

BOOK No. 13

INSTRUCTIONS
FOR USE AND CARE OF

White
Rotary Electric
Sewing Machines

CLARK SEWING MACHINE CO.
217 N. Broadway Phone 5-2332
WICHITA, KANSAS

WHITE SEWING MACHINE CO.
CLEVELAND, OHIO

To Set Needle

Raise the needle-bar to its highest point; loosen the thumb-screw and press it to the left to permit the shank of the NEEDLE to pass up between the clamp and needle-bar as far as it will go—flat side to the RIGHT—the NEEDLE being flattened on one side so it will set itself perfectly, then fasten securely by tightening thumb-screw.

To avoid loosening of the needle, always use a screw-driver, the needle screw being slotted for that purpose.

The needle, when descending, should pass CENTRAL in the needle hole from FRONT TO REAR, but close to the right side of the hole.

Use Only This Needle



An illustration showing the exact length of the Flat Shank Rotary Needle, to use in this machine. To use a longer or shorter needle will cause trouble and injure the machine.

When ordering needles, attachments or machine parts, do not fail to give the number of the machine which you will find stamped on the bed plate near base of the arm.

Do not allow agents or unauthorized repairmen to tamper with your machine. When any repairs are needed or instructions wanted in connection with this sewing machine, consult or write the concern from whom you purchased this machine for directions.

Size of Needles and Thread

Size of Needles	Class of Work to Sew	Cotton Thread	Silk Thread
00	Very Thin Muslins, Cambrics, Linens, etc.	150-300	000
0	Very Fine Calicoes, Linens, Shirtings, Fine Silk Goods, etc.	90-150	00
1	Shirtings, Sheetings, Bleached Calicoes, Muslins, Silk, General Domestic Goods and All Classes of General Work.	60-90	0-A
2	All kinds of Heavy Calicoes, Light Woolen Goods, Heavy Silk, Seaming, Stitching, etc.	40-60	B
3	Tickings, Woolen Goods, Trousers, Boys' Clothing, Corsets, Cloaks, Mantles, etc.	30-40	C
4	Heavy Woolens, Tickings, Bags, Heavy Coats, Trousers, etc. Heavy Clothing Generally.	20-30	D

Never run Machine with needle threaded without goods under presser-foot. Run Machine so that top of hand wheel moves from you.

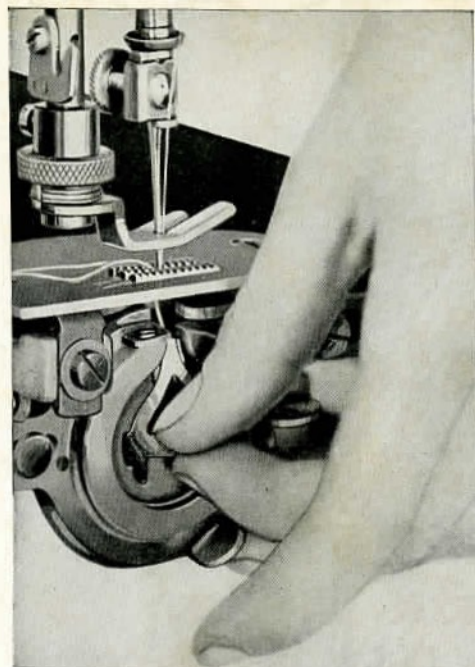


Fig. 2

To Remove Bobbin Case From Shuttle

Raise the take-up to its highest point. With the thumb and second finger of left hand clasp bobbin case as shown in Fig. 2, then lift latch *S* (see Fig. 6) with the third finger, when bobbin case may be readily withdrawn from shuttle *F* (see Fig. 5).

To Thread Bobbin Case

Place bobbin in case so that thread will come from bobbin on same side as hole *B* in bobbin case; pass thread through slot *A* to hole *B*, thence across opening, drawing it down under lip *C*, then pull it up until thread passes out under tension spring *D*.

