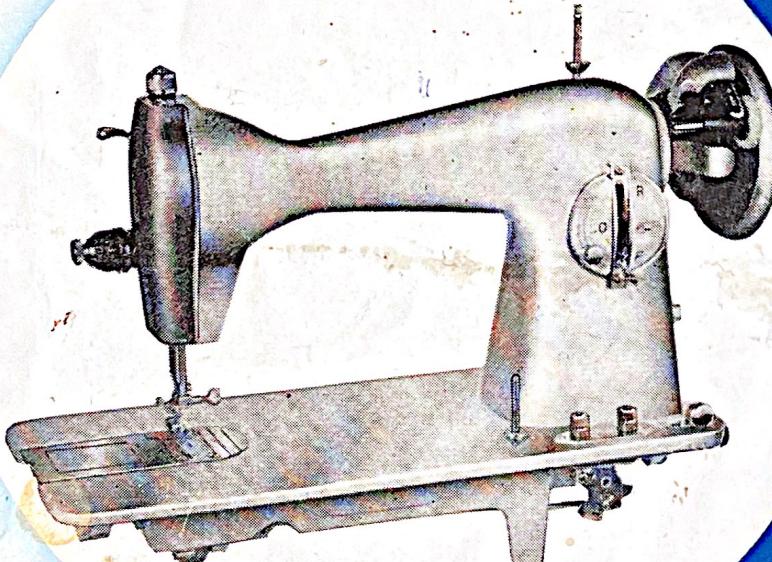
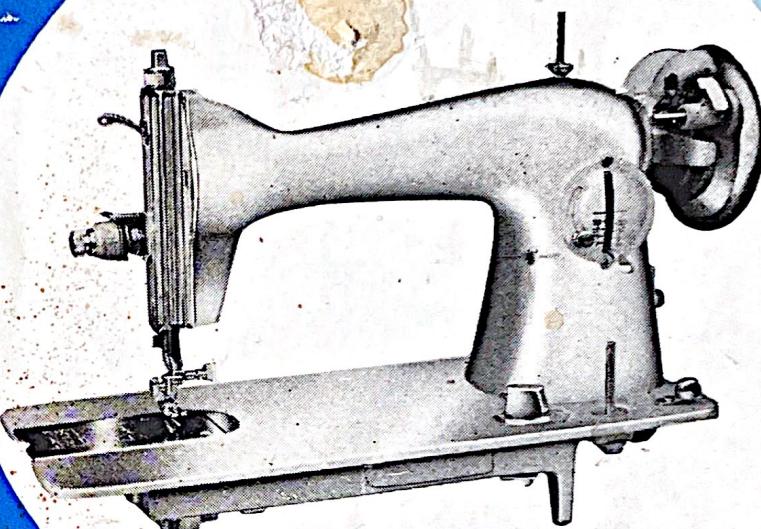


INSTRUCTIONS

USING &
CARE OF
YOUR NEW



SEWING
MACHINE

So Easy--Enjoyable Sewing

WELCOME

- Keep the machine clean and well oiled
- Adjust tensions, etc. properly
- Use proper size needles

... welcome to the family of happy owners of this fine, precision built Sewing Machine. You now have one of the finest full-size sewing machines made, with all these wonderful features:

- * BUILT-IN DARNER.
- * NUMBERED STITCH REGULATOR.
- * INSTANT REVERSE-SEWING by just pushing a button.
- * PUSH-BUTTON DROP-FEED for embroidery and darning.
- * NUMBERED THREAD TENSION DIAL.
- * AUTOMATIC BOBBIN WINDER, stopping and self adjusting.
- * HINGED PRESSER FOOT that rides over pins, seams, etc.
- * NOTCHED SHUTTLE HOOK that prevents thread from jamming.
- * SNAP-OUT RACE for convenience in cleaning.

For first use of the machine, wipe off the Head thoroughly with a soft cloth to remove the preservative oil. This is a precision machine produced with precision parts so don't forget to oil all necessary points in accordance with this instruction Manual. Do not start sewing until you make sure the machine works smoothly when the Motor operates. This machine is carefully designed and produced for greater sewing efficiency for the user. Give good care to your new machine and enjoy sewing in a trouble-free manner, for many years.

This machine is precision-built for a lifetime of sewing service. It will require a minimum amount of servicing, and will give the maximum in efficient service. This manual provides all the information needed to operate the machine and to care for it properly. Read through the book thoroughly so that you may become familiar with the operation of the machine. Follow all instructions closely. Several service calls may be necessary to adjust this machine to your individual needs, and to eliminate any stiffness which may be present during the initial break-in period.

NEVER ATTEMPT TO USE A BENT NEEDLE,
NOR ONE WITH A BLUNT POINT.

Sizes and Grades of Needles	Type of Fabric and Work to be Done	SIZE OF THREAD		
		Cotton	Silk	Linen
11 (Medium-Fine)	Nylon and Plastics, Medium light-weight and summertime fabrics. For house dresses, children's dresses, washable cotton dresses, aprons, curtains.	80 to 100	0	Twist
14 (Medium)	Dress silks and cottons, light weight woolens, draperies, fabric furnishings. For general household sewing, fine men's shirts, smocks, window draperies and fabric decorations.	60 to 80	A & B Twist	
16 (Light-Heavy)	Heavy cretonne, madras, muslin, brocades and quilts. For men's work shirts, sturdy smocks and aprons, heavy quilting and fabric furnishings.	40 to 60	C Twist	
18 (Medium-Heavy)	Heavy woven coating, light-weight canvas, bed ticking, upholstery and awning materials, slipcover fabrics. For work or sports uniforms, suits made of strong linen or cotton fabrics, awnings, slip-covers and mattresses. Heavy woven suiting, coating, duck, ticking, drililing, canvas and sacking. For heavy wash uniforms, bedding supplies for hospitals, hotels and camps.	24 to 30	D E to 80	

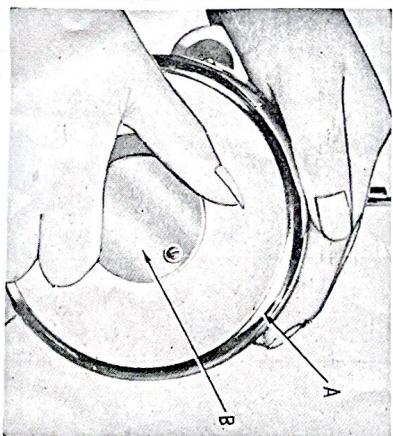
In general sewing, use the same size thread in the bobbin as is used on top.

