. This

![Fig. 53.—Tailor tacking, Type 1](image-url)
type of tacking is used to mark seam lines as well as individual perforations. Take small stitches thru the pattern and the material, leaving long spaces between the stitches. Clip the threads between stitches, remove the pattern, and then separate the material and cut the threads as before. Tailor tacking type 2 is described on pages 82 and 83.

A few running stitches are very good for marking notches and division of parts to be gathered. Basting threads are used for center, quarter, and eighth divisions.

Where there are perforations for several different purposes to be transferred, as in marking the edges of plaits and the edges of the spaces between the plaits, use different colored threads for each purpose.

2. Tailor’s Chalk: This chalk, which comes in white and in many colors, is very useful in marking perforations. It is easily brushed off when the work is finished.

3. Tracing Wheel: Tracing wheels furnish a quick method of transferring marks to materials on which fine perforations will show.

4. Scissors: Scissors should be used very carefully in marking notches. To avoid cutting a notch too large, fold the material at the place where the notch is to be, and cut from the cloth toward the edge. If notches are cut too deep, a larger seam must be made than the pattern has allowed for and this often causes difficulties.

5. Pencil: Pencils should be used with extreme caution. Never use one when there is the slightest possibility of the mark showing on the finished garment.

After transferring the perforations, remove the pattern, fold it carefully and replace it in the envelop.

PREPARATION OF MATERIAL

Shrinking

Many materials should be shrunk before being made into garments. To determine whether or not shrinking is necessary, mark with pins a 4 or 5-inch square on a corner of the cloth. Wet this square and then iron it dry. Re-measure it and compare with the original measure. It is often found that material will shrink ½ inch in width and length in this small square, which means a shrinkage of one inch or more per yard.
There are many methods of shrinking which may be used. One of the most satisfactory is to roll the material to be shrunk in a large wet cloth and leave it there until the moisture thoroughly penetrates it. Then remove the cloth and iron the material until dry. Always iron the material on the wrong side. Another satisfactory method of shrinking is to wet a piece of muslin and lay this over the goods to be shrunk. Iron the muslin with a hot iron so that the steam penetrates the cloth. Then remove the shrinking cloth and iron the material until thoroughly dry.

**Sponging**

Water is apt to spot such materials as crepe de Chine, pussy willow taffeta, satins, velvets, and broadcloth. Before making these materials into garments, it is wise to test them for spotting. Place a drop of water on a corner of the material and see whether a spot shows after the material is dry. Sponging is the name given to the process of treating materials to keep them from spotting with water.

Silks and some woolen cloth can be sponged successfully at home, while broadcloth and some other materials are better sponged by a tailor. Velvets should be steamed for sponging. There are two ways of sponging cloth: (1) Woolen cloth can be sponged in the same way and at the same time that it is being shrunk, by using a wet cloth and a hot iron. (2) Silks should be sponged differently. Wet the silk thoroughly in a bowl of clean water. Lift the material out with the hands, allowing the water to drain off. Do not squeeze or wring the cloth. To dry this material, have one person hold each end of the piece. Shake it until it is almost dry, and then press on the wrong side with a moderate iron until thoroughly dry.

**Straightening**

One or both ends of the material should be straightened by tearing the cloth or by pulling a thread and cutting on the line of the thread.

Materials which have been pressed crooked in manufacturing can be straightened by pulling. This allows the threads to resume their original direction and makes it possible to fold the material lengthwise or crosswise and have it lie flat and smooth.

**UNDERWEAR CONSTRUCTION**

**Seams**

The seams most commonly used in underwear are the French seam and the stitched fell seam. Whenever a strong, flat seam is
desired, the stitched fell seam is used; whenever a seam which does not show on the right side is desired, the French seam is used. Plain seams are seldom used in underwear.

Plackets

The continuous, faced, and hemmed plackets are most common in underwear. Directions for making these are given on pages 40 to 46.

Edge Finishes

There is considerable variety in edge finishes for underwear. Bindings, facings, lace and embroidery edgings, ruffles, decorative stitches, and commercial hemstitching are some common finishes. The French hem is especially good as a finish to which to sew laces in underwear. Directions for all of these will be found in this manual.

Gathering

In gathering parts of a garment, two rows of gathering stitches are preferable altho one is often used. First mark the piece to be gathered, into halves, quarters, and eighths with a few running

![Fig. 54.—Dividing a band and garment for distribution of gathers](image)

stitches at right angles to the edge to be gathered, and also mark the corresponding divisions on the material or band. This will insure the proper distribution of gathers.