The tension on bobbin case should be the same as the upper tension.

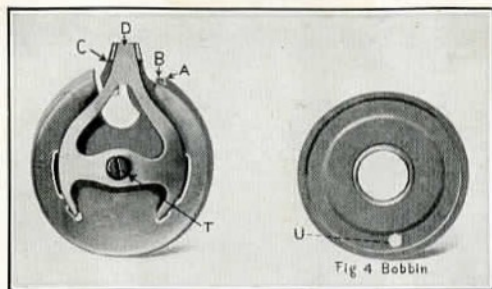


Fig. 3. Bobbin Case.

Lower Tension

Fig. 3 represents the bobbin case. To regulate the lower tension, turn the screw *T* to the right to tighten, and to the left to loosen.

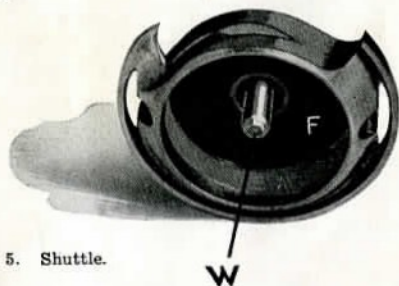


Fig. 5. Shuttle.



Fig. 6. Shuttle Race Cover.

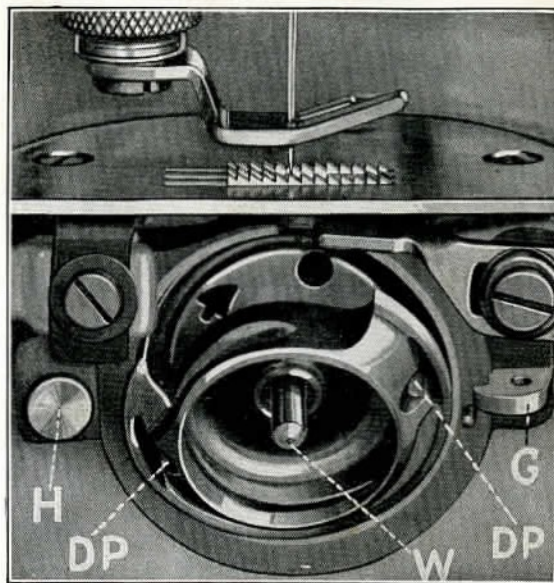


Fig. 7

To Remove Shuttle From Shuttle Race

First remove the bobbin case. Turn the machine back on its hinges, then turn the wheel in the same direction as in sewing until the point of the needle just enters the needle plate hole; push on rear end of latch *G* and at the same time pull shuttle race cover away from shuttle and toward latch *G* from under pin *H*; the shuttle can now be removed.

When shuttle has been removed from race be sure to clean both and oil the race slightly before replacing. Occasionally put *one drop* of oil on pin *W* in shuttle. Also see that no thread is wound around bottom of center pin *W*.

To Replace Shuttle

Turn the machine in the direction for sewing until the point of the needle just enters the needle plate hole; take the shuttle by the center pin *W* with the left hand and place it in the race, so that the point of shuttle will be from you and over arrow on thread cast off, so that the holes in the shuttle will drop onto driving pins in race, then replace the shuttle race cover.

Do NOT FORCE the shuttle into race. It will enter readily when in proper position.

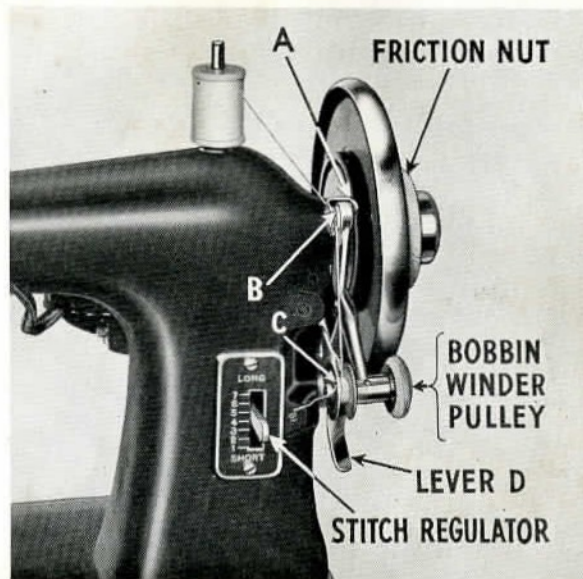
Should the machine at any time act badly in sewing or running, it would be well to remove shuttle and clean it and the race, which is but a moment's work.