To Set the Needle

Raise needle to its highest point by turning the balance wheel toward you by hand.

Loosen the needle-clamp screw on the right hand side of the needle bar. Remove the old needle, and insert new needle, FLAT SIDE TOWARD BALANCE WHEEL, until it hits the stop. Then tighten the needle-clamp screw securely.

For best results, change needles frequently.



The Balance Wheel

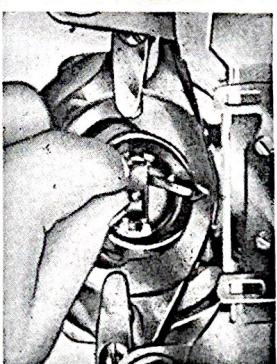
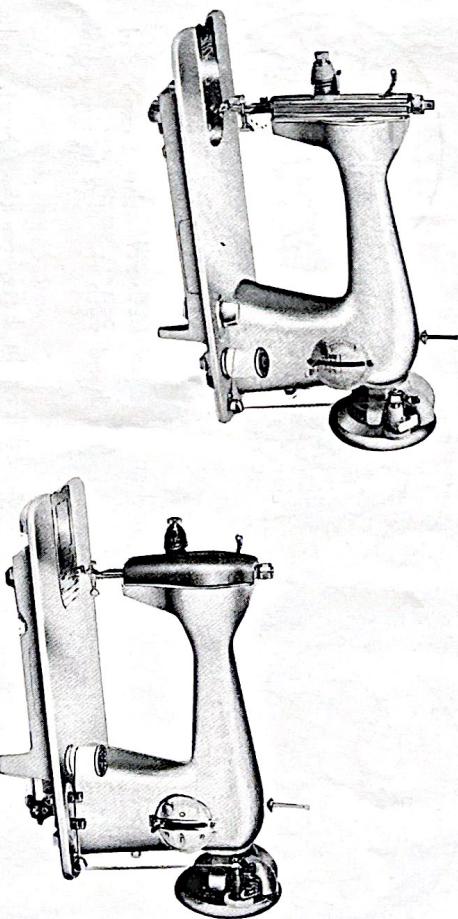
WHEN SEWING, WINDING BOBBINS, OR CHANGING NEEDLES ALWAYS TURN THE BALANCE WHEEL TOWARDS YOU

The balance wheel (A) is provided with a stop-motion device (B) which allows the balance wheel to run freely so that bobbins may be wound without operating the needle.

To loosen the wheel, hold it tightly with the left hand, and with the right hand, turn the stop-motion knob toward you. See arrow.

To tighten the balance wheel, turn stop-motion knob away from you.

To Wind the Bobbin



Loosen the balance wheel (as explained on Page 3).

Place a bobbin on the bobbin-winder spindle, and press it to the end of the spindle, making certain that the pin on the spindle shoulder enters the slot in the bobbin turning the rubber wheel.

Then press down the flat lever (between the bobbin and the rubber wheel) until the bobbin is held in place by the little metal finger that fits between the sides of the bobbin.

Place a spool of thread on the lower spool pin of the machine, and press the thread through the disk (from below) at the bottom right of the machine.

Next, wind the thread at the left end of the bobbin, from below and behind the bobbin and toward you, seven or eight times.

Turn the balance wheel toward you, and press the foot pedal or foot control (as in sewing) to wind the bobbin completely. Run the machine slowly to wind the bobbin evenly.

When the bobbin is full, it will release automatically and come to a stop. Break off the thread, and remove the bobbin.

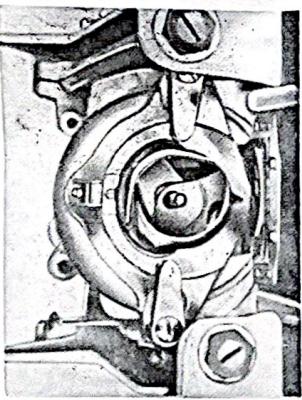
Tighten the balance wheel for sewing. Should the thread wind unevenly on the bobbin, adjust the tension Bracket at the bottom by loosening the screw and sliding the tension right or left as needed to change the tension.

First remove the bobbin case as follows: Turn the balance wheel toward you until the needle bar is at its highest point. Move the hinged slide plate up, and with two fingers grasp the hinged-latch on the bobbin case and remove the case.

Note:—this machine uses standard 15 class bobbins—available at all sewing stores.

Threading the Bobbin Case

Threading the Machine



Inserting the Bobbin Case

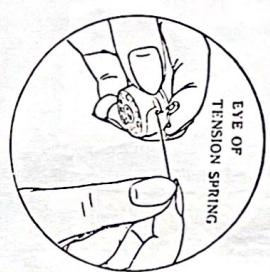
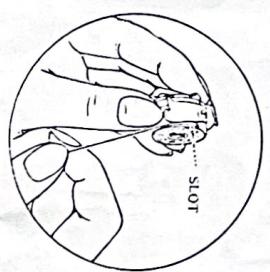
(Be sure the needle is at its highest point.)

Hold the bobbin case with your left hand by the hinged-latch, with the metal finger of the case pointing up and in line with the notch at the top of the bobbin raceway.

Release the hinged-latch, and fitting the centre of the bobbin over the centre-pin protruding from the raceway, press the bobbin gently into position, being sure that the metal finger fits into the notch of the raceway.

The 5 or 6 inches of thread hanging freely from the case will be brought up later through the hole in the centre of the needle plate.

Close the slide plate.



Turn Balance Wheel towards you until the take-up lever is raised to its highest point. Place

spool of thread on the

spool pin of the machine arm: pass thread through the thread guide

(A) at the top corner of the faceplate, down and over the back to front between the tension-disc (B), up to over thread guard (E), down into the hook of check

spring (C), and over back to front through hole in the end of the thread take-up lever (F), down into the eyelet of the

face-plate thread guide

(G), into the needle bar thread guide (H),

then from left to right through eye of the

needle (I). Draw about

5" of thread through the

eye of the needle with which to commence sewing.

