Adv. 1689
November, 1915

A MANUAL

OF

FAMILY

SEWING MACHINES

THE SINGER SHOP

The Best Place to Buy Sewing Machines

WHY?

BECAUSE there you will find the very latest and best machines in FIVE DIFFERENT TYPES to suit individual requirements.

In the sewing machine industry, as in all others, there is no such thing as standing still. Unless manufacturers progress they are really retrograding.

Therefore, BEWARE of purchasing machines copied from obsolete models and designs and sold under names that DO NOT STAND FOR ANYTHING.

QUALITY

vs.

PRICE

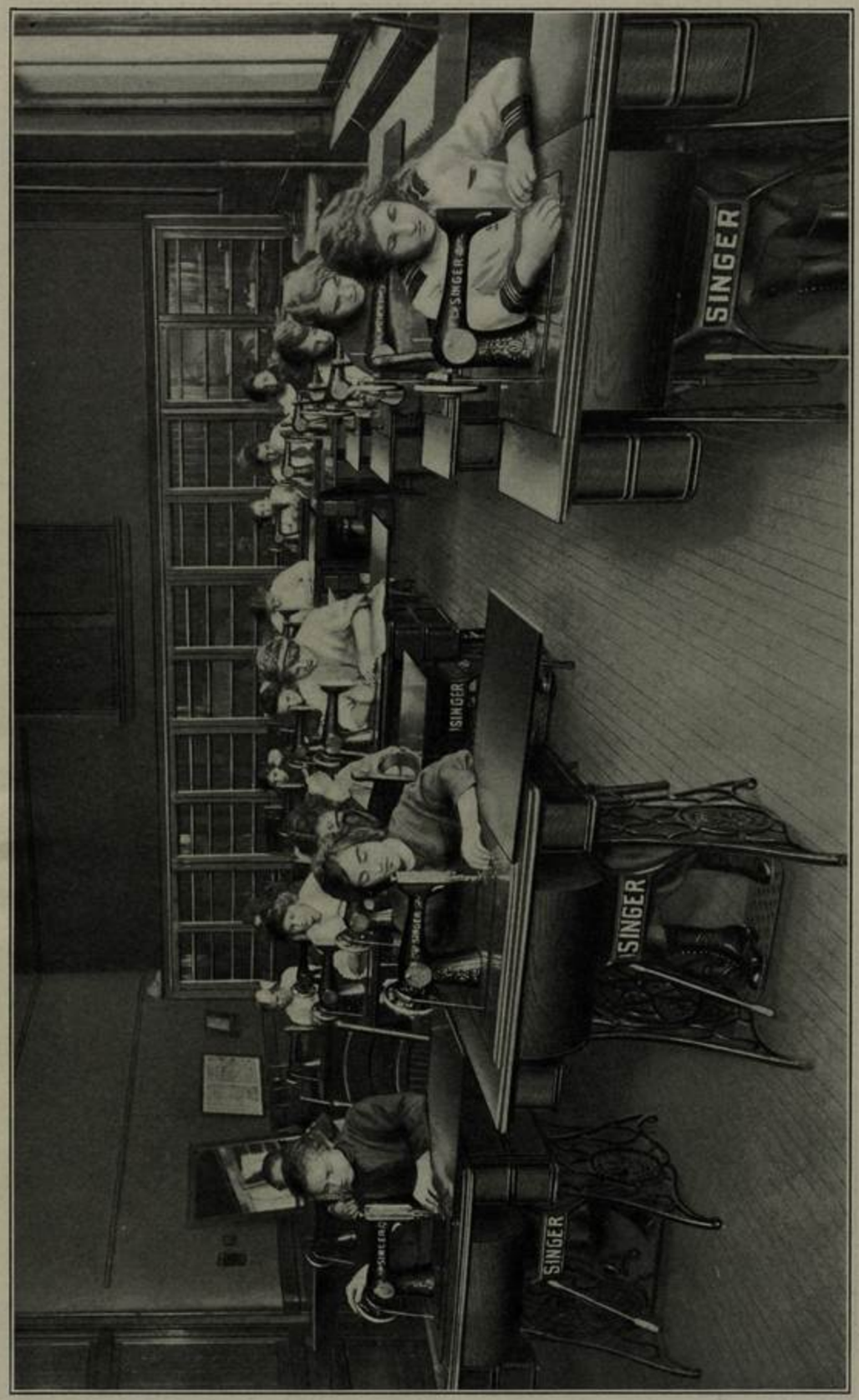
NOT HIGH PRICED

NO MAKERS OF SEWING MACHINES have made such progress in the standard of development and refined improvements as the SINGER COMPANY, the pioneers in the industry.

BEWARE of purchasing machines from stores or dealers, who advertise to sell SINGER machines, which invariably are defaced and numbers mutilated or obliterated.

The Singer Company sells only through its own Shops and Salesmen

THERE ARE SINGER SHOPS IN EVERY CITY



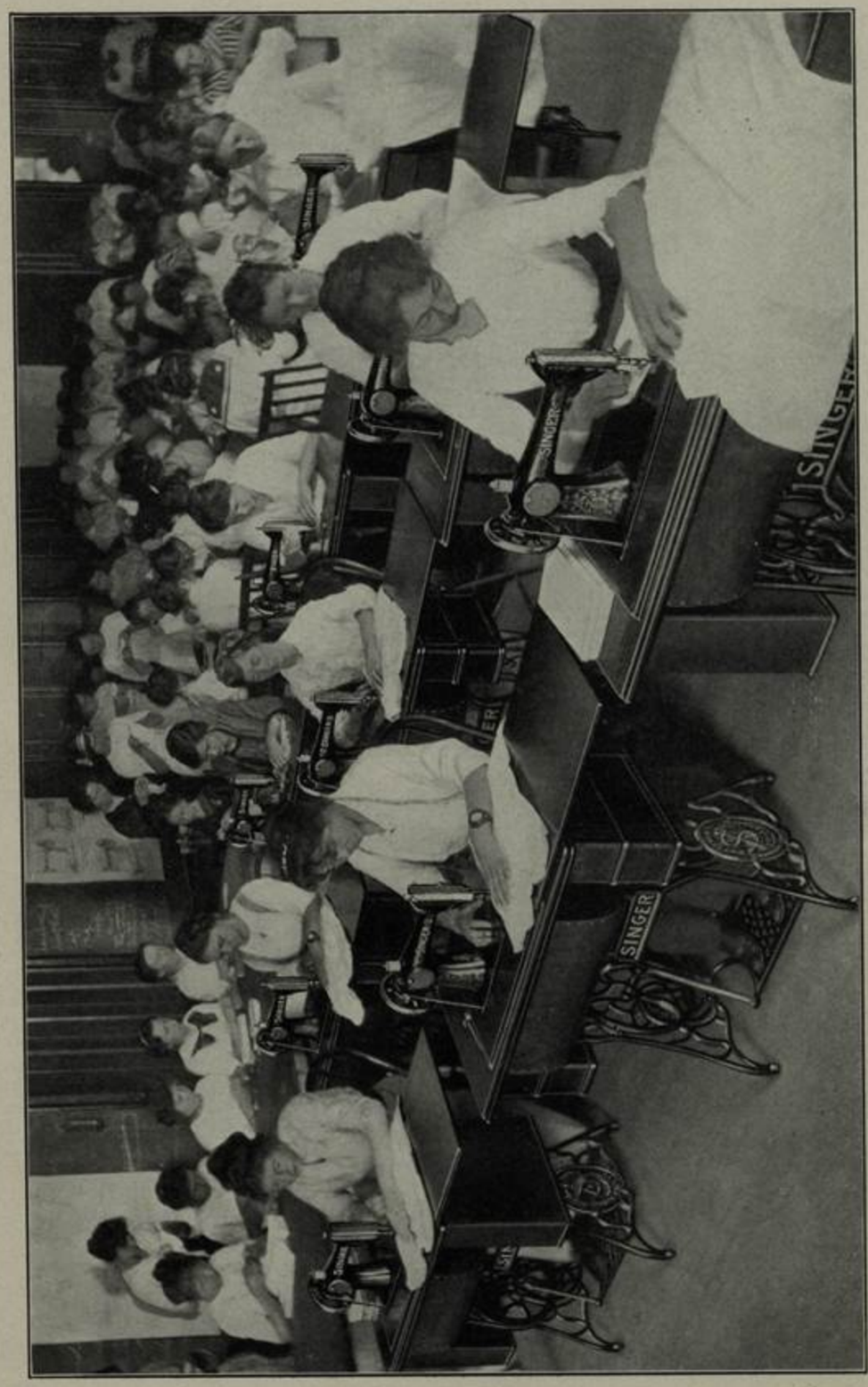
Washington School, Cincinnati, Ohio

Dyer School, Cincinnati, Ohio

Washington Irving High School for Girls, New York, N. Y.

Boardman Apprentice Shop, New Haven, Conn.

Girls' Technical High School, Providence, R. I.



Teachers' College, Cedar Falls, Iowa

PREFACE

The great aim in education is to equip the scholar for his or her future career. One of the surest means to this end, in a girl's education, is to teach her how to use a sewing machine, and the best thing to do is to teach her in the operation of the machine she is sure to use in later life. Throughout the entire world there are more Singer Sewing Machines in daily use than all other makes combined—therefore, it is important that the girls should be taught to sew upon a "Singer" because it is the Machine they will inevitably select.

A girl who has been properly trained in the use of a Singer Machine is not only able to save herself and family much money and time, but is equipped to earn her living, should she require to do so, in one of the great sewing industries.

In every nook and corner of the world Singer Sewing Machines are doing good work under all conditions, and the women of all nations prefer them.

For all household sewing the Singer Machine is pre-eminently the most serviceable. Whether for the finest embroidery, the plainest home sewing, or the most elaborate tailoring, the "Singer" is equally efficient.

There is practically no limit to the variety of sewing which can be performed on a Singer, such as ruffling, tucking, braiding, binding, quilting, hemming, darning, fine silk embroidery, etc., all of which can easily be executed with equal excellence. An important point to pupils who learn to operate a SINGER is that they are receiving instructions upon the standard machine of the day, and that no matter where they may eventually reside throughout the world they will there find Singer Sewing Machines and Singer Shops.

For darning and mending, Singer Sewing Machines are indispensable. After an article has been repaired by a Singer the darn is scarcely discernible. Singer Sewing Machines are in regular use in all the large Hotels, Hospitals, Laundries, etc., and in each establishment are earning their cost over and over again.

The important point to teachers when installing a Singer is that that they are entitled to the help and benefit of the unique Singer staff of expert teachers and mechanics always ready to supply lost parts or attend to any possible adjustments which may be necessary.

Singer Shops are located in every city throughout the world.

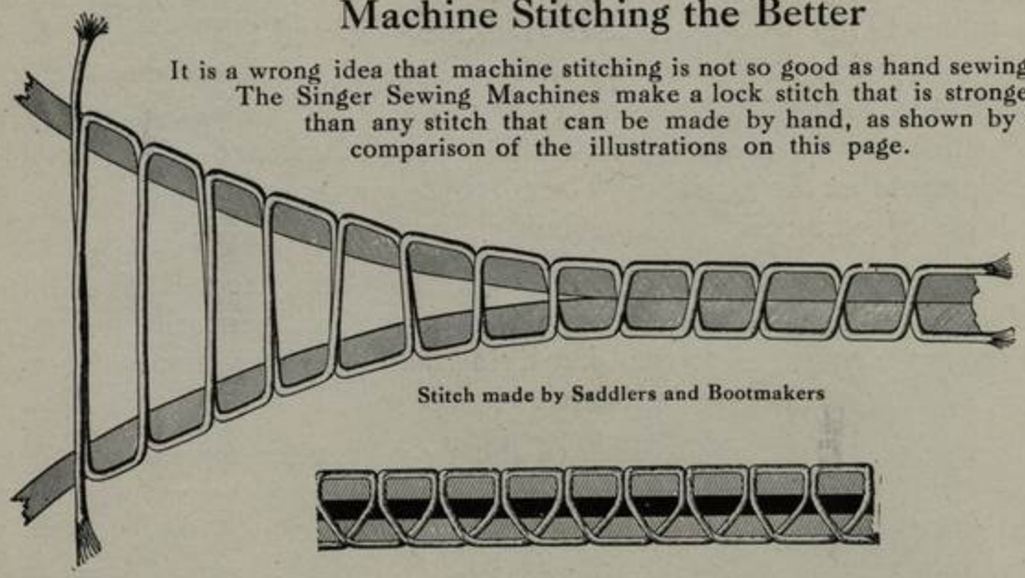
The Machines

There are four types of machines for making the two thread lock stitch—the Rotary Hook, the Oscillating Hook, the Oscillating Shuttle and the Vibrating Shuttle.