To replace the bobbin case, it need not be held as when removing, but simply slip it on the pin in shuttle, with the tension projecting upward, and push it into shuttle as far as it will go, when the spring latch will pass over and retain it in that position.

The thread should be allowed to project about two inches from bobbin case tension.

**NEVER RUN MACHINE WITH NEEDLE
THREADED WITHOUT HAVING MA-
TERIAL UNDER THE PRESSER-FOOT.**

For smooth operation and good results it is necessary to use high grade oil. White Sewing Machine Oil is recommended for use on White Sewing Machines.



To Wind the Bobbin (Electric Machine)

Place the bobbin on bobbin winder spindle and push to the right as far as it will go. Hold the hand wheel firmly and turn the knurled clutch release counter-clockwise, permitting wheel to run free. Place spool of thread on Bobbin Winder Spool Pin. Take end of thread in fingers of right hand and hook it under Guide *A* from right to left. Next, lead thread downward between Tension Discs *B*, and put end of thread through hole in Bobbin *C*, letting about two inches of thread project through hole. Next, pull Lever *D* upward, engaging the Bobbin Winder Pulley with hand wheel. Next, hold the end of thread extending through hole *C* with the left hand, run machine and complete the winding of bobbin.

The bobbin winder will automatically disengage itself when the bobbin is full. Remove the bobbin from spindle, cut off the end of the thread at hole *C*, and place bobbin in bobbin case. Tighten friction nut, turning the top from you or clockwise.

To Wind the Bobbin (Treadle Machine)

Follow same instructions as for Electric Machine, except; to engage bobbin winder pulley with hand wheel, the pulley itself must be lifted up, rather than lever *D*; as treadle machine is not equipped with that lever.

Directions for Threading

With take-up lever 5 at its highest point place spool on spool pin 1. Throughout entire threading operation maintain a slight tension on thread with the right hand. *Next*, with left hand pass thread under both hooks of guide 2. *Next*, pull thread downward and pass under tension plate hook 3 from front to back. *Next*, pull thread upward into auxiliary spring 4. *Next*, continue upward, hook thread (upward motion) into take-up clip spring 5. *Next*, pull thread downward and hook into needle clamp thread guide 6 from back to front. *Next*, run thread through the eye of needle 7 from left to right, pulling about two inches of thread through the needle eye.

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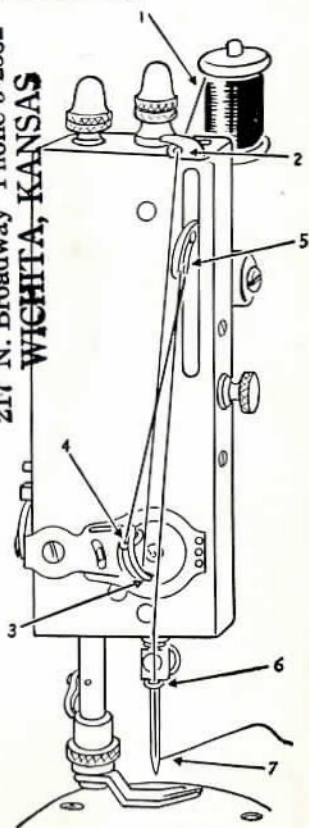


Fig. 9

To Change the Length of Stitch

The regulator is located at the right end of machine on the front side of arm.

To shorten stitch move the lever down.