In gathering, begin with a knot and make the first row of running stitches about $\frac{1}{4}$ inch from the edge. Have the gathering thread several inches longer than the space to be covered and make a knot in the loose end of the thread to prevent it from pulling out. Make the second line of running stitches $\frac{1}{4}$ inch below the first.

Stroking is necessary to make the gathers lie flat and to make it easy to adjust them. To stroke gathers, draw the material tight upon the gathering string, insert a pin in the cloth, and wind the
thread around the pin. Then, holding the gathered part tightly between the thumb and fingers of the left hand, use the right hand to draw the gathers a few at a time over the first finger of the left hand. With the left hand pinch the gathers as they are drawn. This will make a little crease for each gather, which will make it possible to space the gathers more easily. After stroking, release the thread, arrange the gathers in position, and fasten the gathering string at the desired length with a finishing knot.

**Garment Bands**

Bands are usually cut lengthwise of the material. The length of the piece for the band is 4 inches longer than the waist measure and the width is twice the finished width of the band plus two seam allowances. The 4 inches extra on the length allow for the lapping of the placket and for a surplus to be turned in at both ends for strength. Before attaching, mark the band to correspond with the marks in the gathered part. Mark it first in the center. From the center on both sides measure one-half the waist measure plus \( \frac{1}{2} \) inch, and mark these points. Divide the space between the center and end marks in half and mark these points. Eighths also may be marked if necessary.

The band is placed on the right or wrong side of the garment depending, as in facings and bindings, upon whether one or both stitchings are to be made by machine. If the last stitching is to be made by hand, place the band on the right side of the garment; if by
machine, place the band on the wrong side of the garment. Place the center of each side of the placket at the end marks of the band, and match the halves and quarter marks of skirt and band. About an inch of the band will be left at either end that will later be turned into the band to strengthen the place for the fastenings. Space the gathers evenly and baste the garment and the band together. Stitch a 3/4-inch seam. Turn the seam up on the band and turn in the ends and the other edge of the band. Bring the folded edge over the first stitching and hem the fold by hand or stitch by machine. Overhand or stitch the ends of the band together.

KIMONO NIGHTGOWN

The kimono nightgown is a type of garment which can be successfully cut, even by beginners, without using a pattern. For one gown, purchase twice the length of the gown plus twice the depth of the hem. Thirty-six inch material is the best width for the average girl. Very large girls or women should use 40-inch material or put a piece on each side toward the bottom to give sufficient width if 36-inch or narrower material is used.

Fold the material in half lengthwise and then crosswise. Lay these thicknesses flat on the table and place the following marks and lines on the upper piece. On the selvage edge, measure down from the crosswise fold 7 to 9 inches for the sleeve. Measure in from this point 2 to 5 inches depending on the size of the person. Draw a line with colored tailor's chalk between these points and parallel with the crosswise fold. Place the yardstick from the inside end of this line to the selvage at the bottom of the gown and draw a line. Draw a curve at the intersection of these two lines as shown in Fig. 56. Place a dot 1 inch up from the bottom of the gown on the selvage and draw a curved line from this point to the bottom of the gown at the center fold. Cut on these lines.

The finished neckline is fitted on the person, so at this time cut
a hole just large enough to slip over the head. From the point where the crosswise and the lengthwise folds meet, measure toward the front 3½ inches, toward the back 2½ inches, and toward the side 3 inches. Cut on a curve drawn between these points.

Pin and baste the underarm seams, slip the gown on, and mark one side of the neck with a line of pins in any shape desired. Remove the gown and transfer the markings for the neckline from one side to the other. Finish the gown as any other article of underwear.

CONSTRUCTION OF WAISTS

Preparation for Fitting

Baste as much of the waist together as possible before the first fitting: shoulder and underarm seams, the plaits at the opening of the waist, and the seams of one sleeve. If there is any danger of the neck line stretching out of shape while working with it, baste a tape or straight piece around it to hold it temporarily.

1. **Seams:** French, fell, hemstitched, corded, and plain seams are those most commonly used in waists. Decide upon the type of seam to be used and baste accordingly, so the beginning of the seam is on the right or wrong side of the garment. The shoulder of the back piece is usually from ¼ to ½ inch longer than the shoulder of the front. The extra fulness in the back is allowed because of the shoulder blade. Hold this extra length into the front, stretching the front slightly to fit the back.

2. **Fronts:** When a waist opens in the front, baste a fold along both sides, folding over as much material as will be used in making the finished plait or hem.

