

330.71
Or 361
c. 2
no. 227

SEP

MENT
ECTION

Extension Bulletin 227

December, 1919

Oregon Agricultural College Extension Service

O. D. CENTER
Director

BOYS' AND GIRLS' CLUBS
Club Series L-12

Stitches, Seams, and Sewing Processes

BY
HELEN COWGILL



LIBRARY

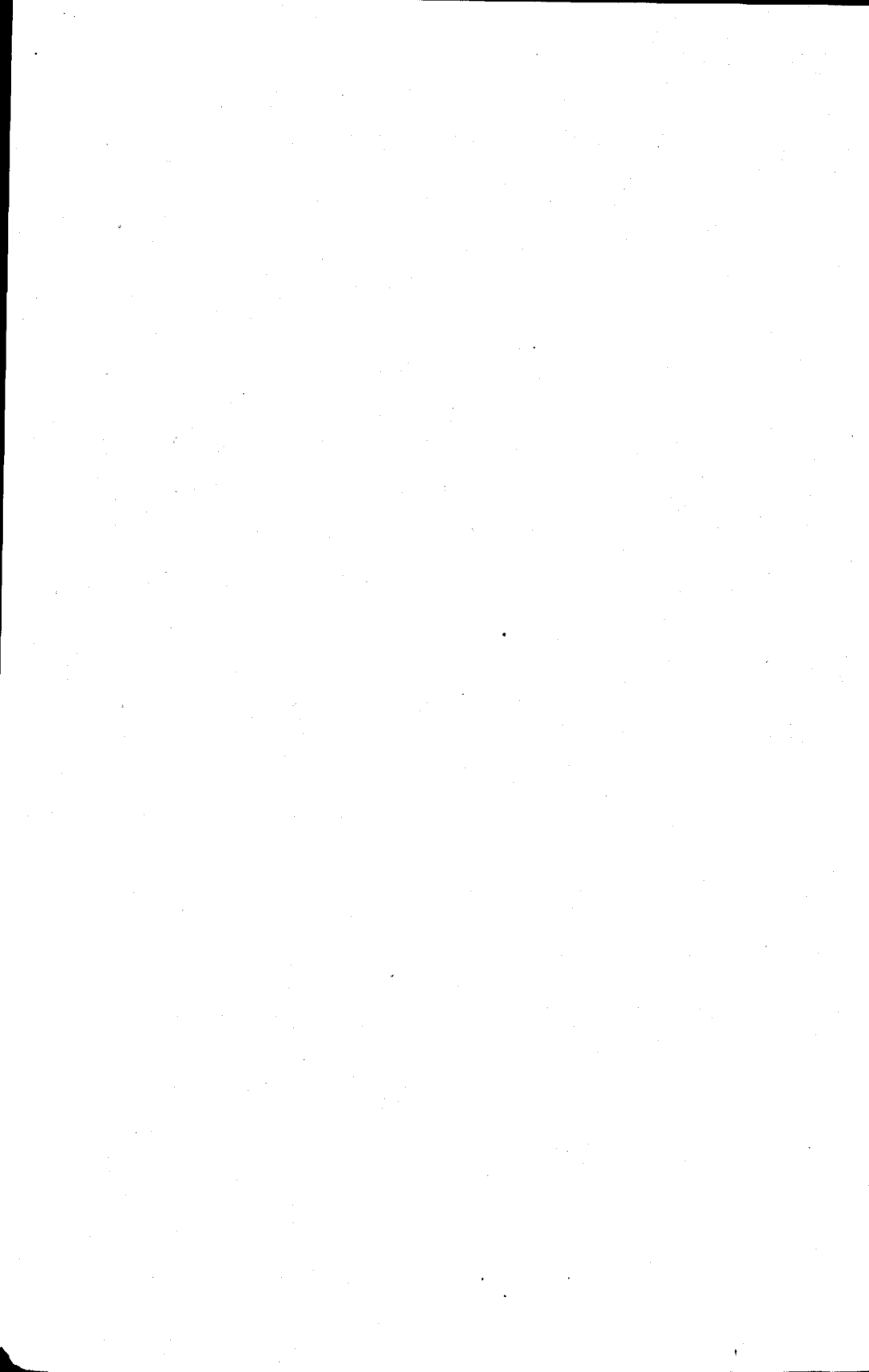
Oregon State Agricultural College, State Department
of Education, United States Department of
Agriculture, Cooperating

Printed and distributed in furtherance of the Act of Congress of May 8, 1914

(Reprint of C. B. 193, Ex. III, No. 6)
(Reprinted April, December, 1919)

CORVALLIS, OREGON

The Bulletins of the Oregon Agricultural College are free to all
residents of Oregon who request them.



STITCHES, SEAMS, AND SEWING PROCESSES

This bulletin has been prepared to furnish definite instructions regarding the kinds of stitches and seams, and the processes usually met with in sewing.

No directions are given for making any particular garment or article, as each girl is permitted to make anything she desires. There is a suggestive list of articles, however, from which she may choose.