To lengthen stitch move lever up. No. 1 indicates the shortest, and No. 7 the longest stitch.

To Regulate the Tension

The regulator is located on the front of machine above the needle. To loosen tension, turn pointer upward toward No. 1; to tighten turn pointer downward toward No. 8. By this means the same tension can always be duplicated, thus obviating the necessity of experimental trials. If a tight tension is desired, both upper and under threads must necessarily be tight. If the upper thread is tight and the lower thread loose, the upper thread will be drawn to the top, thus:



If the lower thread is too tight, it will be drawn straight on the bottom of goods, thus:



When tensions are properly adjusted, the stitching on materials will look the same on both sides, thus:



The Tension Releaser

The tension releaser is operated by the presser bar lifter. By means of it, all tension is taken off the upper thread when the presser-foot is raised, and the work can be taken out without pulling the thread down by hand.

Particular Notice

The tension cannot be regulated when the lifter is up, because the Releaser is operated by the presser bar lifter.

To Commence Work

In threading the needle and bobbin case respectively, you should leave an end of thread about two inches in length to each. Hold the end of the upper thread loosely in the left hand, and with the right hand revolve the hand wheel until the needle passes to its lowest point and returns, and, as the needle ascends it will draw up the lower or shuttle thread and the machine is ready for sewing.

To Remove Work

Stop the machine with the take-up at its highest point; raise the presser foot with the lifter which releases tension on the upper thread; then take hold of your work with your left hand and pull it directly from you, keeping the top thread in the slot of the presser-foot, which will prevent bending the needle. Now raise the work and draw the threads into the thread cutter on the presser-bar and pull downward, which will cut the threads the proper length to commence work again.

To Clean Machine

If the machine is dirty or gummed up with poor oil, oil thoroughly (Page 23), using Kerosene (coal oil). Run the machine for a short time, wipe dry and oil with good sewing machine oil.

Explanation of Difficulties That Sometimes Occur With Beginners

If the upper thread breaks, it may be caused by the needle not being properly set, or the machine not threaded correctly, or the upper tension too tight, or the thread uneven and the needle too small for it, or the needle eye too sharp, or the presser-foot attached to the machine so that the needle rubs it in passing.

If the under thread breaks, it may be caused by the bobbin case being improperly threaded, or too much tension upon it, or by the bobbin being wound too full so that the thread slips over the ends of the bobbin in the bobbin case.

If the needle breaks, it is more than likely caused by pulling the goods to or from you in such a manner that the needle strikes the throat plate. The needle may, however, break in trying to sew extraordinary heavy seams when the pressure on the presser-foot is not heavy enough.

To create more pressure upon the goods turn the presser-bar cap on top of the presser-bar to the right; to decrease the pressure turn it to the left.

If it makes loop stitches, it is most sure to be caused by too loose tension both top and bottom.

If the machine skips stitches, the needle is either bent or not in right position.

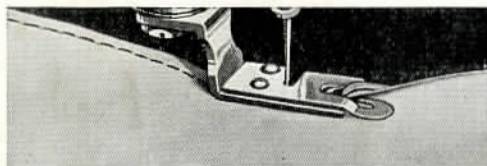
If the stitches are not even, it may be caused by the presser-foot not resting evenly upon the fabric sewed, or by the stitch being too short, or by pulling the cloth or by using too fine a needle with too coarse or uneven thread.

If the machine should be run without sewing and thread gets in the shuttle race, making the machine run heavy, take out bobbin case and run the machine in the wrong direction; it will cut the thread out. Or remove shuttle and clean race and driving pins.

The Attachments

Most of the attachments used with this machine must be attached to the presser-bar in place of the regular presser-foot. To remove presser-foot from machine, raise the take-up to its highest point, loosen knurled thumb-screw on presser-bar. When replacing presser-foot or putting on any attachment be *certain* it is pushed back onto presser-bar as far as it will go. Always be sure that knurled thumb-screw is tightened securely.