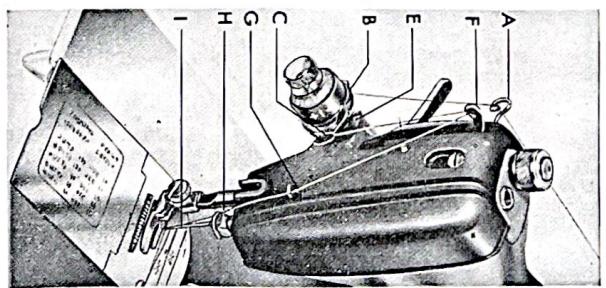
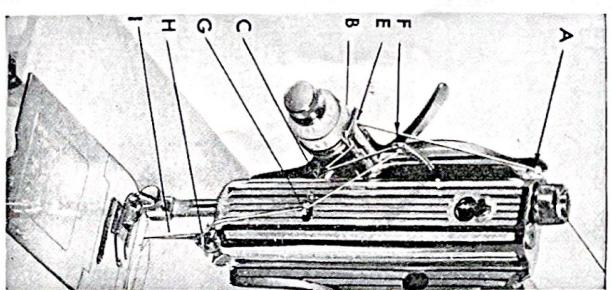
Hold needle thread in your left hand, turn balance

wheel towards you until needle moves up and down,

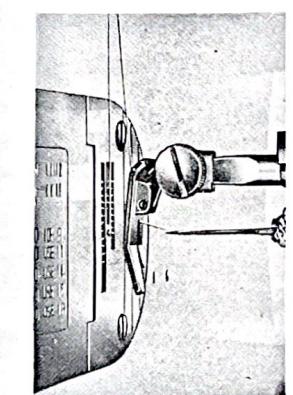
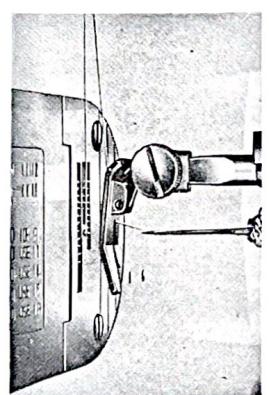
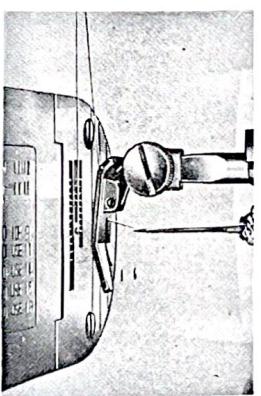
and up again to its highest point, catching the bobbin

thread, which will be brought up that way through

the hole in the throat plate.



To Prepare for Sewing



Pick up the thread as follows: Holding the loose end of the needle thread in your left hand, turn the balance wheel toward you by hand until the needle moves down and up again to its highest point. Pull the needle thread gently, and the bobbin thread will come up with it in the form of a loop through the needle hole. With your finger, pull this loop until the end of the thread appears. (If the bobbin thread does not rise, check to see if at least 5 or 6 inches of bobbin thread is hanging loosely from the bobbin case.) Then draw both ends of the thread back under the presser foot and through the toes of the presser foot.

Place the material to be sewn beneath the presser foot, and lower the presser foot lever. Insert needle into material by turning the balance wheel toward you, by hand. Regulate stitch to desired size and start sewing.

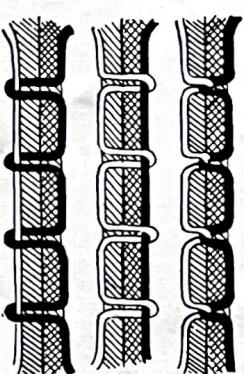
Do not try to help the feeding of the work by pulling the material, as this may bend the needle and cause it to blunt or break. As the machine feeds without any assistance, it is sufficient merely to guide the fabric gently by hand in the direction you want it to be sewn.

IT IS ADVISABLE TO TEST THE TENSION AND THE STITCH LENGTH ON TWO PLIES OF SCRAP MATERIAL BEFORE STARTING TO SEW THE ACTUAL GARMENT.

To Remove the Work

To remove the work, stop the machine with the needle at its highest point; raise the presser foot, and draw the fabric back and to the left, then pass the threads over the thread cutter, and pull down lightly to cut them.

To Regulate the Stitch Formation



For ordinary stitching, the tension on the upper and under threads should be adequate and just sufficiently strong to lock both threads in the center of the work, as shown above (A).

If the tension on the needle is too tight, or if that on the bobbin thread is too loose, the needle thread will lie straight along the upper surface of the material, thus making an imperfect stitch, as shown above (B).

If the tension of the bobbin thread is too tight, or if that on the needle is too loose, the bobbin thread will be straight along the under side of the material, thus making an imperfect stitch, as shown above (C).

To Regulate the Tension

A correct stitch can usually be obtained by varying the tension on the needle thread.

To increase the tension, turn the thumb nut on the tension spring clockwise. To lessen

the tension, turn the nut in the opposite direction. The thumb nut should not be turned abruptly, but regulated little by little, until the desired tension is obtained.

The quality of sewing depends on the thread. Hence, it is necessary for the user to become fully familiar with the correct tension, through practice.



To Regulate the Length of the Stitch

The length of stitch and reversal of stitching, both are regulated by the Regulator Lever.

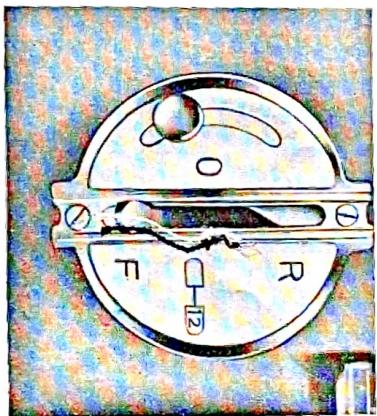
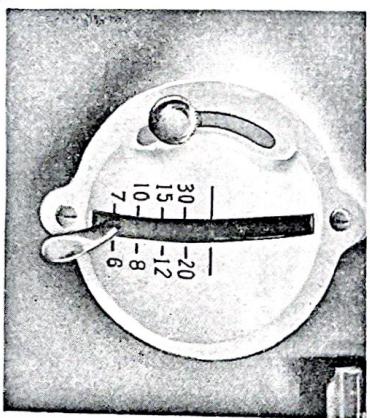
The feeding action is augmented and consequently the stitch length widened by pushing the Regulator Lever downward which is to be kept tightly in position with the screw on the left side of the round metal plate.