HISTORY OF SEWING

Sewing in one form or another has been done for many centuries by all nations. To be sure, it has not always been done with steel needles and spool cotton, linen, or silk. Uncivilized and semi-civilized people even today use much more crude materials than do the inhabitants of civilized countries. For example, in Greenland, the girls sew with bone needles, on coarse skins. But still they are sewing.

Before cloth was woven out of plant and animal fibers, clothing was made from skins. These skins were often joined by lacings of narrow strips of the hides.

SEWING ACCESSORIES

In order to do good work of any description it is necessary to have good tools and to keep them in good condition. There are very few essential tools for sewing, but they must be good to be valuable. The necessary ones are scissors, thimble, needles, tapemeasure, pins, thread, work-bag, emery-bag, and apron.

Scissors. In order to cut cloth or thread easily, scissors should always be sharp. Be careful not to drop them, as this loosens the screw, making them harder to use. Do not cut paper with them because paper dulls them. Always cut or break off the thread; do not bite it, as this breaks the enamel of the teeth, finally causing them to decay.

Thimble. The thimble is worn on the middle finger of the right hand. Of course, if you are left-handed, you will wear it on the middle finger of the left hand, instead. Can you tell why you wear it on the middle finger instead of some other one? It is because this finger is a little longer and stronger than the rest and because it is next to the finger that helps to hold the needle and hence very convenient. Have you ever seen a sailor sewing a big sail? Those of you who have, know that he wears a queer kind of thimble on the palm of his hand. That is because the cloth on which he is sewing and the needle he is using are both very heavy, and require a great deal of strength to push the needle through. Sometimes he wears one of these thimbles on each hand so that he can push the needle through one way with the right and back with the left hand. This is because sails are so very large. Many of them are larger than a carpet.

If you have not been accustomed to wearing a thimble, you should practice using one a little every day until it becomes easy for you. Sewing without a thimble sometimes makes a bad sore on the finger and always leaves an ugly-looking callous. The thimble should fit well.

Needles. The Egyptians, five thousand years ago, used wooden needles. Steel needles were first made in England in 1545. Needles are made of steel wire, cut and pointed by machinery. The eyes, though, have to be punched in by hand. Sometimes young boys are employed for the purpose and they become so skillful that they can put the eyes in a great many needles in one day. After the eyes are in, the needles are polished and put into papers.

Needles are made in different sizes to correspond with different numbers of thread.

TABLE OF THREAD AND NEEDLES

Needle.	Thread.
10.....use.....	100
9.....use.....	70 to 90
8.....use.....	50 to 60
7.....use.....	40 to 50

Number 100 thread is used for very fine linen and lawns; number 70 for muslin; number 50 to 60 for buttonholes on muslin, etc.; number 70 to 100 for buttonholes on fine materials.

Thread. Thread is made of cotton, linen, or silk. Its size depends on the number of fibers twisted together. Always use a thread no longer than from fingers to elbow. A longer thread knots and becomes roughened and soiled before it can be used.

In taking a thread, hold the spool in the right hand with the thread coming over the top of the spool toward the left hand. Pull the end of the thread with the left hand until the desired amount has been unwound, then press down on the taut thread with the middle finger of the right hand and break. With a little practice this will be found a very simple method for breaking the thread. Very heavy thread will have to be cut.

Tapemeasure. The best tapemeasure to buy is one that is numbered on both sides. It is very convenient if the numbering on one side begins at one end and on the other at the opposite end.

Pins. Pins are made from a brass wire which is cut into the required lengths, pointed at one end, headed at the other, and then polished and put into papers for sale.

Work-box or Work-bag. Have some kind of box or bag in which to keep your tools, then always put them away. This saves much valuable time which might have to be spent in searching for thimble or scissors or needles.

Emery-bag. Emery is a powder which rubs off dirt and dust from needles, making them as smooth and bright as new. A small quantity tightly sewed up in a bag, is an excellent thing to have.

Sewing Apron. An apron is worn to protect the dress and also to keep the work clean. When you have finished sewing, fold your apron neatly and put it in your box or bag.

RULES TO BE OBSERVED

Position. Always sit erect, with feet on the floor. Hold the work up so that it can be seen easily.

Cleanliness. Always wash your hands before beginning to work. If your hands perspire, keep a box of talcum powder in your work box and when your hands become sticky or moist, shake a little of it on them. You will find it a great help.

Light. Sit with the light coming over the left shoulder so that there may not be a shadow cast upon your work by your right hand.

Knots. Knots are used in basting and in some kinds of work where they will not be clumsy or will not show.

TO MAKE A KNOT. Wrap the end of the thread around the forefinger of the right hand, having the end extending just beyond the point of crossing. Roll the thread between the thumb and forefinger until it is pushed off from the finger onto the thumb, then put the middle finger on the loop and pull the loop up with the middle finger and the thumb.

To fasten thread without a knot, take three or more stitches into the same place. This is a method used for hemming, overhanding, or seams, and in all kinds of embroidery except cross-stitch work.