The Narrow Hemmer

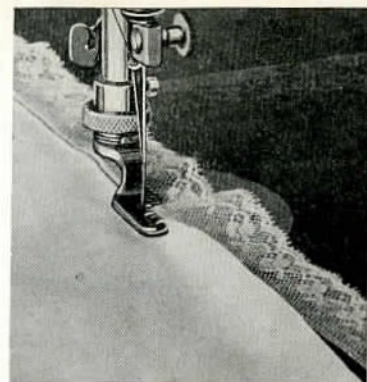


Remove presser-foot and attach the narrow hemmer. Fold over one-eighth inch of material for a few inches along the edge, then insert between scrolls in hemmer (narrow fold of material on top) and draw back until starting end is under needle. Lower presser-foot and begin to sew, guiding material with left hand, so a uniform amount of material keeps feeding into scroll. Too much material feeding in will result in a wide and uneven hem—too little will prevent edge from turning under, leaving a raw edge.

Hemming and Sewing on Lace, One Operation

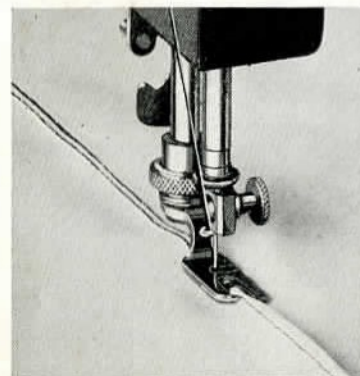
The narrow hemmer is slotted at the needle hole, for making a fine hem and sewing on lace at the same time.

With the right side of material down proceed to make the narrow hem as previously explained. Simply insert the edge of the lace (right side down) in the slot leading to the needle hole, and guide the lace with the right hand, while feeding material into the scroll with the left hand.



The French application of lace with invisible stitching also requires the use of the narrow hemmer. Place lace under hemmer with edge of lace against the material being turned into the hem, and proceed as previously explained. Thus the edge of the lace will be enclosed in the turned hem, all in one stitching. Then press the hem back on wrong side of material and no stitching will be visible on right side.

Felling



A fell is made with the narrow hemmer as illustrated here. Place the two pieces of material together (right sides in) with the edge of the bottom piece projecting about one-eighth of an inch beyond the edge of the upper piece. In this position sew the two pieces together, stitching about one-sixteenth of an inch from the edge of the upper piece of material. Then open the work and put it back on machine right side down,

with the raw edges of material up. Fold down the wider edge toward the left and over the narrower edge; then feed it into the scroll of the narrow hemmer as shown.

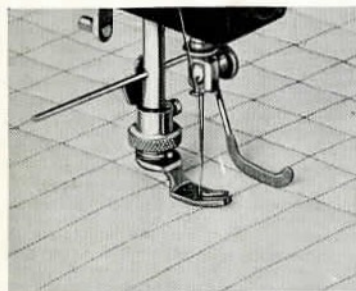
Wide Hemming

The assortment of wide hemmers is furnished for heavier work and for making wider hems, and they are used the same way as the Narrow Hemmer.

If the hem is started by folding it over for a short distance along the edge before feeding into hemmer, no difficulty should be encountered.

If line of stitching is too near the stitched edge of hem move the hemmer to the right by merely pushing it slightly. If the stitching is too far from the stitched edge of the hem, move the hemmer toward the left.

Quilting

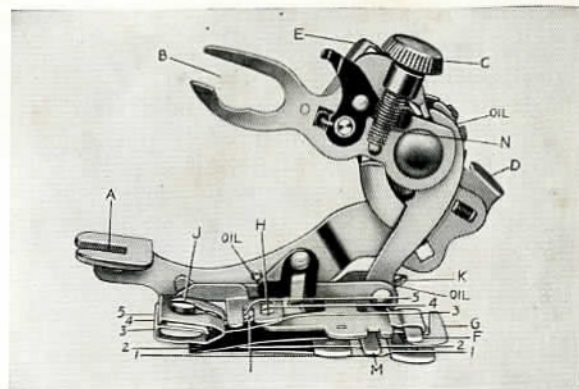


Loosen screw in thread cutter and pass the quilting through hole in presser-bar, adjust the quilting guide to the right of the needle according to the desired space between stitching, and high enough to allow the goods to pass freely under it, and then fasten the quilting securely with thread cutter screw.