All are made by **The Singer Manufacturing Company**, and each is the best of its type.

Machine Stitching the Better

It is a wrong idea that machine stitching is not so good as hand sewing. The Singer Sewing Machines make a lock stitch that is stronger than any stitch that can be made by hand, as shown by a comparison of the illustrations on this page.

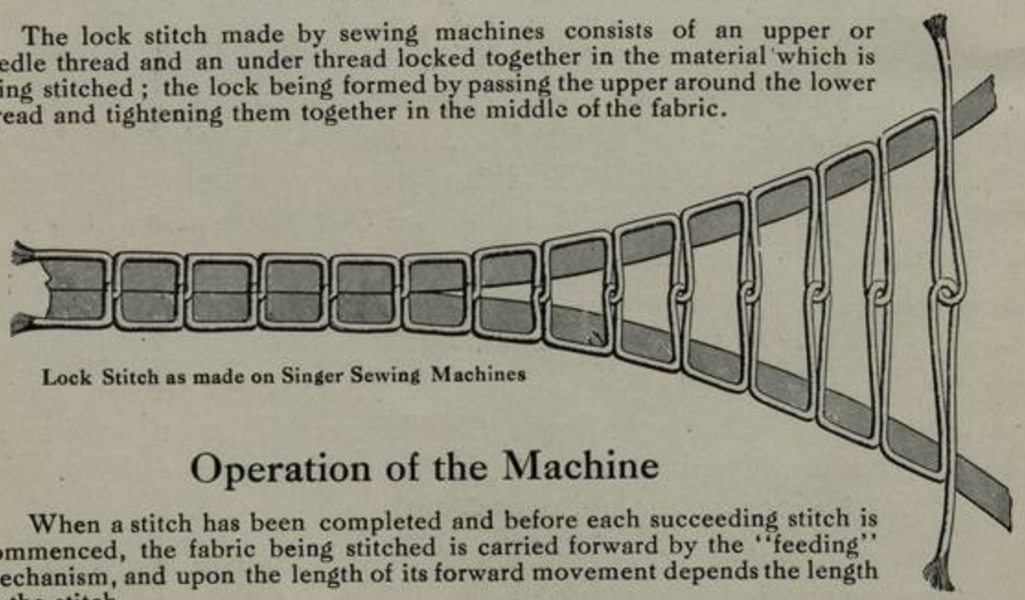


Stitch made by Saddlers and Bootmakers

Ordinary Stitching by Hand

Formation of the Lock Stitch

The lock stitch made by sewing machines consists of an upper or needle thread and an under thread locked together in the material which is being stitched; the lock being formed by passing the upper around the lower thread and tightening them together in the middle of the fabric.



Lock Stitch as made on Singer Sewing Machines

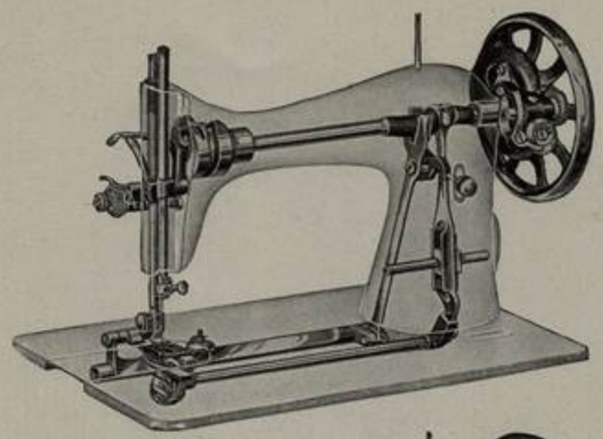
Operation of the Machine

When a stitch has been completed and before each succeeding stitch is commenced, the fabric being stitched is carried forward by the "feeding" mechanism, and upon the length of its forward movement depends the length of the stitch.

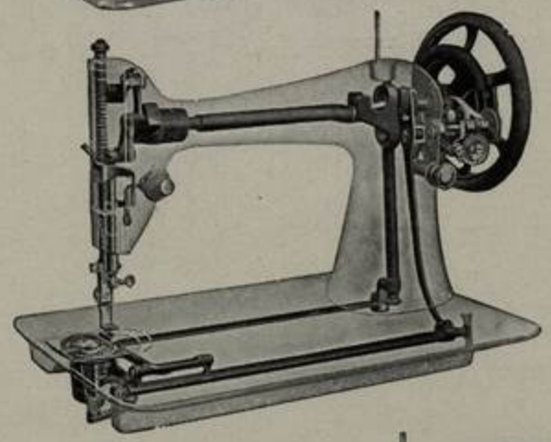
The presser foot holds down the fabric and prevents it from rising with the needle. A section of the foot pressing on the cloth is shown as broken in the illustrations, in order that the view of the stitching may not be obstructed.

On following pages are illustrations showing the method of forming a lock stitch. In the illustrations the needle thread is shown black and the under thread white, the fabric being stippled, in order that each may be readily distinguished.

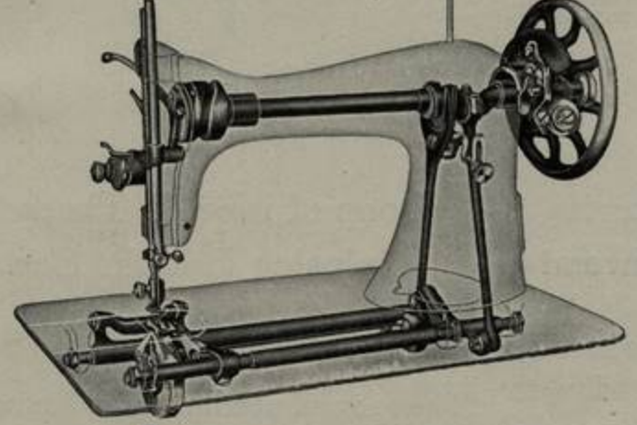
The Lock Stitch Machines



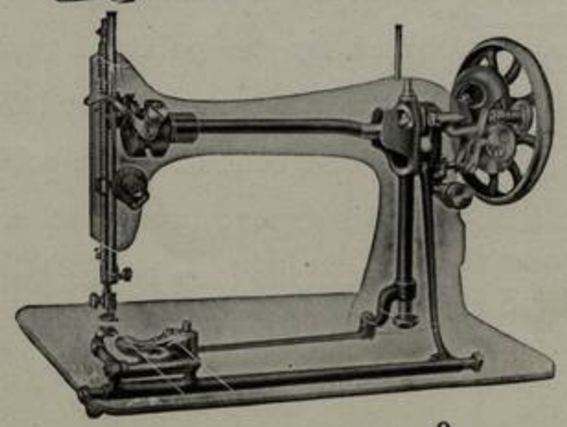
Machine No. 115-1
Lock Stitch
The Rotary Hook



Machine No. 66-1
Lock Stitch
The Oscillating Hook



Machine No. 15-30
Lock Stitch
The Oscillating Shuttle
Central Bobbin



Machine No. 127-3
Lock Stitch
The Vibrating Shuttle

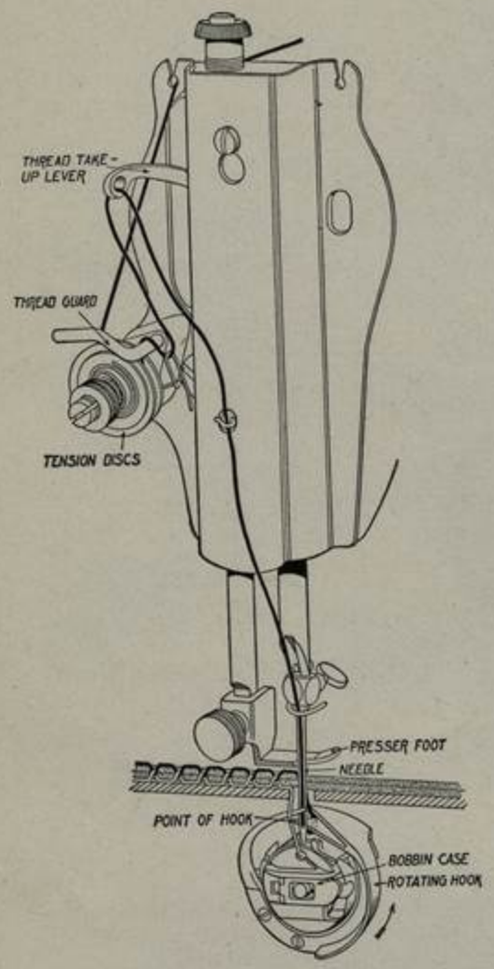


Fig. 11

Point of Hook Entering Loop of Needle Thread

Fig. 11 shows the first stage in stitch formation. The thread leading to the needle is loosened, because the thread take-up lever has begun its descent; the needle, after having descended to its lowest point, has been slightly raised and a loop of thread is thus formed which is immediately entered by the point of the hook, which rotates in one direction around the stationery bobbin case.

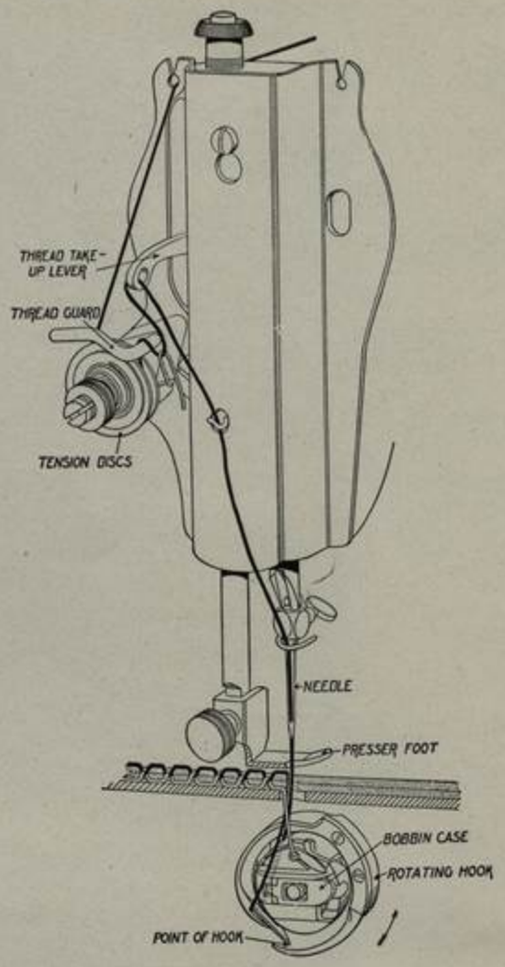


Fig. 12

Loop of Needle Thread Enclosing Bobbin Case

Fig. 12 shows the second stage. The loop of needle thread has been taken by the point of the hook and is being passed around the bobbin case containing the bobbin of under thread, sufficient enlargement of the loop having been permitted by the descent of the thread take-up lever.