Fitting

Try the waist on, pin the fronts together, centers matching, and pin a tape around the waist line, arranging fulness and gathers properly. Fit one side of the waist only unless the person is very unlike on both sides, when it will be necessary to fit both sides.

1. **Waist:** The armhole should receive first attention. Be sure that it is large enough so that it does not draw a wrinkle in either the front or the back of the waist. If it is too tight, make a few short cuts in the edge of the material in the underpart of the armhole, continuing to cut and test for tightness until all is released. Never cut away any of the material; clip into it, but leave the original edge.
Examine the shoulder seam. A normal shoulder line should run from the highest part of the shoulder to the neck, slightly toward the back at the neck. If a drop shoulder is used, be sure the gathers in the fronts, if there are any, are spaced in the center of the distance from armhole to neck.

The underarm seam should come directly under the arm and should allow the proper fulness in the waist at this place. Take this seam in or let it out to regulate the fulness of the waist under the arm.

Place pins around the armhole to mark the proper line for sewing in the sleeve.

Mark the corrected neck line with pins. If the waist is to be attached to a skirt, mark the waist line also with pins.

There are some common faults in garments which are easily remedied. If the neck is too large, make the shoulder seams deeper. If the neck is too tight, make the shoulder seams smaller. If the neck is too high, clip the edges slightly to allow the neck line to drop where it belongs. Remove wrinkles at the shoulder by ripping the shoulder seam and refitting the backs and fronts, always holding the back slightly full on the front. Alter a waist that is too tight or too full across the bust by letting out or taking in the underarm seams.

2. **Sleeves:** Place the basted sleeve on the arm and pin it to the waist at the top of the shoulder, at the underarm, and once in front and in back. Test the sleeve for fulness and length, always bending the arm to judge either.

**Altering**

Mark all alterations with thread, tracing wheel or chalk, marking armholes, both sides of seams, necklines, and any other place where the line is changed. Where two lines of alterations cross each other, be sure that the threads or other marks actually make points of intersection where the lines cross. This will enable one to pin the garment together the second time more accurately.

Remove pins and original bastings. Fold the fronts and backs together and transfer the alteration from one side to the other with tracing wheel, chalk, or tailor tacking type 1.

If the sleeve has been altered, open it and make the other sleeve like it.

**Verifying Fitting**

Baste the waist together on the new lines. Again try it on and criticize the new lines, changing any that need to be changed.
Before finishing the sleeve, be sure that the distance around the top measures at least one inch more than the armhole. If the sleeve is too small, make the sleeve seams smaller, or, if that does not remedy the difficulty, insert a piece in the sleeve seam.

**Finishing**

1. **Seams:** Finish seams according to the directions given under *Seams*. Before attaching sleeves or collars, turn the shoulder and underarm seams toward the front. Sew sleeves in with fell seams or with plain seams which are finished in some way on the wrong side. It is seldom wise to sew a sleeve in an armhole with a French seam because of the difficulty in adjusting the gathers.

2. **Openings:** Front openings are usually finished with hems or with plaits or folds. When there is no right and wrong side to the material, turn the left plait to the wrong side and the right plait to the right side. If the material has a right and a wrong side, finish the right plait as follows: Turn the plait to the wrong side the width of the finished plait. Fold the plait over again the same width and stitch $\frac{1}{4}$ inch or less from the second fold. Open the plait and stitch the outer fold like the first one. When the neckline is round or V-shaped and the collar meets in the center of the plaits, cut the right plait so as to leave an extension point on the upper left side, which can be fastened under the collar.

Back openings may be made similar to front openings, or both the right and the left side may be finished with hems turned to the wrong side.

Side openings along vests are usually hemmed or faced.

Shoulder and armhole openings are faced on the front of the waist and an extension sewed on the back and around the armhole to extend under the front.

Special openings for special cases are described on the patterns.

3. **Collars:** Often by changing the type and shape of the collar, different effects can be obtained with the same waist pattern. There are several kinds of collars for which patterns can easily be made. (1) To design a flat collar, lay the front and the back of the waist pattern together on a piece of paper and outline on the pattern the shape of the desired collar. Trace this outline thru to the under paper, following the neck line of the waist in order to mark the neck line of the collar (Fig. 57). (2) For a slightly rolling collar, cut the neck line with a slightly concave curve (Fig. 58-1). (3) For a roll collar, cut the inner neck line straight (Fig. 58-2).
(4) For a collar which is more nearly the same width in the front as the rolled-over part in the back, and which stands a little away from the neck, cut the neck line as shown in Fig. 58-3.