On the other hand the length of forward stitch shortens as the Regulator Lever is pushed upward but below the center of the round plate. Therefore the desired length of stitch is obtained in either the normal or reversed stitch by moving the Regulating Lever up or down as needed and sewing, it into the desired position with the stopper screw which ensures a uniform length of stitch.

To sew in reverse, first reduce the speed and stop the wheel by hand. Then raise the Regulator Lever upward from the center line.

This lever can be set at any desired length of stitch required and secured in place tightly with the stopper screw which moves up or down to the position of the lever.

Note: Never sew or use machine in zero or neutral position.

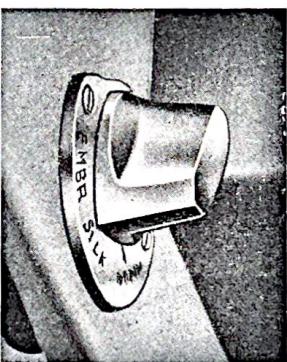


For Darning and Embroidery

The height of the feed may be regulated according to the thickness of the material being sewn, by pressing setting of the push buttons A and B (See picture on the right.)

When sewing on thin materials such as silk, nylon or rayon, push button B down all the way. This drops the feed below the plate. Now press button A halfway down, to red line on button. Machine is now set for sewing lighter materials. When sewing on medium or heavy materials, the button A should be all the way down.

To work THE DROPO-FEED, the button turn the drop-feed knob to "EMBR". The feed dog is then out of the way. For regular sewing turn the drop-feed to its normal position.



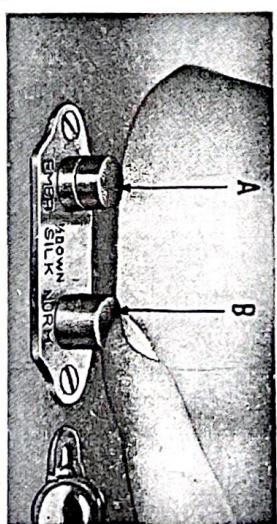
TO WORK THE BUILT IN DARNER.

Catch between thumb and forefinger the fringe of darning and press down, the darning will pop-up, and release the pressure on sewing clothes automatically, now you are ready to darn or embroider.

Large repairs, fine materials, embroidery and applique are best done with a hoop.

It is advisable that you practice carefully on scrap material before attempting any major repair so that you will learn to control the stitching evenly. Be sure to keep the material constantly moving by pressure of your fingers inasmuch as permitting the cloth to remain in one place while sewing may cause your thread to break.

Upon completion of your use of the Darners, simply press the device down to its normal position. Also turn the drop-feed for regular sewing.



To ADJUST THE BOBBIN TENSION.

All sewing machines are correctly adjusted before leaving the factory, and it is therefore seldom necessary to alter the bobbin tension.

Should it become necessary to do so, due to using certain kinds of materials, the adjusting screw in the tension spring on the outside of the bobbin case can be tightened so as to increase the tension, or loosened slightly in order to lessen the tension.

If you want to sew fine fabrics, silk etc., you will get good results if you press the darner to medium height, and turn the drop feed to the silk position.

TO REGULATE PRESSURE OF THE PRESSER FOOT IN REGULAR SEWING. Always maintain only enough pressure to keep the cloth moving and to permit the machine to make a straight seam. When goods do not feed through the machine properly, there may be too much pressure of the presser foot. Adjust this condition by allowing the darning device to rise a bit. Test this adjustment before sewing. If you wish, you can instead adjust the machine for sewing heavier fabrics by adjusting the Drop-Feed.

If your machine has been standing idle for many months, it will require a thorough cleaning and oiling that can best be done by your sewing machine dealer.

Oiling the Machine

Use only a good grade of oil. Inferior oils may cause the machine to become sluggish. Use only oil whose label specifies "for Sewing Machines."

If your machine is used continuously, it should be oiled every day; preferably when you are done using the machine for the day. If not in constant use, oil the machine before using.

Use ONE drop of oil on bearings, and wherever one part rubs against another, or turns within another part.

Some such parts are visible to the eye. Others are hidden inside the castings. Hence look for all oil holes in the casting. Insert the oil can nozzle well into the oil hole.

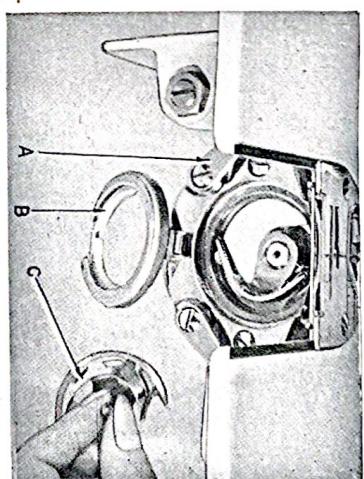
Before oiling the oil hole to the RIGHT of the spool-pin on top of the machine, turn the balance wheel until the needle is DOWN at its lowest point, and look into the oil hole to see that the oil receptacle on the shaft is in position.

Also remove the face plate by loosening the screw near the top and lower, and lifting the face plate up and off. Turn the balance wheel slowly by hand and watch the mechanism under the face plate to see which parts move and require oil.

Next, put three drops of oil in the bobbin raceway after the race has been removed as described at the top of page 12.

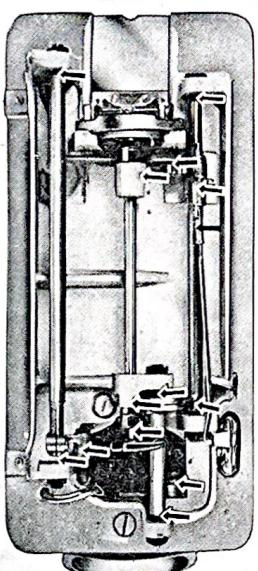
The machine is also to be oiled from the back. Loosen the screw holding the metal plate, move the plate out of the way, and tighten the screw to hold it there. Turn the balance wheel slowly in order to see which parts move and require oil.

To Clean and Oil



Lint, dust and threads collecting in the machine will cause it to become sluggish. To clean the machine, first disconnect the electric cord. Then remove the needle, presser foot, slide plate, and throat plate.

Also remove the bobbin and bobbin case. Brush the exposed parts thoroughly. Remove any packed lint with a toothpick. Clean the inside of the bobbin case and under the spring. Also clean the raceway as instructed on Page 12. (Leave the machine in this condition for oiling.)