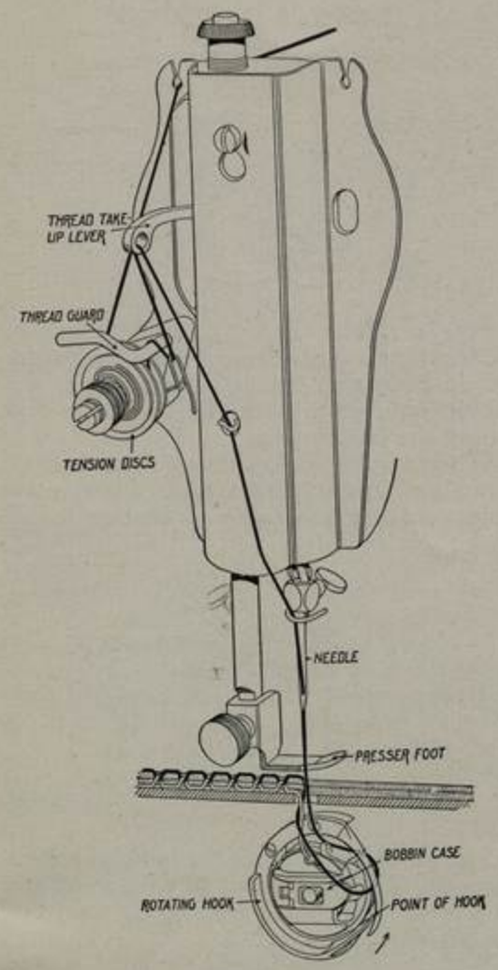


Fig. 13

Under Thread Enclosed by Needle Thread

Fig. 13 shows the third stage. The loop of needle thread has been cast off from the hook, the under thread has been enclosed by the needle thread, and the thread take-up lever is being raised to tighten the stitch.

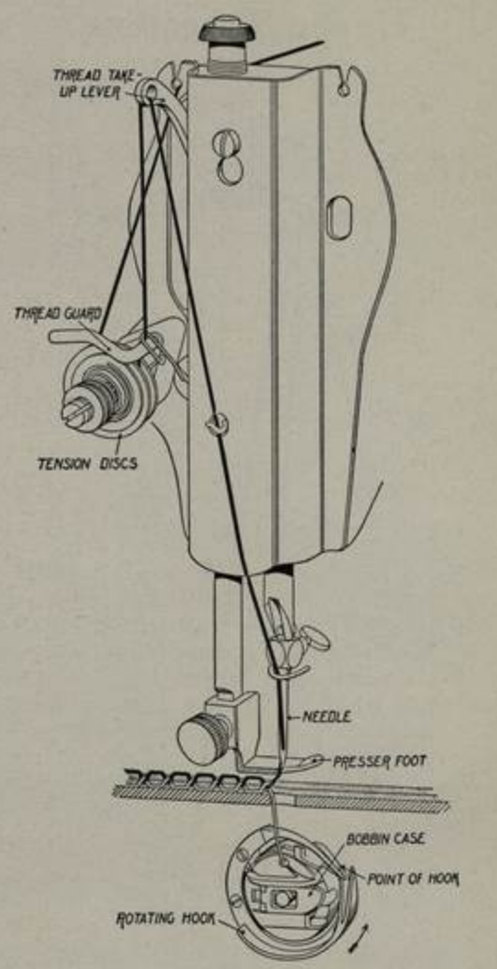


Fig. 14

Stitch Completed

Fig. 14 shows the stitch completed. The thread take-up lever has been raised to its highest point, drawing the needle thread, together with the under thread, into the middle of the fabric, the two threads now being locked. The tension on the needle thread is regulated by the circular tension discs shown in the illustrations, and the tension on the under thread is regulated by a spring on the bobbin case.

Upper Threading

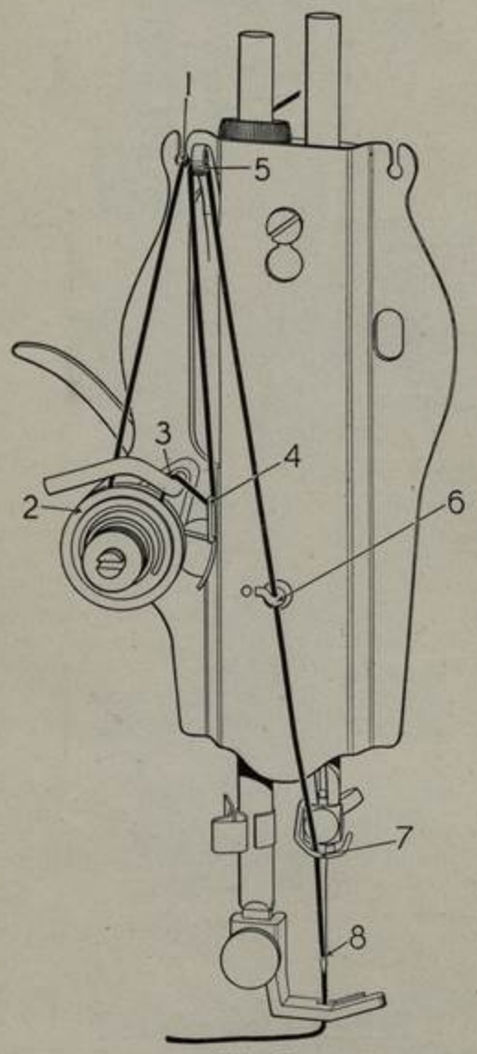


Fig. 7

Raise the take-up lever (5) to its highest point by turning the balance wheel over toward you. Place the spool of thread on the spool pin; draw the thread toward the left through the thread guide (1) at the back and at the top of the face plate, down, under and around from back to front between the tension discs (2), up back of the tension thread guard (3), down into the loop of the take-up spring (4), up and from back to front through the eyelet in the end of the take-up lever (5), down through the eyelet (6) in front of the face plate and into the wire thread guide (7) at the lower end of the needle bar, then from left to right through the eye of the needle (8). Draw about two inches of thread through the eye of the needle with which to commence sewing.

Under Threading

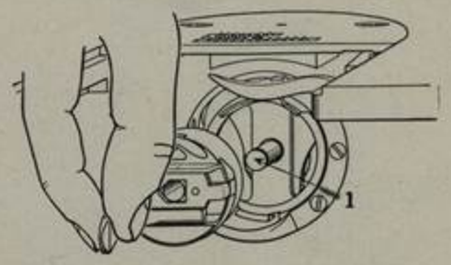


Fig. 1. Draw out the slide in the bed of the machine. Reach down with the thumb and forefinger of the left hand, open the bobbin case latch with the forefinger and lift out the bobbin case.

While the latch remains open the bobbin is retained in the bobbin case. Release the latch, turn the bobbin case downward and the bobbin will drop out.

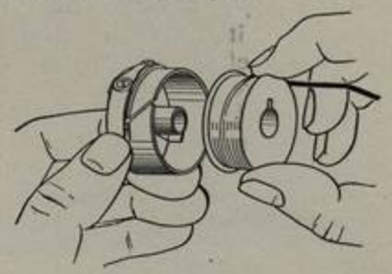


Fig. 2. After winding the bobbin, hold it between the thumb and forefinger of the right hand, the thread leading on top from the left toward the right.

With the left hand hold the bobbin case as illustrated (Fig. 2), the slot in the edge being at the top, and place the bobbin into it.

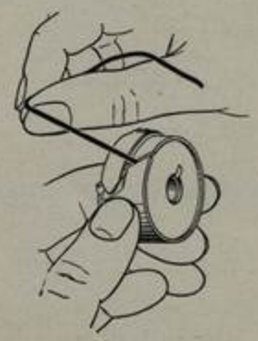


Fig. 3

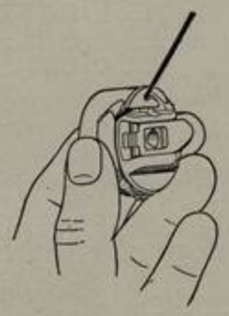


Fig. 4

Then pull the thread toward the left, into the slot in the edge of the bobbin case, (See Fig. 3).

Then draw the thread under the tension spring, and turning the case over in the fingers toward the right, pull the thread into the delivery eye, which is on the latch side of the bobbin case, (See Fig. 4).

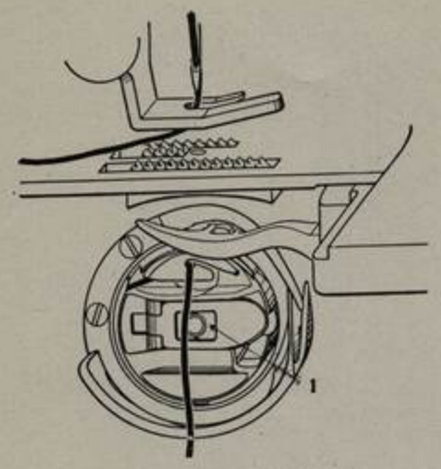


Fig. 5

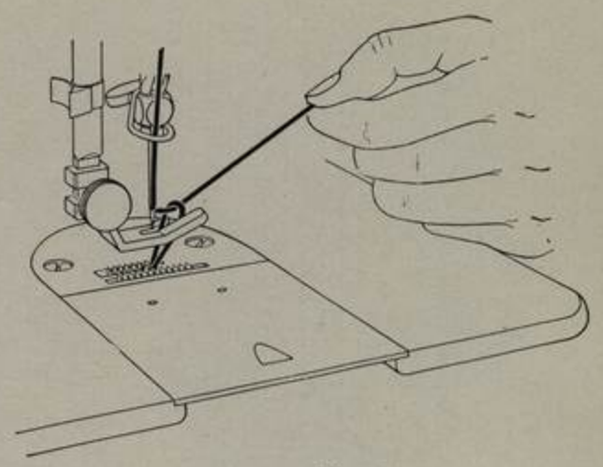


Fig. 6

To Replace the Bobbin Case

After threading, take the bobbin case by the latch, holding it between the thumb and forefinger of the left hand, place the bobbin case on the centre stud of the bobbin case holder, (See 1 in Fig. 1 and Fig. 5) release the latch and press the bobbin case back until the latch catches the groove near the end of the stud. Allow the thread to hang free and replace the slide in the bed of the machine.

Drawing up the Under Thread

With the left hand hold the end of the needle thread, leaving it slack from the hand to the needle, turn the balance wheel over towards you until the needle moves down and up again to its highest point, thus catching the under thread; draw up the needle thread and the under thread will come up with it through the hole in the throat plate, (see Fig. 6). Lay both threads back under the presser foot.

To Regulate Tensions

For ordinary stitching the upper and under threads should be locked in the center of the material as shown in the above illustration, Fig. 9.

If the tension on the upper thread is too tight, or if that on the under thread is too loose, the thread will lie straight along the *upper surface* of the material.

If the tension on the under thread is too tight, or if that on the upper thread is too loose, the thread will lie straight along the *under side* of the material.

To tighten the tension on the upper thread, turn the thumb nut, (See Fig. 8) in front of the tension discs, over toward you. To loosen the tension turn the nut over from you.

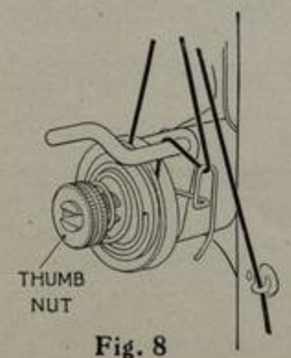


Fig. 8

The tension on the under thread is regulated by the screw in the bobbin case tension spring, (See Fig. 10). To tighten the tension turn the screw over to the right. To loosen the tension turn the screw over to the left.

When the lower tension has been once properly adjusted it is seldom necessary to change it, as a correct stitch can usually be obtained by tightening or loosening the upper tension.