Collars may be of single or double thickness. If a collar is single, the outer edge may be finished in any of the numerous ways that edges are finished. If the collar is double, pin the collar and lining with the right sides together and edges even. Baste a ¼-inch seam along the edge. Stitch, trim the edges even and narrow, and clip surplus material from the corners. Turn the collar right side out and crease on the edge, bastting the edge to keep it from slipping.

Collars may be attached with fell seams and facings, or if the collar is double the outside and the lining may be attached with separate seams. Narrow fell seams are used more often to attach single collars.

Both single and double collars are sewed on easily and neatly with facings. The cutting and finishing of facings are described under Facings. The only point to be noted is that the facing is basted in line with the other edges on the right side of the collar, and one stitching holds all the thicknesses together. The second fold of the facing may be stitched by machine or hemmed by hand. The facing should be long enough to extend to the ends of the plaits.

The other method of sewing on collars can be used only for double collars. If the collar is to roll high and close to the neck, place the wrong side of the collar against the right side of the waist. If the collar lies flat, place the right side of the collar against the wrong side of the waist. In either case, stitch a ¼-inch seam thru
the waist and one thickness of the collar. Trim and clip the seam to prevent puckering and turn the seam into the collar. Turn in the other edge of the collar $\frac{1}{4}$ inch, baste the fold over the first stitching, and hem by hand.

4. **Sleeves:** The seam in the sleeve is usually the same kind as those used in the rest of the waist. Plackets are necessary in a sleeve if the cuff is to be tight or semi-tight fitting. Hemmed and faced plackets and sometimes narrow bound or continuous plackets are used. In tailored waists a tailored placket such as is found on men's shirts is best. The placket should be placed 3 to 5 inches back from the underarm seam, the distance depending upon the fullness in the sleeve.

Cuffs are either single or double and are attached as single or double collars, except that a facing is seldom used. If there is any fullness in the bottom of the sleeve, it should be distributed correctly before the cuff is attached. Place one end of the cuff at the edge of one side of the placket and the other end at the edge of the other side of the placket. Pin the sleeve seam on the cuff 2 to 3 inches from the under part of placket. Arrange the fullness so that there are no gathers for about 1$\frac{1}{2}$ inches on either side of the seam, a few on the under side of the sleeve toward the placket, and most of the fulness on the upper side toward the placket.

Place two rows of gathering thread around the top of the sleeve. The placing of the sleeve requires patience and skill. The notches in commercial patterns are a great aid in placing the sleeve correctly. If for some reason the notches have been destroyed, put the waist on and slip the sleeve on, pinning the sleeve to the waist; the lengthwise thread of the sleeve should fall exactly at right angles to the highest point of the shoulder. Place pins at the top, at the underarm seam, and at the front and the back. Remove the waist and baste the sleeve in, holding it a little full around the lower part of the armhole, placing some gathers at both front and back, but placing most of them at the top and toward the front. Always hold the sleeve uppermost in basting it into the armhole. If the gathering stitches have been small and the basting is very small, a number of gathers may be placed in the sleeve so that they do not show at all.

5. **Bottom:** Some waists extend below the waist line and others are gathered on an elastic at the waist. If the first method is used, finish the bottom with a narrow hem, pinking, or overcasting. Arrange the gathers at the waist line and sew a tape for about 5
inches across the center of the back, leaving the ends loose and long enough to be tied around the waist.

If elastic is used, a hem wide enough to hold it should be made 1 inch below the waist line after the fulness has been allowed for. Run the elastic in the hem, and sew on hook and eye for fastening.

CONSTRUCTION OF MIDDY

The middy blouse is an example of construction which may be made easy by following the proper method. The steps are given here in logical order.

Facing for the Opening of the Middy

One method is as follows: Slash the center front and the facing down thru the perforations for the front opening. With the right side of the facing to the right side of the front opening, and with edges even, baste a narrow seam along both sides of the opening. Stitch by machine, making a narrow seam to within one inch of the bottom of the opening, then gradually stitch out toward the edge, making the seam as narrow as possible at the bottom of the opening. Stitch the other side like the first. Remove the bastings and turn the facing to the wrong side. Turn under the raw edges of the facing ¼ inch except at the neck. Baste and stitch.

Another method is to make a double row of stitching down the center front before cutting the opening. Mark with thread or tracing wheel the neck opening on both the front and the facing. Place the right side of the facing to the right side of the garment and stitch on both sides of the marked line. Cut down between the stitchings and proceed as before.

When the facing is finished, buttonhole around the bottom of the opening for about ¼ inch on each side to prevent tearing when the garment is being put on.