In starting to quilt use the outer edge of the cloth for the first guide, or else crease the cloth on the right and let the quilting guide follow the crease; quilt the remainder by keeping the guide in a line and over the last row of stitching.

NOTICE: Large quilts should be made in squares or sections and then sewed together. In quilting squares or diamonds the seams should be on an equal bias.

The Five-Stitch Ruffler



Letters designate the parts of Ruffler.

Figures indicate the placement of materials.

- A—Foot which is attached to Presser-Bar.
- B—Fork Arm. The section placed astride the needle clamp screw.
- C—Adjusting Screw. Used to regulate the fullness of plaits and gathers.
- D—Five-Stitch Lever. Used for setting a five-stitch plait.
- E—Lever. Adjusts for plaits or gathers in groups by throwing Ruffler into neutral.
- F—Seam Guide.
- G—Sliding Guide. Used to vary size of headings.
- H—Piping Guide.
- I—Edge Guide. Used to determine a close edge stitch on material when ruffle is entered from the right.
- J—Screw. Used to set edge guide.
- K—Adjustable heading guide.
- M—Lip which separates seam guides.
- N—Blue spring over adjusting screw.
- Line 1—Is under the ruffler and indicates the position for the garment or band to which ruffle is sewed giving a $\frac{1}{4}$ " seam.
- Line 2—Between the blue blades where the feed blade will gather or plait material with a $\frac{1}{4}$ " seam.
- Line 3—The upper piece of material used when ruffle is sewed between two pieces of material.
- Line 4—Guide for piping strip.
- Line 5—For edgestitching material to ruffle that is entered from right.

Ruffling

Remove the presser-foot from machine by loosening knurled thumb-nut on presser-bar. Place ruffler foot A in position on the attachment holder and at the same time set

the fork arm *B* astride of the needle clamp pushing ruffler from you as far as it will go and tighten thumb screw securely. See that needle does not strike attachment. The goods to be ruffled must be placed between the two blue blades and then in gauge *G*. Gauge *G* should be adjusted to the right or left to get the desired distance from the edge; the goods will guide itself. To make a fine ruffle, have arrow on stitch regulating lever on sewing machine between 1 and 2 and turn adjusting thumb-screw *C* up until the end of screw is $\frac{1}{8}$ of an inch below the blue spring *N*. To make a heavy ruffle, lengthen the stitch to between 2 and 3 (see stitch regulator), and turn adjusting thumb-screw *C* downward until the desired fullness is obtained. Adjusting lever *D* should be down.

To Ruffle on Band

To ruffle on band, place under both springs next to feed and over lip *M*. Place goods to be ruffled between the springs and in gauge *F*. If a facing is required, place facing above both springs and under foot.

To Ruffle With a Heading

To ruffle with a heading, place the goods to be ruffled between the springs with heading to the right and adjust gauge *K* for desired heading.

To Pipe or Edge-Stitch

To pipe or edge-stitch a ruffle, the piping is placed in the ruffler through hole *H*, and edge to be piped is creased and inserted in gauge *I*. If stitching comes too far from the edge, loosen screw *J* and adjust gauge *H* to the left. Tighten screw *J* thoroughly after adjusting is done. The ruffle to be piped is placed at the right of the blades and in guide *G* to keep ruffle heading even.

Plaiting

To adjust for plaiting, turn adjusting screw *C* down as far as it will go; pull adjusting lever *D* toward you. Insert the cloth between the blue springs, the ruffler will then make one plait at every fifth stitch. The space between plaits can be regulated by adjusting the stitch on the machine, a longer stitch makes a wider space between the plaits and a shorter stitch brings the plaits closer together.