Fig. 10

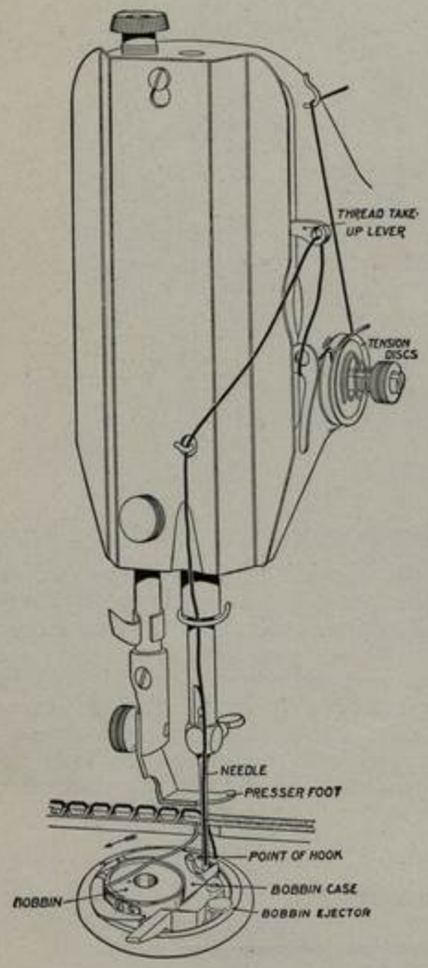


Fig. 10

Point of Hook Entering Loop of Needle Thread

Fig. 10 shows the first stage in stitch formation. The thread leading to the needle is loosened, because the thread take-up lever has begun its descent; the needle, after having descended to its lowest point, has been slightly raised and a loop of thread is thus formed which is immediately entered by the point of the hook.

This type of hook makes part of a revolution during the beginning of each stitch, the direction being indicated by the arrows in Figs. 10 and 11, and during the completion of the stitch the direction of the hook is reversed as shown by the arrows in Figs. 12 and 13.

The hook oscillates around the bobbin case which is held stationary.

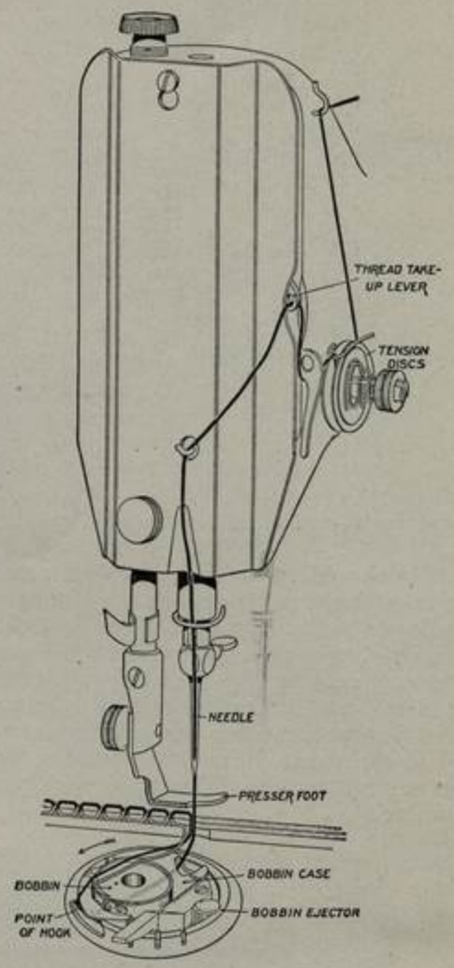


Fig. 11

Loop of Needle Thread Enclosing Bobbin Case

Fig. 11 shows the second stage. The loop of needle thread has been taken by the point of the hook and is being passed around the bobbin case containing the bobbin of under thread, sufficient enlargement of the loop having been permitted by the descent of the thread take-up lever.

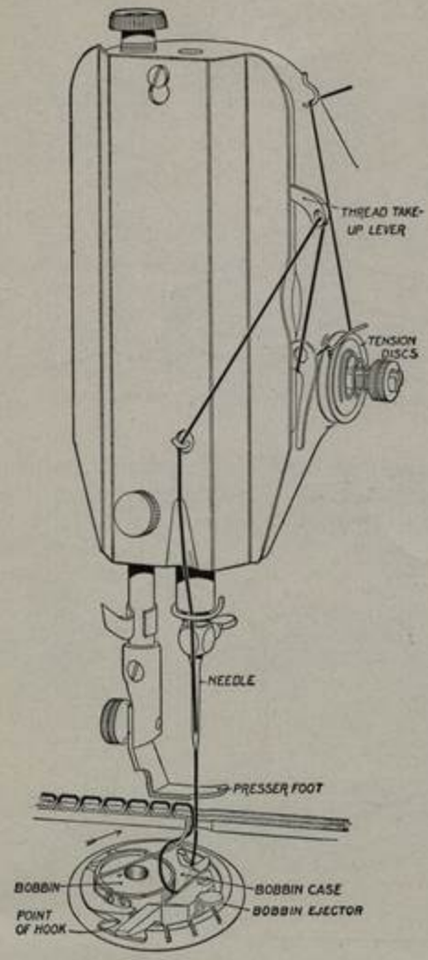


Fig. 12

Under Thread Enclosed by Needle Thread

Fig. 12 shows the third stage. The under thread has been enclosed by the needle thread, and the thread take-up lever is being raised to tighten the stitch.

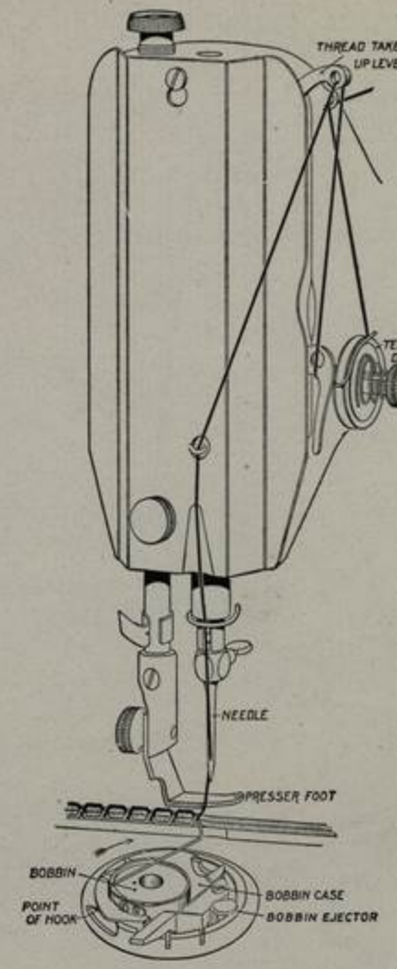


Fig. 13

Stitch Completed

Fig. 13 shows the stitch completed. The thread take-up lever has been raised to its highest point, drawing the needle thread, together with the under thread, into the middle of the fabric, the two threads now being locked. The tension on the needle thread is regulated by the circular tension discs shown in the illustrations, and the tension on the under thread is regulated by a spring on the bobbin case.

Upper Threading

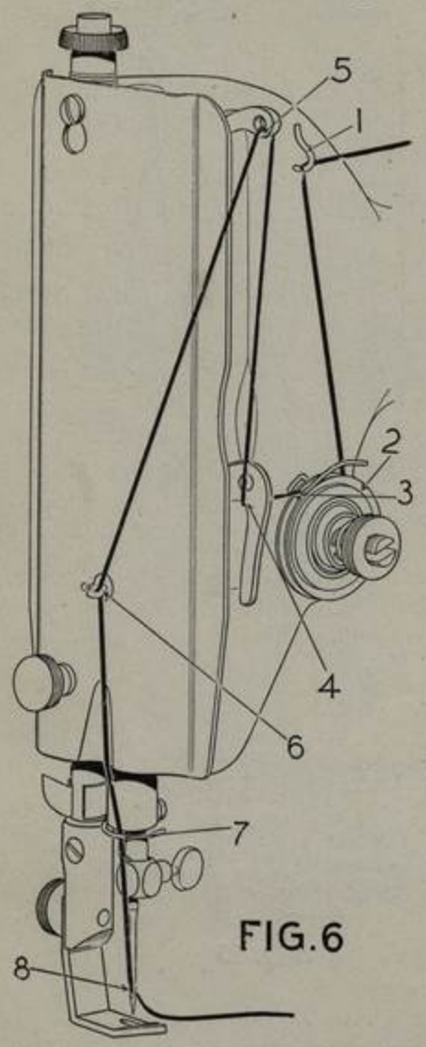
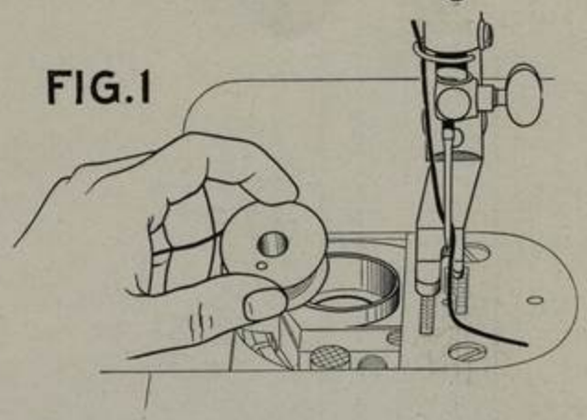


FIG.6

Raise the thread take-up lever (5) to its highest point by turning the balance wheel over toward you. Place the spool of thread on the spool pin; lead the thread into the thread guide (1) at the left and near the top of the arm, down, under and from right to left between the tension discs, (2) into the small wire spring (3) at the left of the discs, *under the thread regulator at the left* (4) (not through the eye in the thread regulator), up and from right to left through the eyelet (5) in the end of the thread take-up lever, down into the eyelet in front of the face plate (6) into the lower wire guide (7), then from *left to right* through the eye of the needle (8). Enough thread must be drawn through the needle to leave an end about two inches long with which to commence sewing.

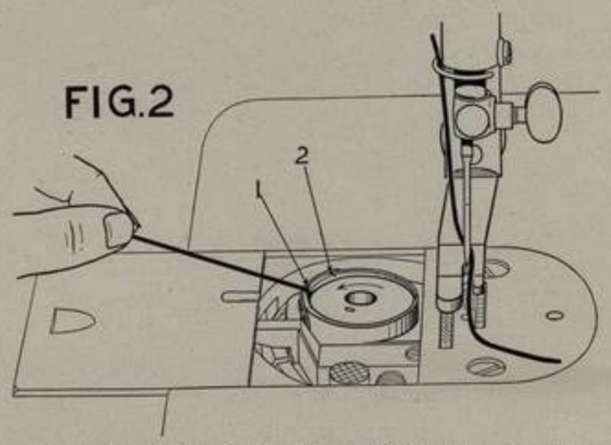
Under Threading

FIG.1



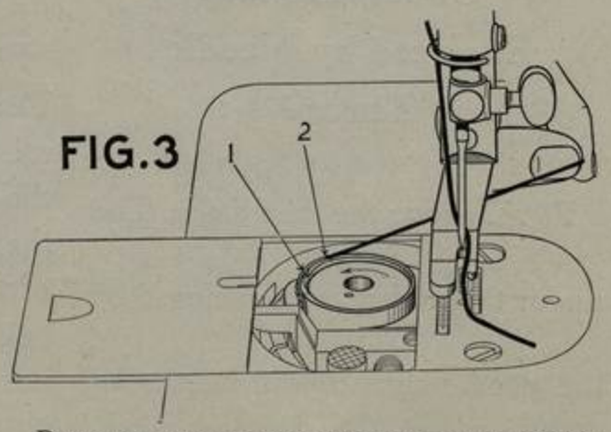
Hold the bobbin between the thumb and forefinger of the left hand, the thread leading on top from the right toward the left, (see Fig. 1).