The thread is fastened at the finish in the same manner.

USE OF PATTERNS

When selecting a pattern, be careful to purchase one of the right size. Even if the age is given, look at it carefully. See whether the bust, waist, and hip measures are right for you before you leave the store. You should have taken these measures before going to the store so that you could be certain about them. Choose a pattern that has few seams and pieces. Before opening it, study the directions carefully. After you have opened the pattern, compare the pieces with the chart, if one is given, and write the pattern number in blue or red pencil on each piece. If there are any pieces which you are not going to use, fold them up neatly and return to the envelope to avoid confusion.

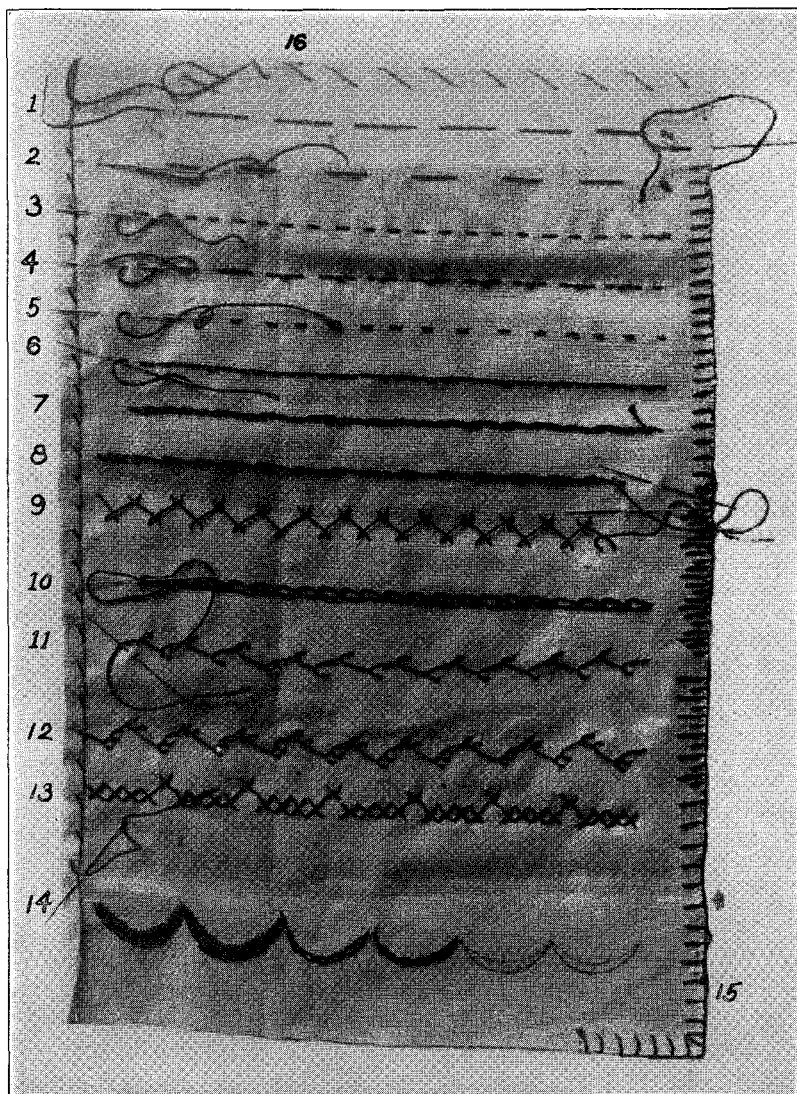
Notches indicate proper joining of the various pieces. Three round perforations usually mean the straight of the material. Two perforations mean a lengthwise fold. Be careful when placing the pattern to have each piece with the straight of the material exactly where the directions say. In most patterns a seam allowance is made, so cut exactly at the edge of the pattern. Where notches are required, make small ones so that they will not interfere with the seams.

If the pattern you are using is not large enough, there are two ways in which to overcome the difficulty. (1) Cut the piece of the pattern in two through the center in the direction in which it is too small, and pin on the material so that there is the required extra size. (2) Crease a fold in the material in the direction in which the pattern is too small, to make the piece the required size. This is a good method to use if you plan to use the pattern again and do not wish to spoil it. If the pattern is too large, fold a pleat through the center of the piece large enough to make the pattern the required size.

SOME OF THE PRINCIPAL STITCHES AND THEIR USES

Basting. The use of a long running stitch in which stitch and space are of equal length or in which the space is longer than the stitch, is called basting. The former is called even basting and the latter uneven

PLATE I.



(1) Uneven basting; (2) even basting; (3) running; (4) combination stitch; (5) half back; (6) backstitch; (7) wrong side of backstitch; (8) outline; (9) catch-stitch; (10) chain-stitch; (11)-(12) feather-stitch; (13) cross-stitch; (14) button-hole stitch; (15) blanket stitch; (16) overcasting.

basting. This stitch is used to hold two or more pieces of material together until they can be permanently joined. Make a knot in the end of the thread, as this saves time.