Shoulder Seams

Baste the shoulder seams with the wrong sides together and the notches matching, basting as far from the edge as the seam allowance indicates. Before stitching, try on the blouse to see if it fits, basting the underarm seam temporarily for this purpose. Make any necessary alterations and finish the shoulder seam with a stitched fell seam, turning it toward the front. The seam should be ¼ to ⅜ inch wide when finished.
Pocket

The two types of pockets commonly used in the middy blouse are the set-on or patch pocket, and the set-in or bound pocket.

_Patch Pocket:_ Baste and stitch the hem in the top of the patch pocket. Turn over the sides and bottom ¼ inch. Pin the pocket in the correct position, baste, and stitch with machine close to the edge. Especial care is required to stitch the edge of the hem at the corner of the pocket. Start the stitching ¾ to ½ inch from the upper edge and ¾ to ¼ inch toward the inside of the pocket. Stitch to the top of the pocket, turn and stitch along the edge and then turn again and stitch around the edge of the pocket to the other side of the top, where this double stitching is repeated. **Draw ends of threads thru to wrong side and tie them.**

_Bound Pocket:_ The set-in or bound pocket used in middies resembles a bound buttonhole on the right side of the garment. The method of starting this pocket resembles that for a bound buttonhole except that the binding piece is usually large enough to complete the pocket as well as to bind the edge of the opening (see the following paragraph).

(1) Mark the location of the pocket with a line of basting. Cut a straight piece for the pocket or binding 1 inch wider than the pocket width and as long as twice the depth of the pocket plus 2 ½ inches. Place one end of the binding piece over the mark for the pocket, with the end extending 1¼ inches above the mark and the right sides together. Baste the piece in this position so the basting comes directly on the mark for the pocket. Stitch a rectangle ¾ to ¼ inch wide along this basting and as long as the desired width of the pocket. Cut along the center of this rectangle and into each corner as for a bound buttonhole. Pull the binding piece thru the cut to the wrong side and hold it in place with stitching made in the crease caused by the first stitching. Turn the lower end of the binding or pocket piece up to the upper end and stitch across the top and down the sides. Finish the edges of the pocket with binding or overcasting. Place another row of stitching on the right side in the crease on the upper side of the pocket opening thru both the garment and the pocket. This last stitching will keep the top of the pocket from dragging down. (See Fig. 62.)
(2) Often the binding of the pocket is a bias piece. Cut this slightly wider than for a buttonhole. Finish this binding exactly as a buttonhole thru the hand stitching which holds the binding in place. Then attach a long piece of material to the lower part of the binding and bring it up to form the pocket, finishing as before. If the pocket is a circular shape and it is not possible to make it from a continuous piece, attach two shaped pieces, one to the upper and one to the lower part of the binding. Stitch around the edges and finish.

The ends of the opening of the pocket may be finished with bar tacks or with arrowheads. (For directions for making these finishes, see needlework magazines.)
Collar

The collar of a middy is usually double and is made and attached as any double collar is attached. (See collars, page 71.) Sometimes the top of the collar forms a facing of the front opening also. In this case the collar may be made before the facing is done, or the facing may be made first and the lining of the collar sewed on afterwards. If braid and emblems are used on the collar, sew them to the upper piece before attaching the lining.

Sleeves

Lay the middy flat and sew the opened sleeve in the armhole with a stitched fell seam on the right side. The finished seam should turn down on the sleeve. In very heavy material, such as flannel, an easier way is to make the seam on the wrong side and turn the sleeve up on the shoulder for the second fold and stitching. Then on the right side make a second stitching so that the seam resembles a stitched fell seam made on the right side.

Underarm Seam

The underarm seam and sleeve seam are made as one continuous seam. A stitched fell seam should be used. This may turn either to the front or to the back if a placket is to be made for the cuff opening. If the opening for the cuff is to come on the seam line, the seam must turn to the front.

Placket

A regulation bound or faced placket may be made in the sleeves, or the seam may be opened for about 2 inches and finished with a binding on the under side and a facing on the upper side.

Cuff

A double cuff is usually made and attached as any double cuff is attached (see page 73). If braid is to be used on a cuff, it should be sewed on the right side before the lining is turned up. Some middy sleeves are finished at the hand with a hem or a facing instead of a cuff. This method is usually followed when the fulness of the sleeve is taken out in tucks which run to the wrist.