FIG.2



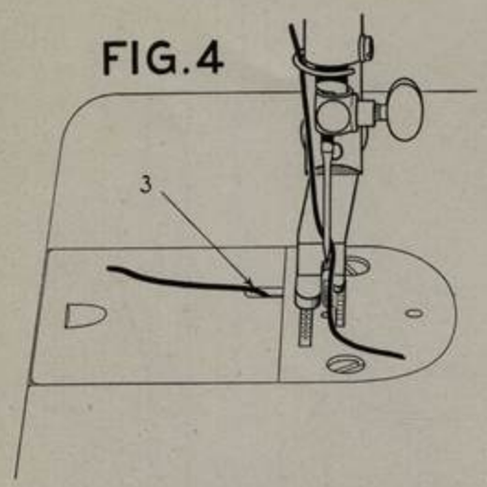
Place the bobbin into the bobbin case and draw the thread into the slot in the bobbin case at the left, (see 1 in Fig. 2).

FIG.3



Draw the thread backward between the bobbin case and the tension spring until it reaches the notch (see 2 in Fig. 3), then pull the thread with the left hand toward the right as illustrated, and close the slide.

FIG.4



When closing the slide see that the thread is in the slot in the right edge of the slide, as shown in Fig. 4. This completes the under threading.

With the left hand hold the end of thread, leaving it slack from the hand to the needle, turn the balance wheel over toward you until the needle moves down and up again to its highest point, thus catching the under thread; draw up the needle thread and the under thread will come up with it through the hole in the throat plate (see Fig. 5). Lay both threads back under the the presser foot.

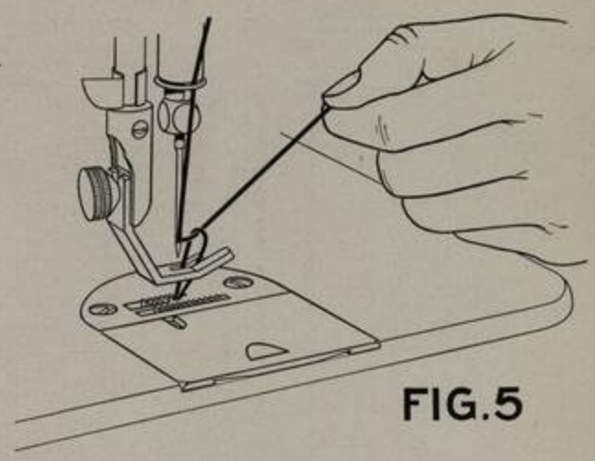


FIG.5

The machine is then ready for stitching.

To Regulate Tensions

For ordinary stitching the upper and under threads should be locked in the centre of the material as shown in the above illustration, Fig. 8.

If the Tension on the Upper Thread is too tight, or if that on the Under Thread is too loose, the thread will lie straight along the *upper surface* of the material.

If the Tension on the Under Thread is too tight, or if that on the Upper Thread is too loose, the thread will lie straight along the *under side* of the material.

To tighten the Upper Tension turn the thumb nut over to the right. Turn the nut over to the left to loosen it, (see Fig. 7).

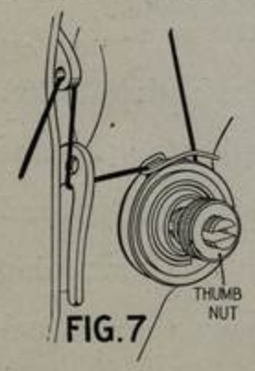


FIG.7

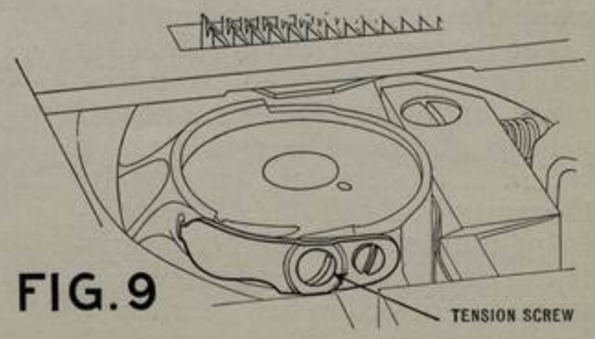


FIG.9

The Tension on the Under Thread is regulated by the large screw which is nearest the back in the bobbin case tension spring, (see Fig. 9); turn over to the right to tighten the tension or to the left to loosen it.

When the Lower Tension has been once properly adjusted it is seldom necessary to change it, as a correct stitch can usually be obtained by varying the upper tension.

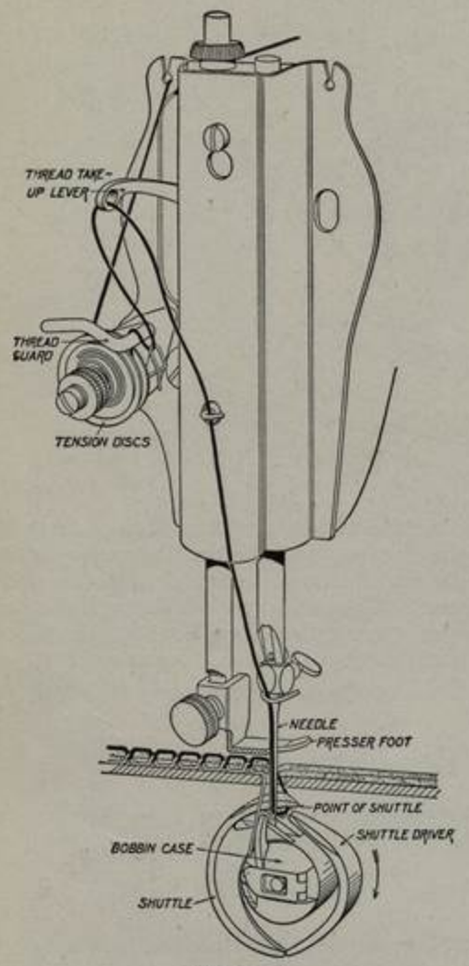


Fig. 11

Point of Shuttle Entering Loop of Needle Thread

Fig. 11 shows the first stage in stitch formation. The thread leading to the needle is loosened, because the thread take-up lever has begun its descent; the needle, after having descended to its lowest point, has been slightly raised and a loop of thread is thus formed which is immediately entered by the point of the shuttle. The oscillating shuttle makes part of a revolution during the beginning of each stitch, the direction being indicated by the arrows in Figs. 11 and 12, and during the completion of the stitch the direction of the shuttle is reversed as shown by the arrows in Figs. 13 and 14.

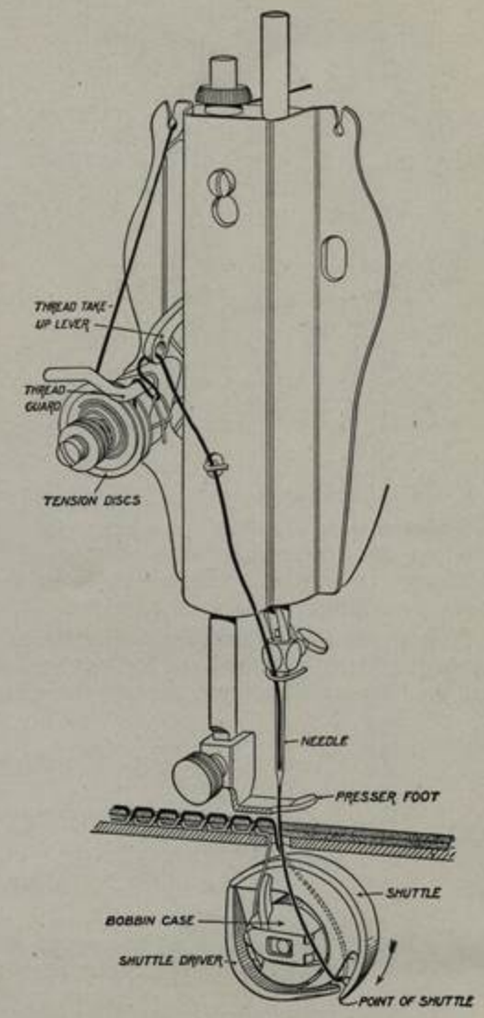


Fig. 12

Loop of Needle Thread Enclosing Bobbin Case

Fig. 12 shows the second stage. The loop of needle thread has been taken down by the point of the shuttle and is being passed around the bobbin case containing the bobbin of under thread, sufficient enlargement of the loop having been permitted by the descent of the thread take-up lever.

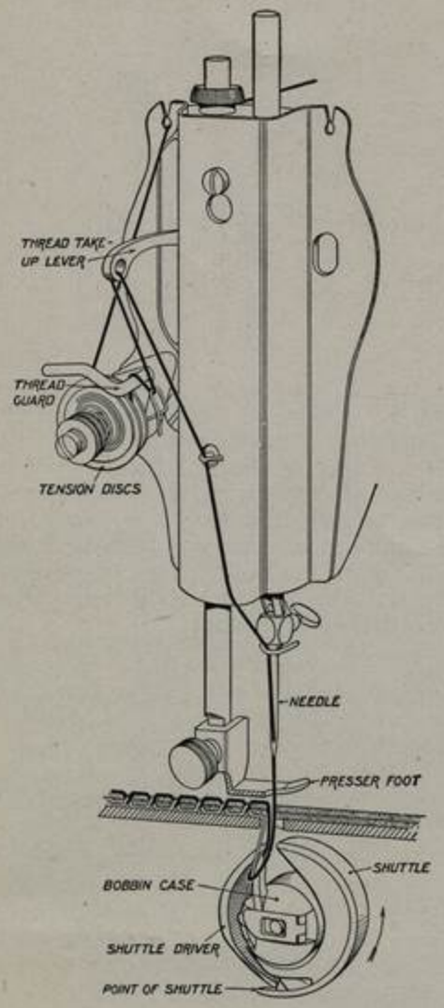


Fig. 13

Under Thread Enclosed by Needle Thread

Fig. 13 shows the third stage. The loop of needle thread has been cast off from the shuttle, the under thread has been enclosed by the needle thread, and the thread take-up lever is being raised to tighten the stitch.

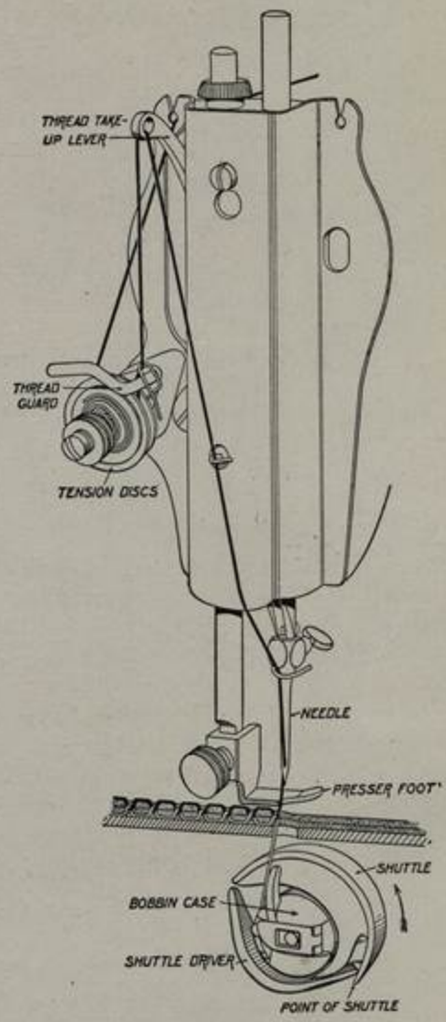


Fig. 14

Stitch Completed

Fig. 14 shows the stitch completed. The thread take-up lever has been raised to its highest point, drawing the needle thread, together with the under thread, into the middle of the fabric, the two threads now being locked. The tension on the needle thread is regulated by the circular tension discs shown in the illustrations, and the tension on the under thread is regulated by a spring on the bobbin case.