Running Stitches. These are little stitches of the same length on both sides of the cloth and are taken straight ahead each time. They are used for sewing seams, for purposes where there is to be no strain, and for gathering.

Combination Stitch. Secure thread. Take three running stitches. Pull the thread through and put the needle in again in the place, where it went in for the third running stitch bringing it out where this last stitch came out. This is the first of three or more running stitches. Repeat to end of seam. This stitch is used for seams that must stand some strain.

Half Backstitch. Secure thread. Take a stitch forward. Pull the thread through. Put the needle in for second stitch half-way back to where the needle came out for the last stitch, bringing it out a full stitch ahead of the last stitch. Keep stitches evenly spaced and in a straight line. This is stronger than the combination stitch and should be used where there is a good deal of strain.

Backstitch. This stitch is like the half back except that, each time, the needle is put in where it came out at the end of the preceding stitch, coming out a whole stitch ahead. This looks like machine stitching on the right side, but leaves a double row of stitches on the wrong side. This is a very strong stitch and will stand a great deal of strain.

Hemming. Preparation of material. Make a $\frac{1}{4}$ -inch fold to the wrong side of the material. Crease again to wrong side making the hem any desired width. Pin first, then baste to hold in place. Hold the work over the forefinger with the hem toward the inside of the hand so that you can see under the edge of it.

TO MAKE THE STITCH. Begin at the right-hand side and work toward the left hand. Do not make a knot, but fasten the thread by taking three or more stitches in the same place. Just below the edge of the hem, and close to it, take up one or two threads of the material. Point the needle to the left and come up through the edge of the hem. Pull the needle through until the thread lies smoothly on the material. Do not pull hard enough to pucker the material. Put the needle in again for the next stitch, a little in advance of the place where it came out, taking each stitch exactly like the first. When the hemming is finished, pull out the basting threads.

Be careful to slant your needle the same each time, keeping the stitches the same length and the same distance apart.

USE. This stitch is used to hold hems in place where it is not desirable to use the machine.

Overhanding. Used to fasten together two pieces of material so that the joining will scarcely be visible.

TO MAKE. Baste the two edges together. If the edges are raw, make a small fold on each piece. Fasten the thread by sewing over the end of it as the work proceeds. Pointing the needle directly toward you, take a stitch through both pieces of material, taking up only two or three threads of the material.

Make the stitches by pointing the needle directly toward you, since a stitch so made will show less on the right side than any other kind of stitch.

Overcasting. Used to keep raw edges from raveling when it is not desirable to finish them in any other manner.

TO MAKE STITCH. Begin at right-hand side of seam, slant the needle toward the left shoulder, put the needle through the material from one-eighth to one-fourth inch from the edge depending on how much the material frays. Do not pull the stitches enough to pucker the material. Make the stitches the same distance apart as they are deep. In overcasting the seams of a skirt, begin at the bottom, working toward the top, because in this way you are working with the cut threads instead of against them.

SOME ORNAMENTAL STITCHES

Outline or Stem-stitch. **TO MAKE.** Hold material over left forefinger and work from you. Keep thread down and to right of needle. Put needle in the material a long stitch ahead on the traced line bringing it out a short stitch back through the material and just at the left-hand edge of the traced line. Put needle in the material again a long stitch ahead on the traced line bringing it out a short stitch ahead. The length of the stitches and their slant will depend largely on the effect desired, the material, and the kind of thread used.

CAUTION. Do not draw stitches tighter than the material. Make all the stitches the same size. Always keep the thread to the right of the next stitch.

With a little practice you can vary this stitch in a number of ways by changing the length, size, and slant.

Chain-stitch. Many times this stitch can be used in place of the outline stitch. It is very effective where a heavy line is desired. It is a loop stitch, so called because several chain-stitches together resemble a chain.

TO MAKE. Hold material over left forefinger. Work toward you with needle pointing toward chest.

1. Fasten thread on the wrong side of material by taking three or more stitches in the same place.

2. Bring needle out on the right side of material at the place on the traced line where you desire to begin the stitch.

3. Hold the thread to the left with the thumb of left hand, insert the needle where the thread comes out, and bring it out a stitch ahead over the thread which forms a loop.

Always re-insert the needle in the place where the last stitch came out, and be sure to have the thread form a loop in front of the needle.

Take each stitch directly into the marked line.

Keep the stitches all the same size.

Do not draw the thread tight enough to pucker the cloth.

Blanket Stitch. This stitch is used to finish and decorate the raw edges of flannel or woolen material. It is also used to finish the edges of articles made of canvas and similar material.

TO MAKE. Work from left to right.

Fasten the thread before beginning to make the stitch by taking three small stitches in the same place near the edge of the material and vertical to the edge so that the first stitch may cover them.