Bottom

The bottom may be finished with a hem or may be gathered into a band.
CONSTRUCTION OF SKIRTS

Gored Skirts

This name applies to those skirts which are made of shaped pieces, or gores, which are generally narrower at the top than at the bottom of the skirt. Fashion decrees different numbers of gores in skirts for different years, the present style being two and three gores. Whenever shaped gores are used, one or both edges of the gore are bias, and care must be taken not to stretch the edges. Sometimes the bias edge of one gore is placed on the straight edge of another gore, in which case the bias edge should be held uppermost in basting and down toward the feed of the machine in stitching. A straight piece sewed in the seam of bias edges will help keep them from stretching. If, however, the seams are true or very nearly true bias, as in a circular skirt, it is better not to reinforce them at all, for the material will stretch or sag on either side of the seams anyway. In this case the best plan is to hang the skirt from the band and allow it to stretch all it will before the hem is put in.

1. **Seams**: The seams should be basted and the skirt tried on before any stitching is done. The seams should hang at right angles to the waist line and should not bulge or draw.

   The kind of seam to use depends on the nature of the material in the skirt (see *Seams*). In woolen material, the tuck, slot, or lap seam may be used, as well as the seams mentioned previously. These seams are not difficult to make and may be made after observing a similar seam in some finished garment.

   Any seam should be opened and pressed flat in the portion of the skirt where the hem is to be made, regardless of how it lies above the hem. Sometimes in order to do this, one half of the seam will have to be clipped at the top of the hem.

2. **Plackets**: See *Plackets* for kind and method of making. Place enough fasteners on a placket to keep it from gaping. A small piece of seam binding or selvage sewed in the bottom of the placket will keep it from ripping at the bottom if there is sudden strain put on it. Sew a narrow piece at the bottom of the placket and allow it to extend ½ inch up on either side.

3. **Inside Belt**: Most separate skirts are attached to a belt 2 or 2½ inches wide. Short-waisted people should use narrow belting; long-waisted people may use wider. This belting should be of good quality stiff material. Avoid a poor quality stiffened by starch and gums of various kinds. Featherboning is sometimes
added to keep the belting from turning over. If the belting is black, it should be of such quality that it will not rub off on underclothes. Purchase the belting 3 or 4 inches longer than the waist measure to allow for shrinkage and for turning in the ends. Belting should either be shrunk and pressed in a circular shape or else shrunk and darted in the front and back to make it fit better (see Fig. 63). The belt is fastened with 3 or more hooks and eyes, the hooks receded $\frac{1}{8}$ inch and the eyes extended $\frac{1}{8}$ inch so that the edges of the belt will just meet (see Fig. 27). Round eyes should be used. Sometimes it is better not to sew the top hook and eye on until the skirt has been adjusted to the belt.

4. Top of Skirt: (a) Preparation. If the skirt is to be gathered, the top may or may not be turned in before the gathering is placed. Use two or three rows of gathering threads.

(b) Adjusting. Hook the belt on the person or on a figure. Put on the skirt. Pin the under edge of the placket even with
one end of the belt. Lap the placket in position and pin the upper side of the skirt wherever it comes on the other end of the belt. Arrange centers and quarters and distribute the gathers evenly. Seams should fall at right angles from the waist line. The skirt should hang straight downward, not protruding at the lower part of the front. To correct this fault, raise the top of the skirt slightly at the back or lower it slightly at the front.

(c) Finishing. (1) If the top of the skirt was turned in before gathering, one stitching will hold the skirt and belt together. This may be machine stitching or hand stitching. If hand stitching is used, take a short back stitch on the right side and a little longer stitch forward on the wrong side. Use heavy thread or buttonhole twist for this purpose. (2) If the skirt has plaits or is of such heavy material that turning the top is not advisable, the unturned edge may be stitched flat to the belt and a binding or a facing used to cover the raw edge. (3) Another method is to turn the top of the skirt over to the inside side of the belt and stitch thru the raw edge and the belt but not thru the outside of the skirt. Finish this raw edge on the inside of the belt with a facing.

5. Hanging Skirt: A skirt hanger or yardstick may be used to mark a line an even distance from the floor.

6. Hem: Turn the skirt up on the line of pins and baste. Try the skirt on to verify the hanging. Cut the hem a uniform width and finish as described under Hems, with the garment hemming stitch.

7. Outside Belt: Belts of different widths should be tried on to determine the becoming width for the person for whom the skirt is being made. The belt may be finished with the seam on the bottom edge or in the middle of the inside of the belt. It may be snapped or buttoned, either handmade or bound buttonholes being used.

Attach the belt to the skirt with tailor tacking type 2 (see pages 82 and 83).

Straight Skirts

Straight skirts are those which are made of one or more straight pieces. These skirts are hung from the waist line and not from the bottom of the skirt.