Upper Threading

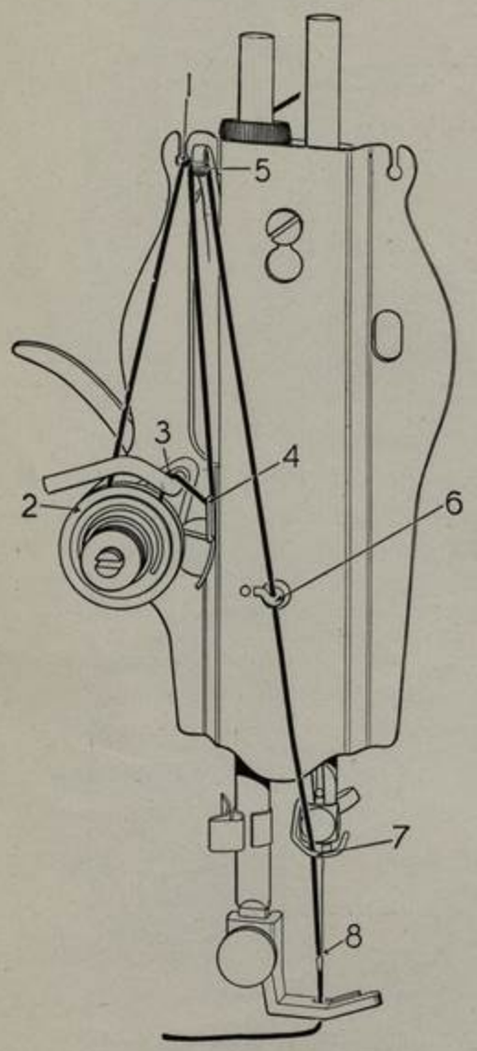


Fig. 7

Raise the take-up lever (5) to its highest point by turning the balance wheel over toward you. Place the spool of thread on the spool pin; draw the thread toward the left through the thread guide (1) at the back and at the top of the face plate, down, under and around from back to front between the tension discs (2), up back of the tension thread guard (3), down into the loop of the take-up spring (4), up and from back to front through the eyelet in the end of the take-up lever (5), down through the eyelet (6) in front of the face plate and into the wire thread guide (7) at the lower end of the needle bar, then from left to right through the eye of the needle (8). Draw about two inches of thread through the eye of the needle with which to commence sewing.

Under Threading

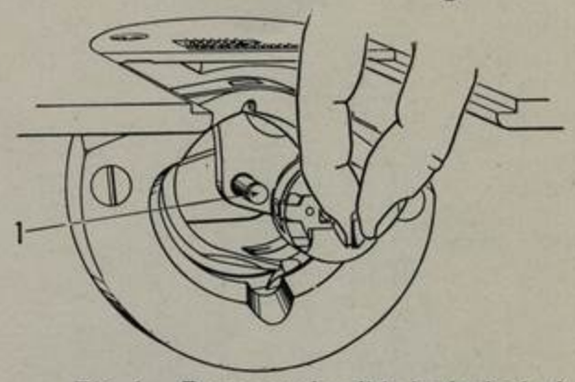


Fig. 1. Draw out the slide in the bed of the machine. Reach down with the thumb and forefinger of the left hand, open the bobbin case latch with the forefinger and lift out the bobbin case.

While the latch remains open the bobbin is retained in the bobbin case. Release the latch, turn the bobbin case downward and the bobbin will drop out.

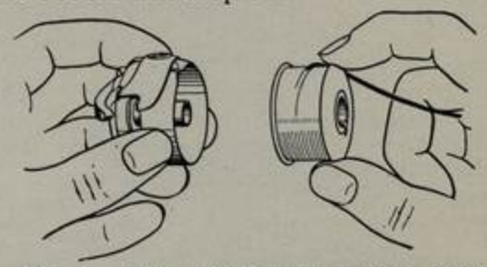


Fig. 2. After winding the bobbin, hold it between the thumb and forefinger of the right hand, the thread leading on top from the left toward the right. With the left hand hold the bobbin case as illustrated (Fig. 2), the slot in the edge being at the top, and place the bobbin into it.

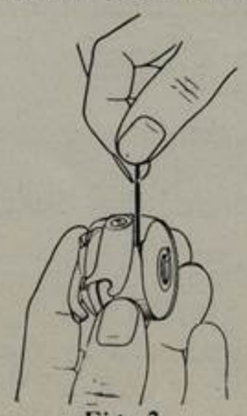


Fig. 3

Fig. 4

Then pull the thread into into the slot in edge of the bobbin case, (Fig. 3). Draw the thread down, under the tension spring, and to the left into the delivery eye at the end of the tension spring, (See Fig. 4).

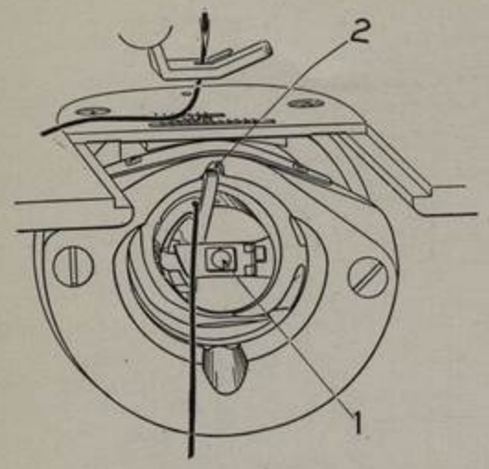


Fig. 5

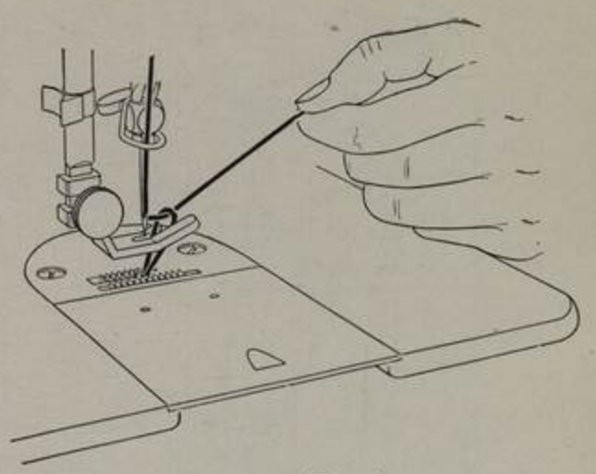


Fig. 6

To Replace the Bobbin Case

After threading, take the bobbin case by the hinged latch, holding it between the thumb and forefinger of the left hand, place the bobbin case on the centre stud of the shuttle body, (See 1 on Fig. 1 and Fig. 5), with the position finger, (See 2 on Fig. 5), in the notch at the top of the shuttle vase, release the latch and press the bobbin case back until the latch catches the groove near the end of the stud. Allow the thread to hang free and replace the slide in the bed of the machine.

Drawing up the Under Thread

With the left hand hold the end of the needle thread, leaving it slack from the hand to the needle, turn the balance wheel over towards you until the needle moves down and up again to its highest point, thus catching the under thread; draw up the needle thread and the under thread will come up with it through the hole in the throat plate, (see Fig. 6). Lay both threads back under the presser foot.

To Regulate Tensions

For ordinary stitching the upper and under threads should be locked in the center of the material as shown in the above illustration, Fig. 9.

If the tension on the upper thread is too tight, or if that on the under thread is too loose, the thread will lie straight along the *upper surface* of the material.

If the tension on the under thread is too tight, or if that on the upper thread is too loose, the thread will lie straight along the *under side* of the material.

To tighten the tension on the upper thread, turn the thumb nut, (See Fig. 8) in front of the tension discs, over toward you. To loosen the tension turn the nut over from you.

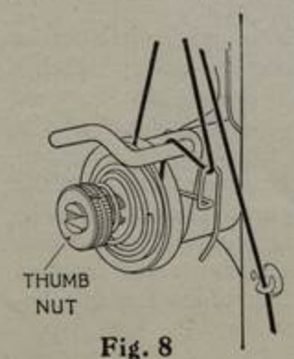


Fig. 8

The tension on the under thread is regulated by the screw in the bobbin case tension spring, (See Fig. 10). To tighten the tension turn the screw over to the right. To loosen the tension turn the screw over to the left.

When the lower tension has been once properly adjusted it is seldom necessary to change it; a correct stitch can usually be obtained by tightening or loosening the upper tension.

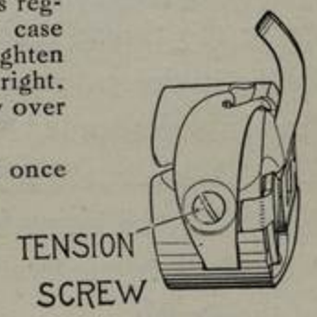


Fig. 10

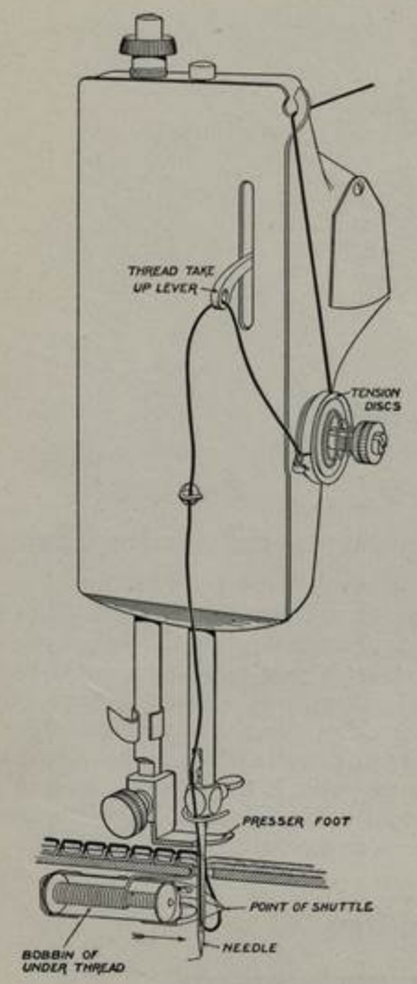


Fig. 1

Point of Shuttle Entering Loop of Needle Thread

Fig. 1 shows the first stage in stitch formation. The thread leading to the needle is loosened, because the thread take-up lever has begun its descent; the needle, after having descended to its lowest point, has been slightly raised and a loop of thread is thus formed which is immediately entered by the point of the shuttle.

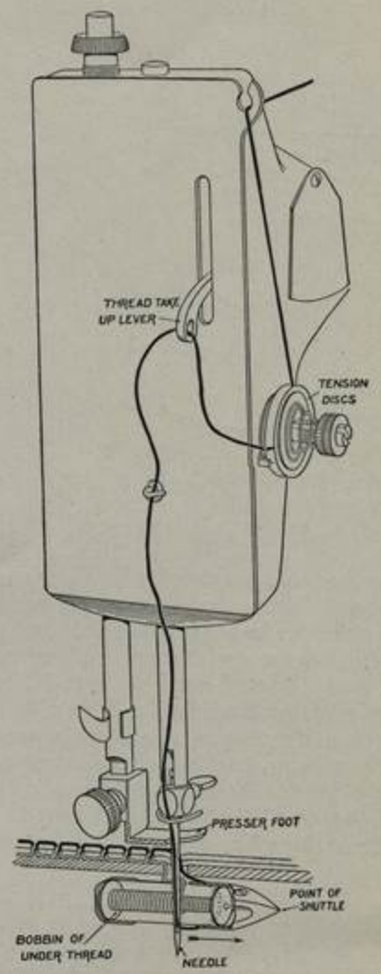


Fig. 2

Shuttle in Loop of Needle Thread

Fig. 2 shows the second stage. The shuttle containing the bobbin of under thread, has fully entered the loop of needle thread, sufficient enlargement of the loop having been permitted by the descent of the thread take-up lever.

The shuttle travels to and fro in a carrier to which it is not fastened, but by which it is held in position. During the forward movement of the shuttle the loop of needle thread slips between the shuttle and the carrier, then passes out between the heel of the shuttle and the rear part of the carrier. The shuttle thread is thus enclosed in the loop of needle thread and both threads are then drawn up by the action of the thread take-up lever.