Insert needle $\frac{1}{4}$ -inch (or less) from the edge and directly over the place where the thread is fastened. Bring it up through loop formed by thread from the attached end of the thread. When drawn up, the thread should form a line at the edge of the material. Be careful not to draw the stitches too tight. Insert the needle for the second stitch at the same distance from the edge as the first stitch was made and at any desired distance from the first stitch.

Do not bring needle out through cloth, but only through loop.

The stitches may be of any desired length and at any desired distance apart. Keep stitches evenly spaced and of same depth, unless it is desired to have them of varying depths to form a design.

To turn a corner, take three stitches into the same place but coming out, one directly on the point of the corner and the others running at right angles to the edge of either side.

Cross-stitch. This is a very easily made stitch and can be used in a great many ways. It can be used in working out a variety of designs, either original or from a book of patterns. It is excellent practice to make your own designs.

If the work is done on Aida canvas, the open spaces in the material can be used as a guide; but if closely woven material is used, it will be necessary to baste firmly on the material a piece of cross-stitch canvas in order to keep the stitches accurate and evenly spaced. Be sure that your piece of canvas has enough squares to allow room for all of the design chosen. It is well to have the canvas a few threads longer and wider than the design, to facilitate drawing them out when the work is completed.

The stitch is double and consists of two slanting lines crossing in the middle on the right side and forming two lines of vertical or horizontal lines on the wrong side.

The needle is brought up in one of the smaller squares and goes over diagonally into another of the small squares and is brought up again to form the other part of the cross, going in again at the fourth corner of the square formed by the stitch.

If there is a long line of stitches to be taken, those slanting one way may be taken first, then come back with the other slant, completing the crosses.

Where there are only one or two stitches in a line, it is better to complete each cross before commencing the next.

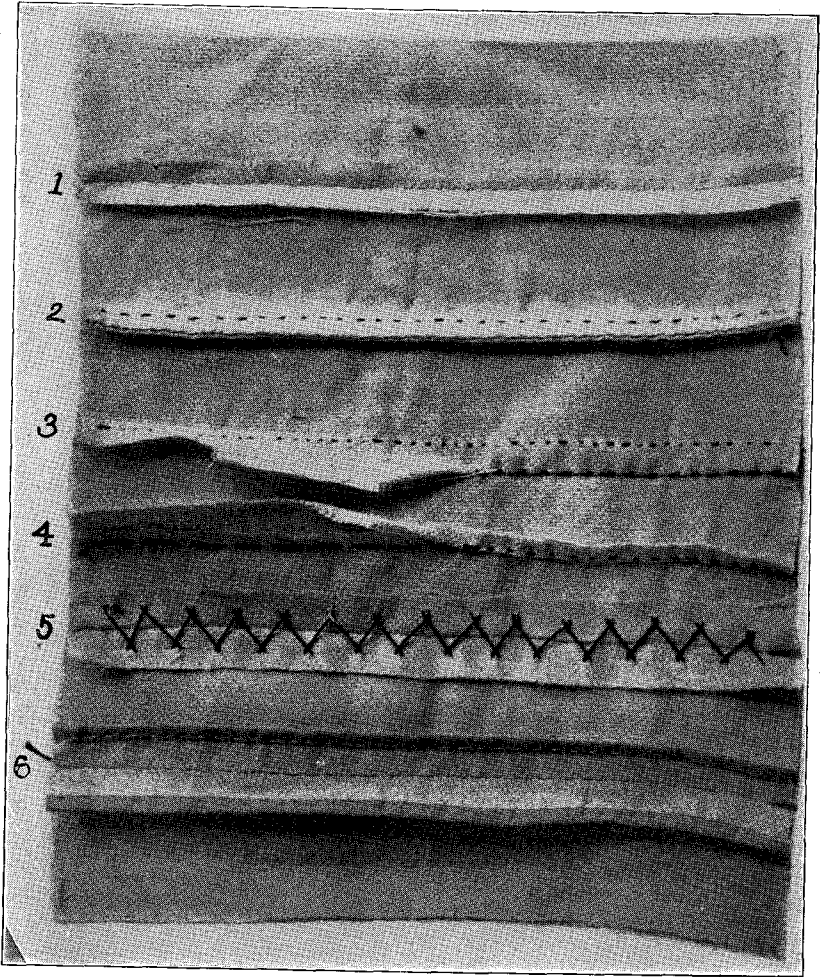
Where two crosses join, be sure to have them exactly meet at the corners. All of the upper stitches should slant in the same direction.

When using cross-stitch canvas, take care not to take the stitches through the threads of the canvas, but in the spaces of the canvas through the material to be decorated.

Draw the threads quite snugly so that when the canvas has been pulled out the stitches will not be loose.

When the design is completed, pull out the canvas, thread by thread, and press the work carefully on the wrong side.

PLATE II.



(1) Plain seam; (2) fell seam; (3) flat fell; (4) French fell; (5) flannel seam; (6) bound seam.

In applying cross-stitch designs, take care to have the center of the design in the center of the space allowed for it, and parallel with the threads of the material.