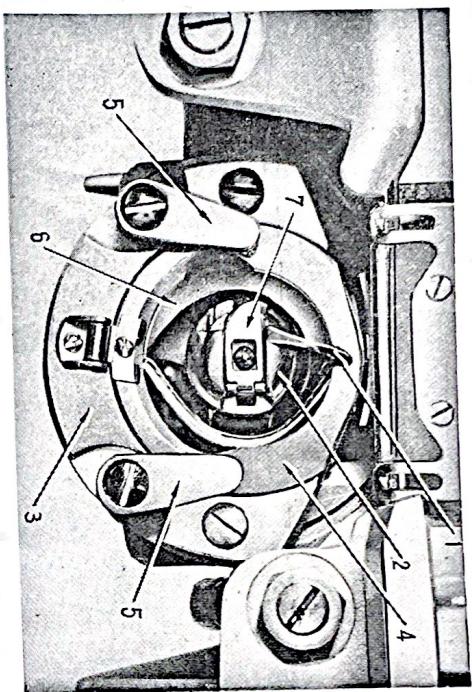
Then tilt the machine back, and again turn the balance wheel slowly to

locate the bearings and other moving parts. Here, too, you will find some oil holes in the castings.

Wipe away all excess oil from all parts of the machine. Connect and run the machine rapidly for a minute to allow the oil to penetrate

to the bearing. Also sew some scrap material to be sure that no oil will drip from the needle bar on to your material.

To Remove Accumulated Lint or Thread from Shuttle Race



Turn the balance wheel towards you until the needle bar is at its highest position.

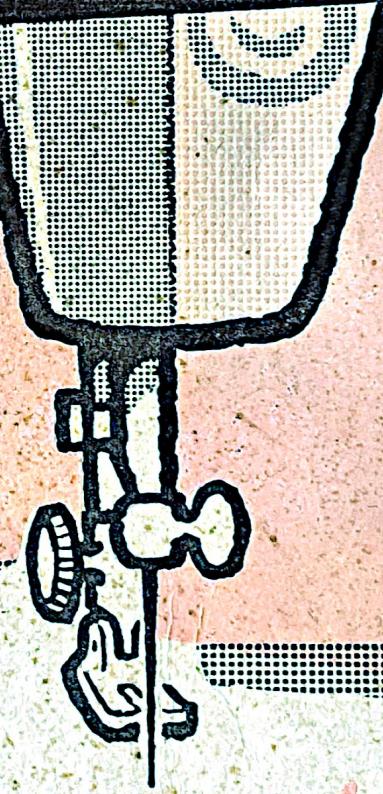
Hold the latch of the threaded bobbin case between the thumb and forefinger of the left hand, replace the bobbin case as shown

(See page 5.)

At the time, make sure that the bobbin case position finger is fixed in the notch of the shuttle race.

- (1) Position Finger.
- (2) Bobbin Case.
- (3) Shuttle Race.
- (4) Race Ring.
- (5) Clips.
- (6) Shuttle Hook.
- (7) Latch.

SEWING MACHINE



Attachments

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Some of these attachments are supplied free with this machine. Others may be purchased from your local dealer at reasonable prices.

THE ATTACHMENT FOOT



The Attachment Foot must replace the presser foot when using the Large Hemmers, Edge stitcher, Binder or Quilter.

Press the blue spring on Attachment Foot forward and slip large hole in the Attachment over the rivet on the Attachment Foot. Then slide Attachment to left as far as possible and release pressure on spring. The stitch may be made close to the edge, or away from it by moving the Attachment slightly on this rivet.

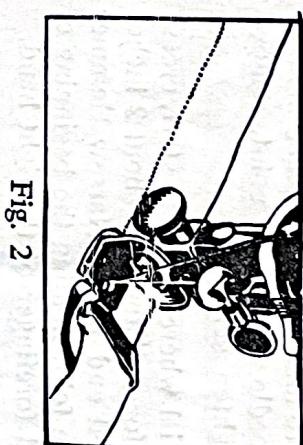


Fig. 2

THE HEMMERS
The $\frac{1}{4}$ ", $\frac{5}{8}$ " and $\frac{7}{8}$ " hemmers are used for turning, finishing and stitching without the troublesome task of measuring, creasing or even basting by hand as when stitching with the presser foot.

Attach the desired size hemmer to attachment foot as already described. Take the cloth in both hands, the right hand in front of Hemmer and the left behind. Insert edge of material in the scroll of the Hemmer, and draw it back and forth a few times, while gradually feeding the cloth into the Hemmer, so as to fill the scroll completely. When the Hemmer is full, draw the cloth back to start hem near the end. Lower presser bar and begin to sew gently, guiding material with first and second fingers of left hand, keeping Hemmer just full. In hemming a curve on flannel or very elastic cloth, guide material with left hand, resisting the feed slightly and guiding the work carefully.

The suggestion made in connection with the Narrow Hemmer of using a needle and thread to make possible the drawing back of material to the extreme edge to be hemmed can also be applied to these wide hems. (See paragraph 5 next page).

THE NARROW HEMMER



Fig. 3

tiniest hem is simplicity itself when given over to the Narrow Hemmer.

This attachment has no equal when used to finish the edge of ruffles or any dainty work where one tries to adhere to sheerness. The Narrow Hemmer is attached to machine in the same manner as is the presser foot. Raise needle to highest point, remove presser foot, attach hemmer, tighten screw.

Beginning at the end of the material where hem is to start, crease over about $\frac{1}{8}$ th inch of material for a distance of about 2 inches along its edge. Insert this creased end in the Narrow Hemmer from beneath, to the depth of the fold, holding the beginning of the hem between the thumb and forefinger of the right hand.

It is quite helpful when it is desired to start stitching directly at the selvaged edge to catch through the material at the folded section of the hem with a needle and thread. The thread can be held on to when drawing the material back, preparatory to stitching, so that the needle will pierce the extreme edge.

With material drawn back to desired position, lower the presser bar and proceed to sew, guiding cloth into scroll of Hemmer with left hand.

Be careful not to feed too much material into the Hemmer.

Hemming and Sewing on Lace in One Operation

The narrow Hemmer is designed with a slot at the right into which the edge of lace, rick-rack, braid or any finished trimming edge can be inserted and stitched to garment while hem is being made.