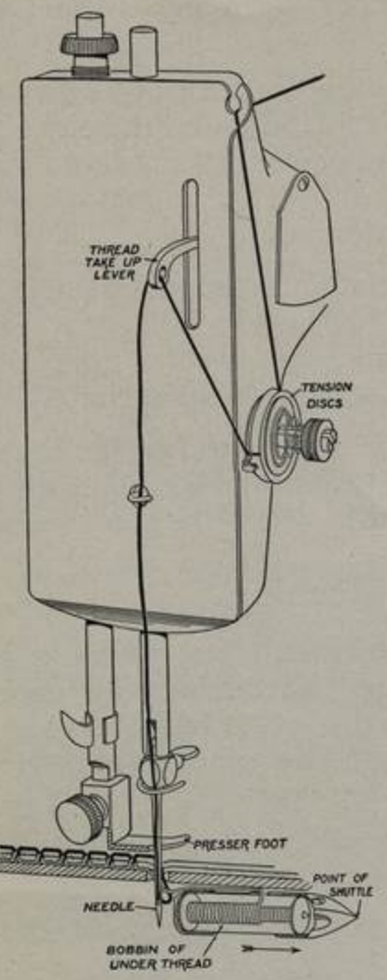


Fig. 3

Shuttle Thread Enclosed by Needle Thread

Fig. 3 shows the third stage. The shuttle has passed through the loop of needle thread, the shuttle thread has been enclosed by the needle thread, and the thread take-up lever is being raised to tighten the stitch.

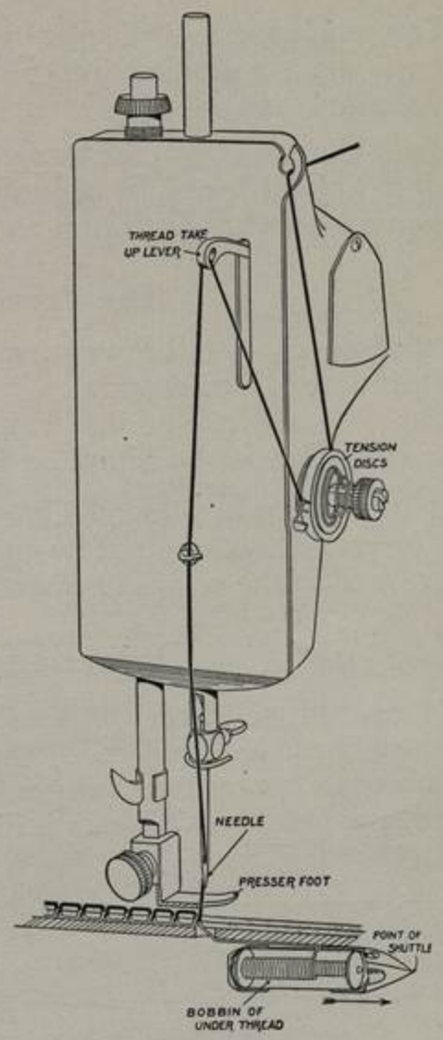


Fig. 4

Stitch Completed

Fig. 4 shows the stitch completed. The thread take-up lever has been raised to its highest point, drawing the needle thread, together with the shuttle thread, into the middle of the fabric, the two threads now being locked. The tension on the needle thread is regulated by the circular tension discs shown in the illustrations, and the tension on the under thread is regulated by a spring on the shuttle.

Single Thread Elastic Chain Stitch

The stitch made by Singer machine No. 24-50 for family sewing is formed from a single thread which is interwoven into a chain *on the under side of the fabric.*

To make this chain, the thread from the needle is formed into a series of interlinking loops by a looper which rotates under the cloth plate. When a new stitch is commenced the one preceding is being finished.

The Tension is Automatic

so that no changes are required for variation in length of stitching or in thickness of fabrics.

This is the Simplest Form of Sewing Mechanism

and is sometimes preferred for that reason and also because the seam can be readily taken apart by unfastening the last stitch and drawing out the thread in the opposite direction to that in which the seam was sewn.

Operation of the Machine

In operation, when the needle is raised, the fabric which is being stitched is carried forward by the "feeding" mechanism and upon the length of its forward movement depends the length of the stitch. The process of fastening the seam is illustrated and described as follows:

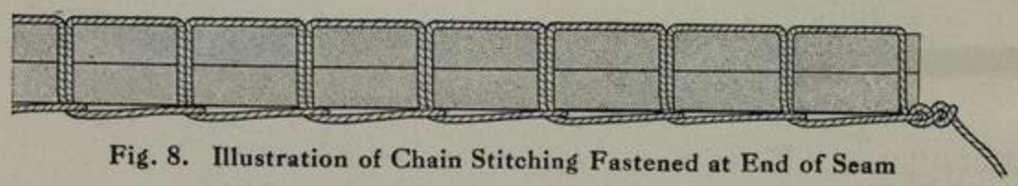


Fig. 8. Illustration of Chain Stitching Fastened at End of Seam

The last stitch in the seam must be fastened; when finishing a seam, sew two stitches past the end of the seam, stop the needle bar at its highest point (which is the only point at which the thread is not held by the automatic tension), with the left hand catch the thread in front of the face plate and pull a finger length of slack thread through the tension. With the right hand draw the slack through the eye of the needle, then pull the thread upward from the work, the presser foot being down, until the thread breaks in the goods. Lift the presser foot, pull the work from you, and the end of the thread will be drawn through the loop. Pull the end of the thread, which will tighten the knot and fasten off the seam. (Fig. 8.)

Method of Fastening the Last Stitch in the Work

When it is necessary to fasten off the last stitch *in the work*, stop the needle in the work, place the fingers on the work close to the presser foot to prevent the work from moving, raise the presser foot and take one more stitch in the last hole made; then off break the thread close to the fabric and fasten off the same as at the end of the seam. See Fig. 9.

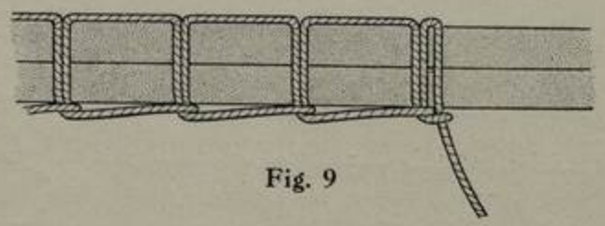


Fig. 9

Single Thread Elastic Chain Stitch

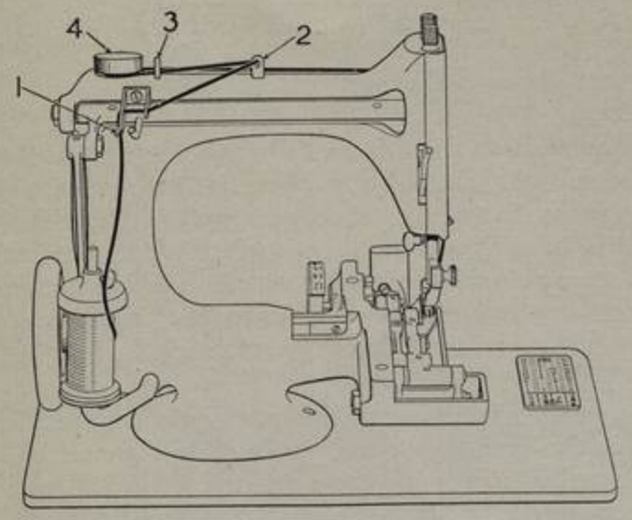


Fig. 1

To Thread the Machine

Raise the needle bar to its highest point by turning the balance wheel from you, in order to open the Automatic Tension for admission of thread. Place a spool of thread on the spool pin and the spool weight on top of the spool; pass the thread up from the spool and from the inside through the lower eyelet in the longest arm of the two-armed thread guide fastened to the back of the machine over the spool. (See 1 in Fig. 1) thence, from the outside, through the upper eyelet in the long arm and thence through the opposite eyelet in the short arm, (as shown in Fig. 1) thence from back to front through eyelet (See 2 in Fig. 2); pass the thread back and in front of pin (See 3 in Fig. 2) around the back and under the tension cap (See 4 in Fig. 2) thence through thread eyelet (See 5 in Fig. 2) down and through eyelet (See 6 in Fig. 2) from right to left, thence up and over the thread take-up (See 7 in Fig. 2) and down through thread eyelet (See 8 in Fig. 2) on the face plate, thence from left to right through the eye of the needle; about three inches of thread should be drawn through the needle with which to commence sewing.

When using coarse silk for embroidery effects, also when stitching fine silk, chiffon and other fabrics that are liable to be drawn or puckered when the machine is threaded regularly, the thread should also be passed into the spring hook made of fine wire, which is just at the right of the lower wire thread eyelet on the side of the arm head near it

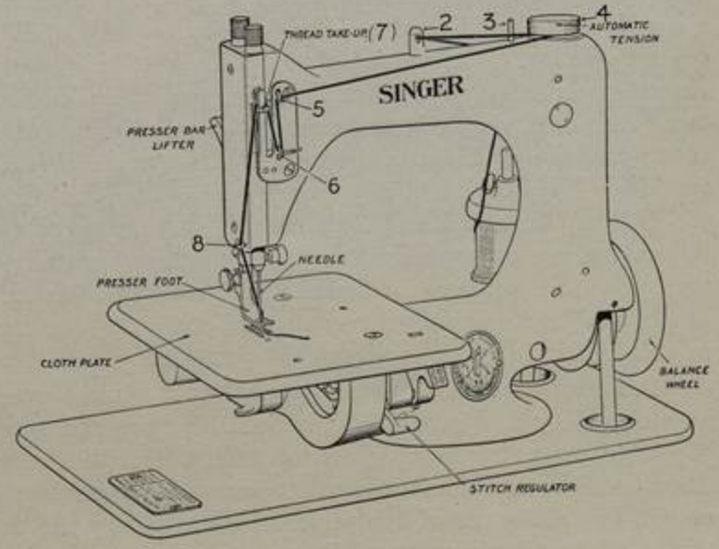


Fig. 2

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SEWING-MACHINE INGENUITY

By Frances Cheney Dawson

BAD habits of work, which have so much to do with our failure to adopt efficient, time-saving ways of doing home tasks, are nowhere in greater evidence than in the sewing-room. Not one woman in twenty, for example, gets all the assistance she should out of her sewing-machine. Not only does she forget all about her box of attachments, a month after the sewing-machine has been installed in her house, but frequently it does not occur to her to open up the machine for ordinary sewing and mending, just because she has always been accustomed to doing certain kinds of sewing by hand.

Many of us are guilty of forgetting to oil or dust our machines, except when there is a rush of seasonal sewing. And yet, in the hand-book of any make of sewing-machine, distinct emphasis is laid upon the necessity for keeping the machinery clean and well lubricated if one is to get the best service out of it.

True, it takes time to go over the sewing-machine carefully, as one does the piano. But this time may be saved by a more intelligent use of the facilities the machine offers, and not only time, but money may be saved by a knowledge of what any good sewing-machine can be made to do. Instead of rushing down-town to purchase a lot of lace to trim our tea apron, or the baby's bonnet, or the shirtwaist we are making, we should think what we can use in the way of self-trimming: that is, trimming made of the same material as that we are working with. Tucking is the natural trimming for sheer materials. Pin-tucks in groups, graduated tucks, box-pleats, cross-barred tucks of many sizes and varieties; bias lawn folds, bias binding and piping; puffing, shirring, ruffling, hemstitching—these are but a few of the possibilities, any one of which will give your garment twice the air and dignity that a cheap lace will, and at the same time prove more durable and cost you nothing.