Hemstitching. Decide on the width of hem desired, then draw out from three to six threads according to the kind of material and the effect sought. Baste the hem so that the edge of it just comes to the place where the first thread has been drawn out.

Fasten the thread at the left end of the hem. Work toward the right hand. Take a stitch through the edge of the hem in the place where the first group of threads will naturally draw up. Put the needle under a group of threads from right to left, then up through the same place that the first stitch was taken. Draw the thread up so that the group of threads is distinct from the rest of the threads but be careful not to pucker the material. Take another stitch into the edge of the hem opposite the center of the next group of threads and there take up the group of threads as for the first stitch. Repeat to the end of the hem.

When fastening the thread, run it in and out of the turned-under portion of the hem for a few stitches, then cut off close. To begin a new thread, run it in and out from the opposite direction.

This stitch is very useful in finishing the ends of guest towels and other straight edges where a little decoration is desirable.

SEAMS

Plain Seam. Baste two pieces together, having right sides of both pieces together. This seam is used on heavy material that will not fray and in places where edges may be bound or overcast, either separately or together as the place demands.

Bound Seam. This is like the plain seam except that a strip of lining, silk, or binding ribbon is sewed on the edges to keep them from fraying.

French Seam. Stitch the first time with the raw edges to the right side, trim to within one-eighth inch to three-eighths inch from the stitching, crease exactly on the line of stitching with the raw edges to the inside, and stitch again far enough from the edge so that the raw edges are covered. This second stitching brings the seam to the wrong side of the garment, where it should be. Used on underwear, thin dresses, and all garments of thin material.

Flat Fell. Baste one piece to another so that the first extends beyond the second from one-eighth inch to one-fourth inch according to the thickness of the material. Stitch one-eighth to three-sixteenths inch from the edge of the inner piece. Remove basting. Fold over the edge of the extended piece. Crease the seam carefully so that the cloth will lie flat when the seam is finished. Baste down smooth and flat onto material. Stitch on the machine close to the edge or hem by hand. Be sure that the crease is exactly at the seam, so that the amount of material underneath the hemmed-down part may not pucker. This makes a good flat seam to use in garments worn next to the body. It is easy to iron.

French Fell. Baste two pieces of cloth together so that one extends one-eighth inch beyond the other. Fold the piece that extends one-eighth inch. Crease again so that the edge of the fold just covers the line of basting. Baste in place. Stitch. This is a good seam to use where no stitches are desired to be seen on the right side. It is easily made, as it requires only one row of stitching. It is suitable for thin materials.

Flannel Seam. Stitch, having raw edges to wrong side. Open the seam and catch-stitch it in place. This is a good way to finish the seam in babies' flannel skirts and slips as the seam will lie flat and smooth.

Tailored Seam. Stitch on wrong side of material one-half inch to three-fourths inch from edge. Press the seam open and then stitch one-eighth to one-fourth inch on either side of the first stitching.

PROCESSES

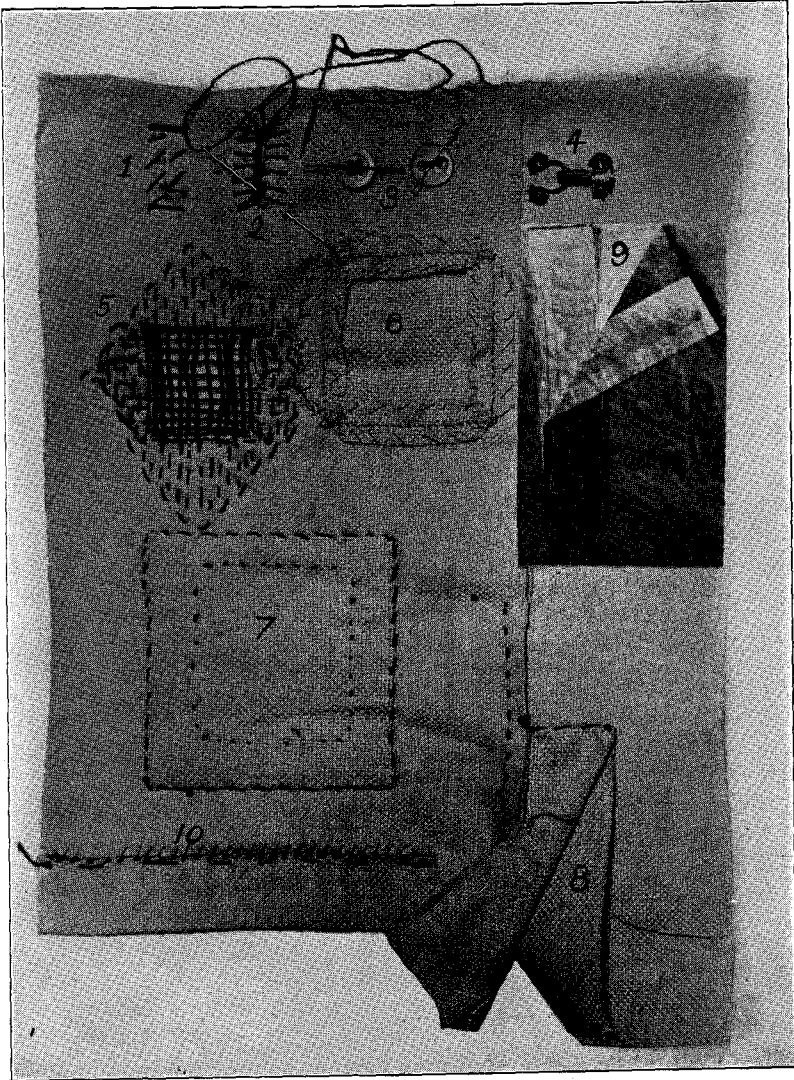
Buttonholes. Decide on the exact place for each of the buttonholes before cutting any of them. Mark the place for each one with a pin. Cut one and work it before cutting the next. Cut the opening for flat buttons the length of the diameter of the button, for round buttons a little longer.