Proceed to make a hem in the same manner as described on previous page. Insert edge of lace or trimming right side down in slot at right of Hemmer, and see that the needle pierces it close to the edge just

above turned edge on hem. Commence to sew, guiding the lace edge into the slot of Hemmer with the right hand while guiding material being hemmed into the scroll of Hemmer with the left hand.

A very attractive way of applying lace so that the stitching of the hem is not visible is to start the hem in the usual way, slipping the lace in from the left as you would the second piece of material when making a hemmed seam.

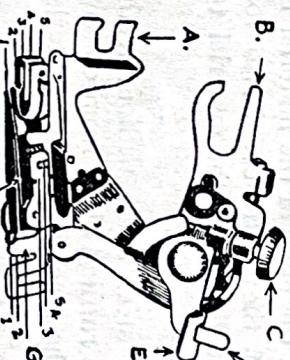


Fig. 4

THE RUFFLER

It is necessary to become familiar with all the parts of the Ruffler before it can be used successfully. The lines, 1, 2, 3, 4 and 5 as shown in Fig. 5 point out where the material is to be placed for various operations, as follows:—

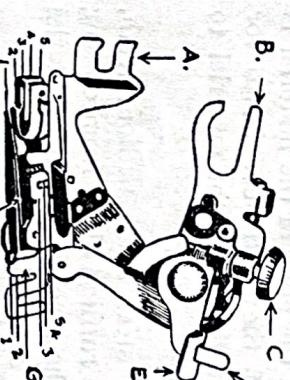
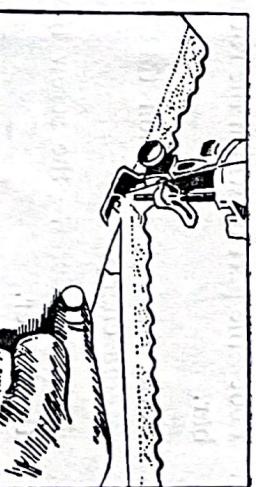


Fig. 5

Line 1—the correct position for the material to which the ruffled material is applied. Line 2—material to be ruffled. Line 3—the facing for the ruffle. Line 4—the strip of piping material. Line 5—the edge to be piped.

Refer to this illustration when inserting material in ruffler. The names and uses of the different parts of the ruffler are as follows (See reference Fig. 5):



- A. Foot—the part by which the ruffler is attached to the presser bar.
- B. Fork Arm—the section that must be placed astride the needle clamp.
- C. Adjusting Screw—the screw that regulates the fullness of the gather.
- D. Projection—the part that projects through the slots in the adjusting lever.
- E. Adjusting lever—the lever that sets the ruffler for gathering or for making a pleat once at every six stitches or once every twelve stitches, as desired; also for disengaging the ruffler, when either pleating or gathering is not desired.
- F. Adjusting Finger—the part which regulates the width or size of the pleats.
- G. Separator Guide—the guide on the underside of the ruffler which contains slots into which the edge of the material is placed to keep the heading of the ruffle even, also for separating the material to be ruffled from the material to which the ruffle is to be attached.
- H. Ruffling Blade—the lower blue steel blade without teeth, which prevents the teeth of the ruffling blade from coming into contact with the feed of the machine, or the material to which ruffle or pleating is to be applied.

Attaching the Ruffler to the Machine

Raise the needle bar to the highest point and remove the presser foot. Attach the ruffler foot to the presser bar by means of the thumb screw while placing the fork arm astride the needle clamp.

Attaching the Ruffler for Gathering

Raise the adjusting lever (E) and move it to the left so that the projection (D) will enter the slot marked "1" in the adjusting lever when the lever is released. The ruffling blade will then move

forward and back once at every stitch. Insert the material to be ruffled between the two blue blades, pull the edge of the material to be gathered forward until it is slightly past the needle, lower the presser bar and commence to sew. If you want to make fine gathering, shorten the stroke of the ruffling blade by turning the adjusting screw upwards; also shorten stitch. To increase the fullness turn the screw down and lengthen the stitch.

To Ruffle and Sew on a Facing in One Operation

Insert the material to be ruffled between the two blue blades, following the line 2 in Fig. 5. Place the garment to which the ruffle is to be attached under the separator blade, following the line 1 (Fig. 5). Place the material for the facing over the upper blue blade as shown in Fig. 5 following the line 3. The facing may be straight or bias material. If the facing is to be on the right side of the garment,

Fig. 6

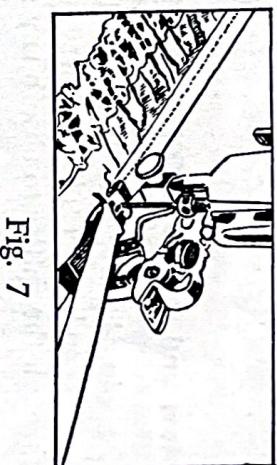


Fig. 7

the wrong sides of the garment and the ruffle should be put together.

If the facing is to be on the wrong side, place the garment and the ruffle so that the right sides are together.

Adjusting the Ruffler for Pleating

Raise the adjusting lever E (Fig. 5) and move it to the right so that the projection D (Fig. 5) will enter the slot marked '6' in the adjusting lever when the lever is released. The ruffling blade will then move forward and back once every six stitches.



Fig. 8

In order to adjust the ruffling blade to make a pleat once at every twelve stitches, place the adjusting lever so that the projection enters the slot marked '12' in the adjusting lever. Insert the material to be pleated between the two blue blades, following the line 2 (Fig. 5). The size or width of the pleats is regulated by the adjusting screw C (Fig. 5) and the adjusting finger F (Fig. 5). If you wish to make a wider pleat, move the adjusting finger back or towards the needle and turn the adjusting screw C (Fig. 5) downwards. To make a narrower pleat, turn the adjusting screw upwards. The space between pleats is regulated by the length of stitch.

How and Where to Oil the Ruffler

Occasionally apply a drop of oil to the working parts of the ruffler and, after oiling, always pass a piece of old material through the ruffler to absorb any surplus oil.

THE PARTS OF THE TUCKER AND THEIR USES



Fig. 10

the width of the space between tucks. The grooved blade contains a groove into which the material is pressed by the spur at the end of the lower or spur blade, thus marking the material for the folding of the next tuck.