The first thing to do to get the most service out of a sewing-machine is to study its construction and parts carefully. Learn to understand the adjustment of the tension, the action of the shuttle, if there is one, the quickest way to change the thread, how to alter the stitch length, and what kind of needle to use for different work. Always have a supply of different-sized needles on hand, as well as different numbers of thread and sewing silk, and make a point of using the right combination of needle and thread. See that the needle is sharp and straight, for you cannot do fine work with a crooked or dull one. As a rule, people incline toward too coarse a thread, and, in consequence, a needle that punches ugly holes in the material. Have the thread as near that of the fabric as possible. Keep on hand, in your sewing-machine drawer, a few strips of material upon which to try the stitch and cleanliness of your thread; if the material is unusual or hard to sew on, use a few scraps for practise before beginning work. After oiling, stitch a yard or so to make sure the material will not be blackened. There is a spool-holder that can be bought for twenty-five cents that will keep your drawer in order, since it just fits in and holds the spools in an upright position.

A sewing-machine is useful even when it is not threaded up. If you wish to copy an embroidery design or a braiding pattern, you can transfer it to several thicknesses of brown paper by running over it with unthreaded needle, and afterwards apply it directly on the machine, tearing the paper away when the stitching or braiding is finished; or you can make use of the perforations to stamp the design on another garment by means of transfer powder. With a chain-stitch machine (Singer No. 24-60) you can

decorate your clothes easily and charmingly by running over a braiding design on the wrong side, so that the chain-stitch appears on top. White lawn or other fine material, decorated with a color in this way, is very effective, and when the idea is carried out for a flounced dress or tunic or jumper effect, the result will be equal to one of the high-priced robes that are seen in the stores. With the narrow hemmer attachment and without a needle, you can quickly accomplish the laborious work of turning the hems of your table-linen ready for hand-hemming; any hemmer is invaluable for pressing hems accurately in this way before basting them. When hemming table linen on the machine, leave ends of thread at each corner long enough to thread for staying neatly by hand.

One reason why many women hesitate to undertake much home sewing is because they cannot make tucks and pleats that look as well as the ready-made ones. There is a trade secret about doing this which renders it very easy. After once understanding the use of the tucker—and the chief value of the tucker is the fact that it gauges the spacing properly for you, and then keeps the material straight—provide yourself with a plain waist pattern that fits you properly. Cut off the length of material required for fronts, backs, etc., without shaping it; tuck the fabric from the center toward the arm, both right and left, and then lay your pattern on the tucked goods and cut out. The same plan can be followed for almost any garment. A baby's cap with dainty cross-bar tucking is started by tucking a square of material, then laying a plain pattern on the goods and trimming to shape. There is, however, a value in buying the pattern that looks, when made up, as you want your garment to look. Spread out, you can tell by it how wide to make your piece for tucking, also how many tucks are needed and at what points.

The most useful attachment on my machine is the binder. In connection with the binder I always use the cutting-gauge, by which I make my own strips of bias lawn binding—or any other kind. Out of a yard of ten-cent lawn can be made about thirty yards of seven-eighths-inch binding, which costs ten cents for six yards in the stores. (*See Editor's Note.*) This binding has innumerable uses. Whereas it would be tedious to baste on and then stitch, with the binding attachment I can finish the edge of a large work-apron in no time; I can run around the sleeves, collar, and legs of the children's rompers, and make underwaists, with bound buttonholes as well as bound edges, far cheaper than those that sell in the stores for twenty-five or fifty cents. Bound buttonholes are not difficult to make. First, determine how far apart they are to be, and cut a strip of drilling or whatever material you expect to use, of that width. Bind both edges. Then cut across it in little strips one-half inch wider than the buttonhole. Set the bound edges together, two by two, and stitch down both sides, finally covering the edges with binding. The buttonhole strip is ready to sew on the waist. When making a seam on underwear or aprons, as when an embroidered edging is sewed on a pair of drawers, stitch the seam on the right side, binding it at the same time, and then stitch the binding flat, making at once a trimming and a strong finish.

Loops of bias binding, stitched together, make a very effective finish instead of buttonholes, and can be made in half the time. Fold each loop into a point of the right length, space the desired distance down the waist, and stitch in place. The point can be sewed by hand so as to retain its shape. This is the edge so popular now on crêpe de Chine and fine lawn waists, where many buttons are used down the front. Bound buttonholes for tailored coats are not made with the binder, though they should be done on the machine, and are far easier than a first-rate hand-made buttonhole in cloth.

Piping is done with the binder attachment, the bias bands being cut a trifle narrower so as not to take the double fold, and the first stitching being done on the right side of the material in such a position that the piping will stand up when the material is folded back. All washable garments should have bound seams, if felling or double

seams are not used. Felling can be done by a special type of hemmer, but on curving seams, like the armhole and underarm, binding is less difficult and equally satisfactory.

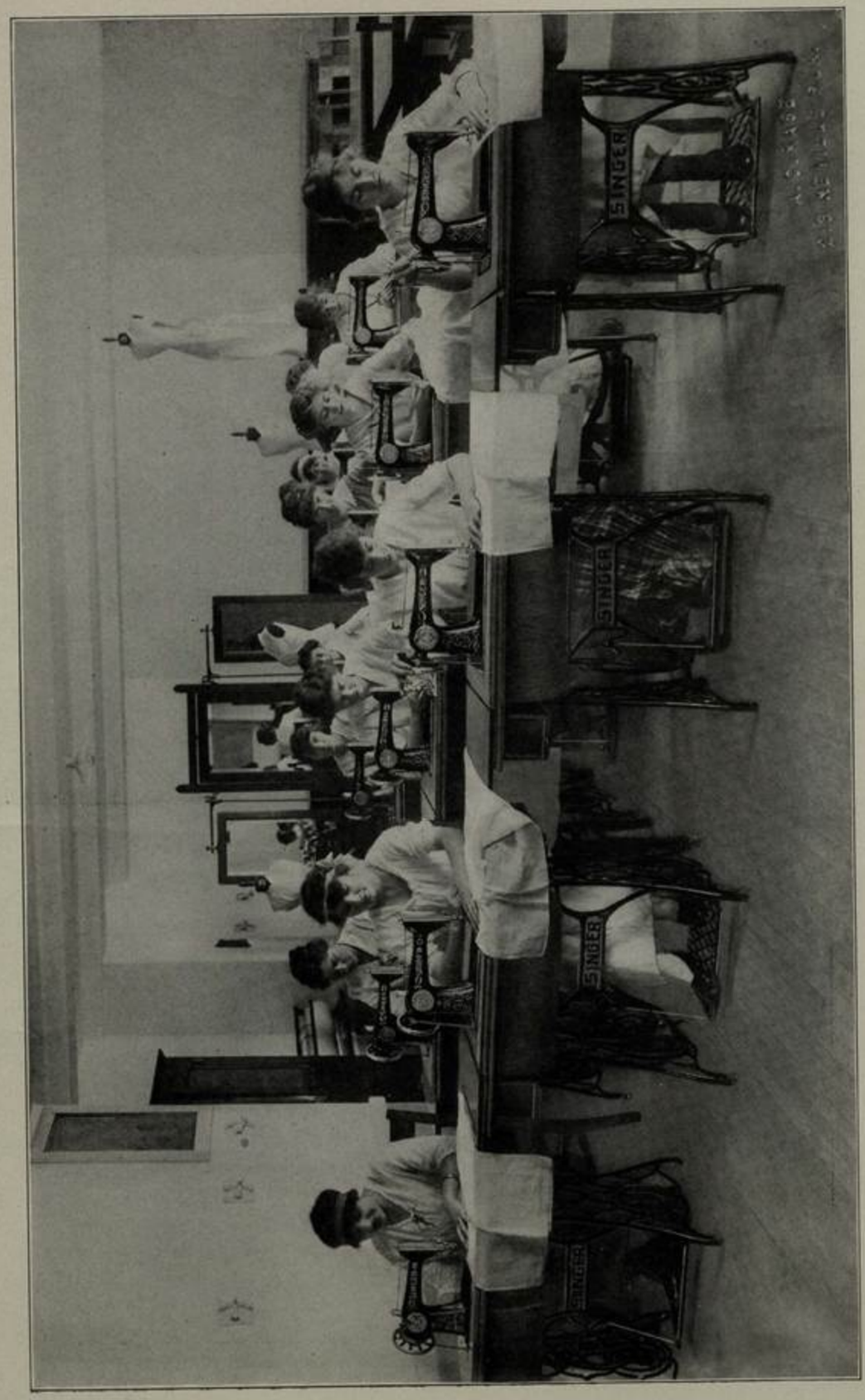
With the new full skirts and ruffled flounces, the ruffler, which is also used for ordinary gathering, is immensely useful. It should be practised with, so that skill is acquired not only for gathering and shirring, but also for pleating the material in different ways. With the help of the stiletto for stroking the folds, very charming pleated neck-wear and pleated trimming can be made. Dainty collar-and-cuff sets are always needed, and those that come ready-made are both fragile and expensive. With the left-overs from a white dress, the binder, and ruffler, any woman can make, almost without extra cost, some of these fine and attractive accessories to her costume. Learn to hem and put on lace at the same time; and there is a way of stitching lace on a hem so that it appears to be whipped on by hand. The lace is laid along the material, facing *inwards*, the exact distance of the hem-to-be from the edge, and stitched on. Then the goods is put in the hemmer, and, when turned, the lace is at the very edge of the hem. In cutting ruffles, have them run across the goods, not down the selvedge, and they will hang and wear better. The quilter will help, when doing repeated shirring, to keep each row an even distance from the last. Another way is to fold the material and crease sharply where each line of shirring is to come. For a small amount of gathering, there is a way of stitching with a long stitch and loose tension. The gathers can be distributed afterwards, as desired.

Successful sewing on sheer or filmy materials, like crêpe de Chine or crêpe Georgette, net, organdy, mousseline, chiffon, or fine maline, must be done over paper to prevent the feed-plate from puckering the fabric and pulling it out of place. If you buy ribbon by the piece, save the paper ribbon and use it for this purpose. Paper can be used under the material with the ruffler or any other attachment.

Hemstitching is a very pleasing trimming for fine waists. It can be done on the sewing-machine, with an attachment that costs fifty cents (Singer No. 28915 for Machines Nos. 27 and 127. For the "66" Machine use No. 28986 and for Machines Nos. 15-30 and 115-1 use No. 28915). Mexican stitch, an imitation of drawn work, is possible after hemstitching. A darning attachment (Singer No. 36088) comes for seventy-five cents, which can be used to mend table-linen or blankets, or other flat places requiring darns. Embroidery hoops help to keep the material flat for darning without any attachment. When embroidering or darning, the presser foot must always be removed and the feed covered with a plate made for that purpose. (Singer No. 32622 for the "66" Machine. For Machines Nos. 15-30 and 115-1 use plate No. 15359 and for Machines Nos. 27-4 and 127-3 use plate No. 8335.) A needle threader costs but ten cents (Singer No. 36088) and saves the eyes and temper wonderfully.

Above all, the woman who would use her machine efficiently should remember to put each article back in its proper place when through with it. There is nothing more discouraging to a woman, at the beginning of a day of sewing, than to find her machine unoiled and gritty, illy-stocked with the necessary tools and supplies, and with the drawers in such a state of disorder that, before setting to work, she must thoroughly overhaul them. If, after every day of sewing, a housewife will take the time, while she is cleaning the sewing-room, to clean the machine as well, putting the possibly slightly tumbled-up drawers in convenient order, and making sure, before she rolls the machine back into its corner, that it is in perfect condition, she will be very thankful, a fortnight later, when, some sudden need having arisen, she can sit down at her machine and find the things she needs. In sewing, as well as in all other work, the great underlying principle of efficiency is, "A place for everything, and everything in its place."

NOTE: While the home manufacture of bias tape is quite feasible as described, it will usually be much preferable to use the "W. & N." bias fold tape, cut by special machinery, folded strictly on the bias, with edges turned straight and true, and the seams are never less than 42 inches apart.



Domestic Art Class, High School, Omaha, Nebr.

Trade School for Girls, Milwaukee, Wis.

Prevocational School, Louisville, Ky.

Sewing School, Irwin Avenue, Pittsburgh, Pa.

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