TO WORK. Bar end farthest from edge. Overcast one side of the buttonhole, bar other end, and overcast other side. After finishing the overcasting, bring the needle to the right side of the material, close to the edge of the cut at the end of the buttonhole farthest from the edge of the cloth. Put the needle into the cut close to the end and bring it out far enough from the edge to avoid raveling. Before pulling the needle through, put the thread from the eye of the needle under the point from right to left. Pull the needle through, drawing the thread away from the work so that the loop is directly on the edge of the cut. The ends may be finished in several ways: (1) With fan end, taking five stitches around the end of the cut having the loops at the end very close together and the stitches forming rays around the end. (2) Bar end. Take the buttonhole stitches clear to the end of the opening on one side, then take three or four stitches in the same place across the end, putting the needle into the material as far from the edge of the opening on the unworked side as the stitches extend on the finished side. Finish by bringing needle up through the cut and work the other side, barring the opposite end in the same way. (3) Fan the end nearest the edge of the material and bar the opposite end.

Sewing on Button. It is well to sew over a pin so that the stitches will not be drawn too tight. Four-holed buttons may have the stitches form a cross on top of the button or two parallel lines. Fasten the thread securely and neatly on the wrong side.

To Sew on Hooks and Eyes. Be sure to place hooks and eyes, directly opposite each other and far enough from the edge so that they will be invisible. Spread the ends of the hooks apart a little way. Use the buttonhole stitch to sew them on with, as this makes a neat and strong finish. Sew all around the loop made for that purpose. In the case of the hooks, always take a few stitches up close to the curve of the hook to hold it firmly in place.

PLATE III.



(1) Overcast buttonhole; (2) finished buttonhole; (3) button; (4) hooks and eyes; (5) stocking darn; (6) overhand patch; (7) hemmed patch; (8) skirt placket; (9) sleeve placket; (10) hemstitching.

To Sew on Ball and Socket Fasteners. Sew the socket piece on the under side of the opening and the ball piece on the upper side. Use a plain over-and-over stitch, taking several stitches into each hole.

CAUTION. Be sure to place so that the sides that are together on the card will come together on the material.

To Cut True Bias. Fold the material to be cut so that the warp threads lie parallel with the woof threads. Crease the material and cut on the crease.

To Join Bias Strips. Place the two pieces that are to be joined so that their right sides will be together and the two pieces form a right angle. Let the upper piece extend exactly the length of the seam's width to the left of the lower piece. Begin to sew at the right-hand edge exactly where the two pieces form an angle.

Facings. A facing is used in place of a hem: (1) where there is not length enough to turn in a hem; (2) where a hem would be unwieldy; and (3) sometimes as a trimming. There are three kinds of facings: those cut on the straight of the material, those cut on the bias, and those shaped like the edges they are to face.

TO APPLY. Baste to garment or article, placing the right side of the facing to the right side of the garment and stitch in a seam. Remove bastings and turn facings to the wrong side of garment. Do not turn directly on the stitching but just beyond it so that the joining will not show on the finished garment. Baste in place near the edge, if the material is not of the kind that will retain the crease. Turn under the raw edge and baste in place. Hem by hand or stitch on the machine.

Skirt Placket. Cut a lengthwise strip of material two inches longer than twice the length of opening and from one to two inches wide, depending on the kind of material. Pin first. Begin to baste at the top of the placket, putting the right sides of the material together. Baste down to the bottom of the opening and up the opposite side as though both sides of the opening were in a straight line. Stitch. Crease the side that is to lap over on the stitching and hem in place. Allow the under side to extend to form the underlap of the placket. Fasten securely at the bottom so that it can not tear out. This is the most often used of the different kinds of plackets.