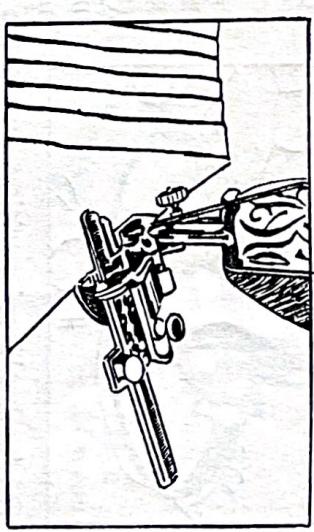


Fig. 10

(C) **Tucker Foot**—raise the needle bar to the highest point, remove the presser foot from the machine and attach the Tucker in its place, taking care to see that the needle goes through the centre of the needle hole. Note the position of the marking lever, making sure that it is in the lower position and that the needle clamp works on it as the machine sews. The width of the tucks and the space between them is determined by the adjustment of the scales.

(D) **The Tuck Guide Adjusting Screw**—by means of which the tuck guide may be set at any point on the tuck scale.

(E) **Tuck Scale**—the figures on the tuck scale indicate width of tuck in eighths of an inch; marks between figures are sixteenths.

(F) **The Space Scale Adjusting Screw**—by means of which the space scale may be set at any desired point.

(G) **The Marking Lever**—which presses on the grooved blade, marks the material as it passes between the grooved and spur blades.

Adjustment for width of tuck is made by loosening the tuck

(A) **Tuck Guide**—which is adjustable and may be set for any desired width of tuck.

(B) **Space Scale**—which contains figures on the upper blade that indicate

guide adjusting screw. Then tuck guide can be moved to the desired figure on the tuck scale. Put the figure on the space scale to the desired figure on the Tuck Scale, then insert the material to be tucked and commence to sew.

How and Where to Oil the Tucker

The only place that requires oiling is the stud on which the marking lever works. One drop of oil occasionally is sufficient.

HOW TO USE THE EMBROIDERY FOOT

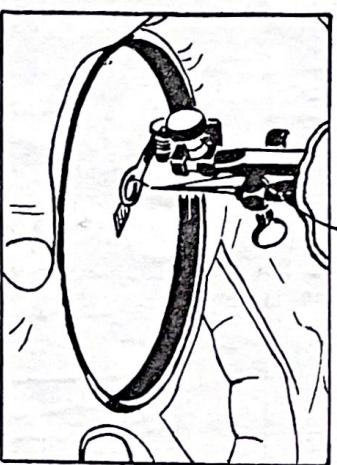


Fig. 11

Raise the needle bar to its highest point and remove the presser foot by loosening the thumb screw. Attach the foot to the presser bar, holding the part under the thumb screw in the needle clamp. Tighten the screw firmly so that it will not become loose when machine is working. Turn the machine drop feed control to the 'embroidery' position, insert the material to be embroidered in an embroidery hoop and place beneath the needle. It will now be possible to sew in any direction, i.e., to follow an embroidery pattern.

THE EDGE STITCHER

The different slots, numbered from 1 to 5 in illustration, serve as guides for sewing together laces, insertions and embroideries, piping or sewing flat braid to a garment.

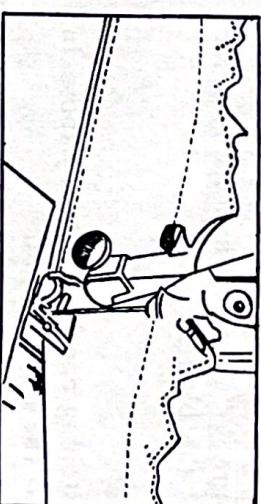
Slots Nos. 1 & 4 are used for sewing lace insertions, lace and embroidery, or lace and tucked strips together. Place one edge in slot 1 and the other in slot 4 and adjust lug until both edges are caught by the stitching. Hold the two pieces slightly overlapped to keep them against the ends of the slots. The thread tensions should be loose to avoid puckering fine lace.

When a wide piping is desired, the piping is inserted in Slot No. 3 and the edge to be piped in Slot 4. If a narrow piping is desired the piping is inserted in slot 3 and the edge to be piped in slot 2.

To make a french

seam, insert the two edges to be joined, wrong sides together in slots 1 and 2 and stitch close to the edge. Then fold both sides together and insert the back of the seam into slot 1 and

Fig. 14



commence to sew, keeping just a slight margin to conceal raw edges.

When using folded tape to finish underwear, children's clothes, aprons, etc., the tape is placed in slot 1 and the garment in slot 5.

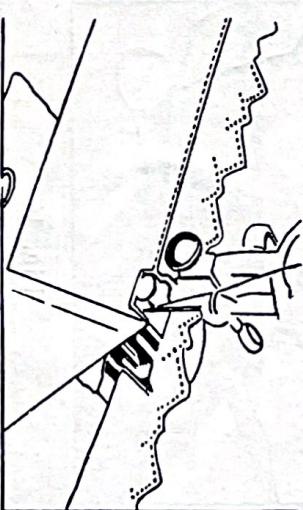


Fig. 13

THE BINDER

The binder fixes to the presser bar in the same manner as the other attachments.

How to Insert the Binding into the Binder

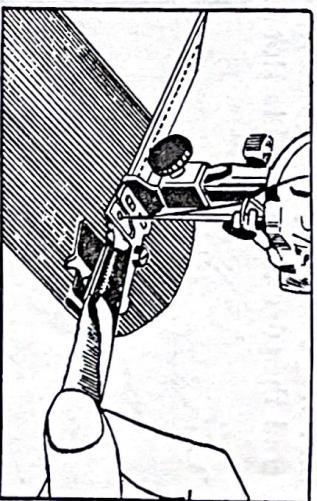


Fig. 15
Starting to sew. Then place the article to be bound into the binder slot, lower the binder and proceed as in ordinary sewing. Be sure to keep the material well into the binder mouth and close up to the binding. Binding may be purchased for use with the binder, and should measure $\frac{1}{2}$ " wide. When using folded binding use the outside slot of the binder.

How to Adjust the Binder

The position of the line of stitching can be varied by loosening screw and moving the scroll to the left or right.