1. Gathered: Straight, full-gathered skirts present no new problems except the hanging. Make the seams, put in and finish the hem, and make the placket. Next, pin a tape line around the
waist and take the front, hip, and back measurement from the tape to the floor. A variation will be found in the most people of one-half to one inch between these measurements.

Fold the skirt at the center front and center back and place pins along the top of the skirt, marking off the difference which was found in the measurements. For instance, if the front was one inch and the hip one-half inch shorter than the back measure, place a pin one inch from the top of the skirt in the front and one-half inch from the top at the hip. Cut on a line between these pins. Gather the skirt along the edge and adjust on the belt as a gored skirt is adjusted.

If the hips are very uneven or if there is any reason why this marking and cutting would be difficult, another method of hanging may be used. Gather the skirt along the upper straight edge and try it on, pinning the skirt tentatively to the belt at the center front and back and hips. Pin a tape line snugly around the thighs. This tape will hold the skirt so it can be adjusted easily for length. Raise or lower the skirt on the band until the bottom is the same distance from the floor all around. Then pin, baste, and finish the top of the skirt on the belt, cutting off any extra material.

2. Plaited: Plaited skirts made from straight pieces offer many difficulties which are too involved to discuss here. Accordeon, sun, or knife plaits are made by a professional plaiter. Side and box plaited skirts may be made satisfactorily without a pattern by the average person if she has a thorough understanding of the problems involved. If a person does not have this knowledge, it is better to purchase a pattern for a plaited skirt and follow the directions given with the pattern.

DRESSES

Many of the problems in dress construction have been discussed under Waists and Skirts. The principal processes which need further explanation are the joining of waists and skirts and the attaching of linings.

Joining the Waist and Skirt

1. Inside Belts: The same commercial belting may be used for dresses as for skirts, or in soft wash dresses a single thickness of the material, with edges folded away from the body, may be used. In either case the inside belt should be shrunk and shaped and should have the fasteners placed on it before the dress is adjusted.
When a dress opens down the front or side, or when the waist opens in either of these ways and the skirt opens on the hip, place the belt so that the opening comes in the center front. Even when the waist opens across the shoulder and down the underarm and the skirt opens on the hip, the belt is placed with the opening in the front because the lining usually opens in the front. But if the dress opens in the back, the belt should open in the back also.

2. **Waists:** Place the belt on correctly and pin the gathered waist line of the finished waist to the belt. The underarm seams should fall at right angles to the arm pit and the center fronts and backs should be exactly in position. If the skirt comes over the waist, one basting and stitching will hold both to the belt.

3. **Skirts:** The top of the skirt is sometimes turned over before it is attached to the waist and belt, in which case no extra finishing is needed to make the joining neat. If this is not done, a facing or a piece of seam binding must be sewed over the joining. The hanging of the skirt has been described under *Skirts*.

**Linings**

Many dresses require linings for the protection both of the skin and of the dress. All materials absorb the secretions of the skin, and unless the dress can be washed frequently, a washable lining should be placed in the dress so that it can be removed easily for laundering. Some dresses require linings for a different reason. If the dress is long-waisted and blouses a little, a straight, long lining will hold the waist line and preserve the fulness in the blouse.

Silk, lawn, silk and cotton mixtures, and net make very satisfactory linings. The neck line should be a little lower than the neck line of the dress and should be finished with a narrow attractive edge finish of some sort, such as picoting, binding, or narrow lace. The lining should be basted to the dress across the back of the neck and to the inside of the belt. It is then very easily removed.

**Outside Belts and Girdles**

Any outside belt or girdle should be held in position with tailor tacking type 2. While the garment is still on the person, pin the parts where they are to be fastened; then remove the garment. To make tailor tacking type 2, take a small stitch close to the pin in each of the two surfaces *which face each other*. Remove the pin, and make three or more stitches directly over the first ones, leaving the space between the surfaces $\frac{1}{8}$ to $\frac{1}{2}$ inch long. Then blanket-
stitch over the first threads until the space is filled with stitches. Parts tacked in this way will never have a tight sewed look.

**SHORT CUTS OR TIME SAVERS**

In this manual many processes have been described at length which are theoretically and technically correct. The beginner in sewing will do well to follow these directions exactly as they have been given. As one develops skill in sewing, however, the same work can be done more quickly, sometimes because it is possible to work faster and sometimes because steps in the process can be eliminated. Therefore, under the following heads there will be discussed the quickest way of performing some of the common processes. Only a few ways can be mentioned here, but many others will suggest themselves to the thoughtful person. Several well known magazines conduct departments which publish helpful suggestions along this line.