Sleeve Placket. Cut a strip twice as long as the placket opening, plus one inch, and one and one-half inches wide, for each sleeve. Cut a piece the same width but only once the length of the opening, plus one and one-half inches, for each sleeve. Place the long strip with its right side to the wrong side of the underarm edge of the placket opening, allowing the extra length to extend beyond the end of the placket, and stitch in a $\frac{3}{8}$ -inch seam. Turn to the right side, creasing a seam depth from the last stitching. Clip the strip the width of the first seam at the end of the opening. Crease the strip its entire length in a line with the crease where it is attached to the opening. Crease opposite side of strip its entire length so that when finished it will be one inch wide. This crease is to the wrong side of the strip. Baste and stitch the strip, like a facing, to the end of the opening. Fold upper end of strip over onto the part stitched in place, and crease across at the end of the

opening. Lay the raw edge of the opening over the strip and baste down so that the two cut edges are exactly together, taking care not to pucker the material. Crease the smaller strip along both its sides so that the finished strip will be one inch wide. Crease the upper end into a point.

Baste this smaller piece to the placket opening so that it extends one and one-half inches beyond the end of the placket and both sides of long and short strip exactly coincide. Stitch as shown in illustration.

REPAIRING GARMENTS

Darning. Darning is the replacing of worn material. It is the best method of repairing stockings, sweaters, and knit clothing of all kinds. Cotton, silk, linen, or woolen threads are all used for this work. The material in the garment should be matched as nearly as possible both in color and kind. Use as fine a needle as will carry the thread so that the darn may be as inconspicuous as possible.

Stocking Darn. Trim away the ragged edges around the hole. If the material around the hole is weak, strengthen it by weaving the darning thread in and out of the weak portion. Begin this weaving a few stitches to the side of the hole; then, when the hole is reached, weave in and out below the hole. Carry the thread across to the opposite side of the hole and weave in a few more stitches. Continue in this manner until the hole has been covered with threads, then weave in and out of the material on this side to strengthen it. You are now ready to fill in threads going across those just in. Weave in and out of the material next to the hole, and then weave over and under the threads crossing the hole. Go over one, under one, over and under one, across to the opposite side. In coming back, go under the threads you went over in the last row and over those you went under. Continue in this manner until the hole has been filled in.

CAUTION. Do not draw the thread enough to pucker it. Use two strands of darning cotton for heavy cotton stockings, but one strand of cotton for thin ones. Use silk darning thread for silk hose and yarn for woolen hose and socks. Always match the color of the stockings with the thread used.

In darning knit materials like sweaters, care must be taken to catch up all the loops, as any not caught will continue to ravel and will make an unsightly long hole, called a "run." The process other than this is like stocking darning.

Damask darning is used in repairing fine table linen. Usually some ravelings of the material are used, if they can be obtained. If they are not available, use a soft embroidery linen or cotton thread that resembles the material to be darned. Put in the first threads or warp as you did for the stocking darn, hiding the stitches as much as possible when weaving into the material. The filling or woof threads are added in the following manner: Over three, under one, for the first row. In the next row, the thread will go under the first one of the three gone over the first time and over the next three, thus going over the one gone under in the preceding row. Each time the thread will pass over the one gone under the time before and will go under a new one. This gives the satiny appearance that damask always has.

Patching. Patching is a method of repairing which is used when a hole is too large to be darned. It is better to take an old piece of the same kind of material than a new one, as the new one is apt to be so much stronger than the garment that it will tear away the fabric. If the old cannot be obtained, use new of a lighter weight than the material in the garment.

Hemmed Patch. Trim the hole neatly in the form of a square or oblong. Cut diagonally $\frac{1}{4}$ -inch at each corner, crease a $\frac{1}{4}$ -inch fold to the wrong side on all sides of the hole. Cut the patch one inch larger than the open space, taking care to match the figure if there is one, having the warp threads run parallel with the warp threads of the garment. Baste patch to the under side of the garment, with the right side to the wrong side of the garment. Hem down the turned-in edge of the hole neatly. On the wrong side, turn in the edge of the patch and hem in place.

Overhand Patch. Prepare the hole in the same manner as for the hemmed patch. Cut the patch one inch larger than the hole in each direction, taking care to match the design if the material has a design. Turn a $\frac{1}{4}$ -inch fold to the wrong side on the four sides of the place to be patched.

Turn in the edges of the patch so that it will exactly fit into the space to be filled. Overhand in place from the wrong side, taking care to have the stitches show as little as possible on the right side. Do not permit the material to pucker. Use as fine a thread as will hold the material. After overhanding the patch into place, overcast the raw edges on the patch and garment. If new material is to be used and the garment has faded from the sun and washing, wash the piece to be used for the patch and put in the sun until it more nearly resembles the color of the garment.

USE OF SEWING MACHINE

A sewing machine requires just as careful attention as any other type of machine. It must be kept clean and well oiled, or there will be unnecessary wear and tear on it. It must be used intelligently and treated with respect. A woman should understand all parts of her sewing machine as well as men understand their farm machinery or the many machines they use in their factories. Do not try to sew faster than your machine is made to sew. This frequently breaks some part or at least jars some screw loose. Sit erect, directly in front of the machine, and treadle with both feet. Study the book of directions which always comes with a machine until you are familiar with all parts of the machine.