How to Bind Outside Curves

Practice is required to bind a curved edge properly. The edge to be bound must be allowed to pass freely through the scroll and should not be crowded in or against it. Guiding should be from the back of the binder and to the left, allowing unfinished edges to swing naturally into the scroll or the binder. Never pull the binding as it feeds through the binder, as bias material is easily stretched and would be too narrow when it reaches the needle. When binding a curved edge, turn the material only as fast as the machine sews. It is not possible to hold the material in the entire length of the scroll when binding a small curve. Do not push the material in too fast, as the edge will then become puckered, and do not stretch the material or the curve

First cut the binding at an angle, with the long point to the left. Insert the pointed end into the binder scroll, until the pointed end comes through the lower end of the scroll. Pull the binding through under

the presser foot before

starting to sew. Then place the article to be bound into the binder slot, lower the binder and proceed as in ordinary sewing. Be sure to keep the material well into the binder mouth and close up to the binding. Binding may be purchased for use with the binder, and should measure $\frac{1}{2}$ " wide. When using folded binding use the outside slot of the binder.

will not be the proper shape when finished. If the stitching does not catch the edge of the binding the scroll should be adjusted a little to the left as previously described.

ZIPPER FOOT AND CORDING FOOT (Adjustable)

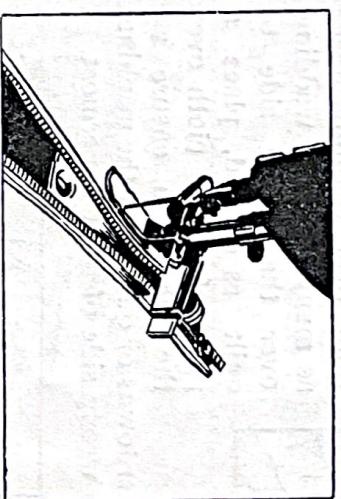


Fig. 16

GATHERING FOOT

This attachment is fastened to the machine the same way as the presser foot, and by stitching with it in the normal way material will be slightly gathered. The fullness of the gathers may be regulated by adjusting the length of the stitch on the machine—a long stitch will give extra fullness while a shorter stitch will decrease it. Nylon, georgette and silks are especially attractive when shirred with this foot. If embroidery silk is used in the bobbin, a very ornamental stitch will be obtained.

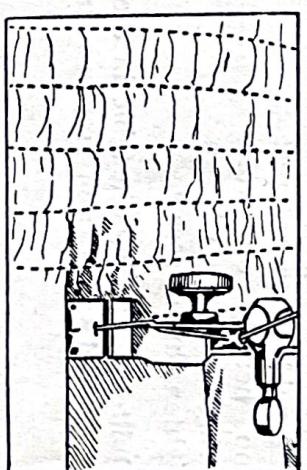


Fig. 17

The Zipper Foot may be attached to the machine in the same manner as the other Attachments. By adjusting the screw at the back of the foot, the zipper foot can be moved to either side of the needle, i.e., to sew left or right side of zipper fastener or when cord-

THE QUILTER



Fig. 18

even pucker so desirable on eiderdowns or quilts. Set the machine stitch fairly long and keep the wrong side of quilt uppermost. Free thumb screw on machine and fit forked holder on Quilter Guide between thumb screw and foot, from the rear. Set forked holder at the angle desired, so that the guide does not rest too heavily on work being quilted, then tighten thumb screw.

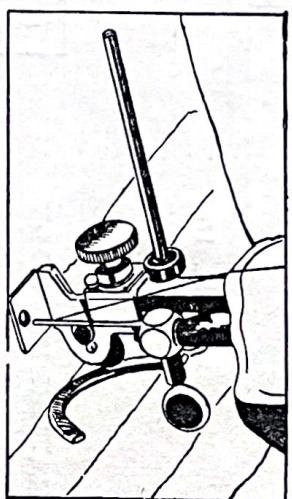


Fig. 19

Quilter Guide is adjustable in the forked holder and can be set at desired space from previous row of stitching.

THE SCISSORS CUTTING GAUGE

The gauge fits on the point of the scissors.

The Cutting Gauge is used to cut materials into bias bands after folding it on the bias cutting through to the fold. Binding that is cut be used with the Binder should be $\frac{7}{8}$ " wide

if cut of material of firm, closely woven texture. Loosely woven materials with more stretchiness should be cut from 1" to $1\frac{1}{4}$ " wide.

The blue spring on the Cutting Gauge should be set to the desired width of binding.

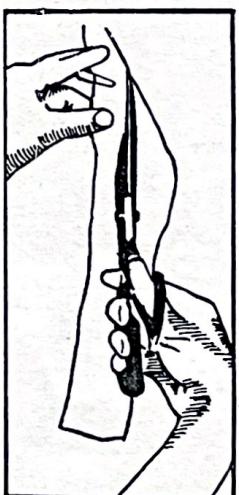


Fig. 21

projecting the same width of seam desired. Start stitching at angle, or grain-of material, finishing at angle on other side of binding. Press seam open and trim edges close to line of stitching.

THE CLOTH GUIDE

This attachment is a convenient attachment for accurate guiding of the work, while sewing close to the edge of the material. Fasten the cloth guide to the bed of the machine by means of the thumb screw, inserting the thumb screw into either one of the two screw holes in the bed of the machine. The cloth guide can be adjusted to bring the line of stitching as close to the edge of the material as desired.

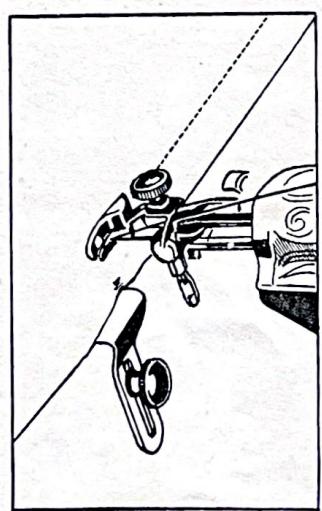
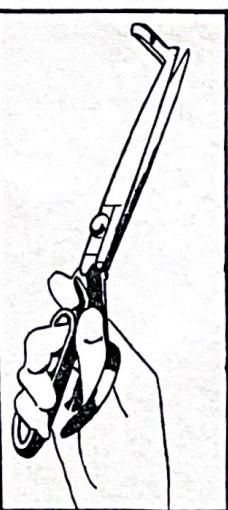


Fig. 22



Insert bias material between the blades of the Gauge with edge of material against blue spring. Cut with short even clips.

Join bias strips by meeting the right sides of materials and laying the length, or warp ends, across each other with the points projecting the same width of seam desired. Start stitching at angle, or grain-of material, finishing at angle on other side of binding. Press seam open and trim edges close to line of stitching.