**CAREFUL PLANNING**

Many hours of time may be saved by concentrating on the work at hand and by thoughtfully planning the work ahead. This will avoid thoughtless mistakes and will prevent needless delays in work because some operation is not finished.

**SKILL**

**Hand Sewing**

Learn to do quickly hand work like basting, that can be done rapidly and at the same time accurately. Do not dawdle over easy work. Do hand sewing that requires more accuracy very carefully, so that no ripping will be necessary.

**Machine Sewing**

Master the simple mechanics of the machine so that threading, stitch and tension adjustment, straight stitching, and proper removal of the work will become automatic and will require little time.

Motors save hours of time and much energy. When electricity is available, a motor should be used. For short seams and small work they are not so essential, but whenever much stitching is to be done, as in stitching long seams and hems, tucking, and binding, a motor is invaluable.

1. **Machine Sewing without Attachments:** There are many, many places where basting may be eliminated when the person has
sufficient skill to do this. Always baste, however when there is the slightest danger of the material shifting. Sometimes pins can be made to take the place of basting. The material should be carefully pinned, placing the pins at right angles to the edge with the head of the pin toward the edge. Then they may be easily removed as the work approaches the presser foot.

*Machine darning* is strong and quickly made and is suitable for ordinary sheets, towels, and table linen, for knit underwear and other undergarments. Use a thread which matches the material in weight and color. Place the piece to be darned in an embroidery hoop to hold it taut. Remove the presser foot. Place the cloth under the needle and lower the presser foot lever. Stitch backward and forward, guiding the embroidery hoop with the hand. Place the lengthwise threads first and then the crosswise threads, making the rows of stitching close together.

*Cable stitching* is a decorative stitch which resembles fine couching. Lengthen the machine stitch and place heavy mercerized or silk thread on the bobbin without threading the shuttle. Place fine cotton or silk on the upper part of the machine and thru the needle. Place the material in the machine with the right side down toward the feed, and stitch on the line of design. A heavy line of stitching will be made on the right side of the garment.

*Gathering* may be done on an ordinary machine by using an average or long stitch and a loosened tension. One of the threads can then be pulled to adjust the gathers.

2. *Machine Sewing with the Attachments*: No girl or woman who makes many garments can afford to be without a knowledge of the use of the attachments which come with every machine. Work can be done more accurately and with less time and effort with attachments than without them. However, no one is foolish enough to claim that attachments can always be used for doing the process in hand. For instance, on some garments the binder is suitable for attaching bindings and on others it is much better to put the binding on in the regular way. Some of the attachments may be used for ordinary work and some are used for exceptional work. Those which are very valuable for ordinary construction are the bias cutting gage, the hemmer, the binder, the ruffler, and the tucker. The braider and quilter, altho valuable, are less frequently used.
However, no matter how good the attachments or how much time they are capable of saving, they are of no use to a seamstress unless she learns how to use and adjust them. If possible, one should see a good demonstration of the use of attachments given by an expert. Then with the help of the instruction book which comes with the machine each attachment should be studied and operated with some practice material until it is thoroughly understood.

There are several good books which give even clearer directions on the use of attachments than does the book of instruction which comes with the machine. One of these is "Sewing Efficiency" by Hazel Hunt and Olive Elrich, published by the Greist Manufacturing Company, New Haven, Connecticut. The other books are mostly in pamphlet forms, dealing with one or two attachments each and are issued by the Greist Company and several sewing machine companies.

PRESSING

For certain kinds of folds, creases can be made more quickly and effectively with an iron than by hand. Folding French or fell seams, folding pipings in the middle, and making the first fold of some hems, are examples of places where iron pressing is a time saver. When using the iron one should always be careful not to stretch the material being creased if stretching is undesirable.

SHAPED FACINGS

Shaped facings suitable for the right side of the neck on dresses, aprons, smocks, and nightgowns may be made quickly by the following method.

Mark the line for the neck on the garment, and place the right side of the facing piece on the wrong side of the garment, centers matching, and pin. Do not cut around the neck line until after the first stitching has been made, as there is less danger of stretching the edge after stitching. If the neck has already been cut, the un-
cut facing will help to prevent stretching. Baste and stitch on the neck line. Cut the garment and facing \( \frac{1}{4} \) inch from the neck line and from the cut edge clip in toward the stitching at frequent intervals so that the facing will lie perfectly smooth when turned over. Turn the facing to the right side and press the folded edge. Shape the outer edge as desired. Turn in the raw edge, pin, baste, and stitch.
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