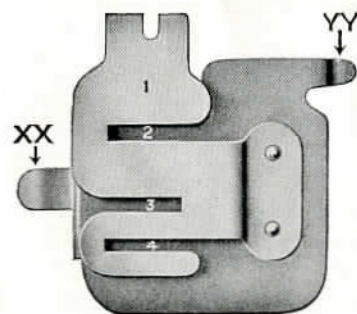
Making Gathers or Plaits in Groups

If you find it desirable, when making garments to have gathers or plaits in groups, especially where the gathers are used at the side with a plain space or surface between, the work can be done by pushing adjustment *E* forward or from you. The ruffler will then sew plain until the adjustment *E* is again pulled toward the operator for making plaits in groups. You will, no doubt, find it necessary to mark your material in order to measure for even spaces between the groups of gathers or plaits. Your ruffler should be oiled at place indicated.

To Adjust Ruffler Back for Regular Ruffling

Turn screw *C* to left until end of screw is $\frac{1}{8}$ of an inch below the blue spring *N*. Push lever *D* down. Pull adjustment *E* toward you and move stitch regulating lever on arm of sewing machine to between 1 and 2.

Shirring with Ruffler



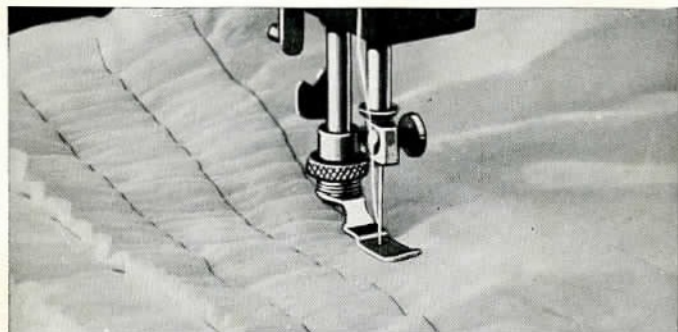
First remove hand hole cover, insert ear *YY* of shirring plate into gauge screw hole in needle plate, and, holding down shirring plate, replace hand hole cover over ear *XX* on shirring plate.

Before putting on ruffler, loosen screw that holds the plate supporting the lower blue blade and remove this plate and lower blue blade, then place ruffler on machine as directed, being certain that blue ruffling plate is on top of surface No. 1 of shirring plate. Important that ruffler be attached firmly by knurled thumb screw.

Place the material to be shirred under blue blade of ruffler, but over the entire shirring plate and into guides 2, 3 or 4 as may be desired. (Note) When shirring is completed put the lower blue blade back onto ruffler before attempting regular ruffling or plaiting.

Directions for Using the Foot Gatherer

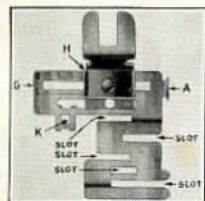
Remove the presser-foot and replace with the Foot Gatherer.



To Gather, Puff or Shirr

Place the goods under the foot the same as in ordinary sewing. For fine gather use a short stitch. To increase the fullness, lengthen the stitch. For greater fullness tighten top tension.

Combination Edge-Stitcher, Tucking Guide and Top-Braider



The Edge-Stitching Attachment is fastened to the machine in the same manner as the Presser-Foot. There are five different slots, which are shown in the illustration, serving as guides for sewing together laces, insertions, embroideries, sewing in position folded or hemmed edges, bias-folded material or piping, etc.

How to Adjust the Edge-Stitcher

To adjust, move the lug *A* to the right or left until the desired adjustment is obtained. When sewing two pieces of lace together, it is very necessary that the attachment is adjusted to stitch exactly on the edge, so that the edges will not fold over when laundered.

When sewing laces or soft materials together, it is better to hold the edges slightly overlapped. This will prevent the lace from feeding away from guide.

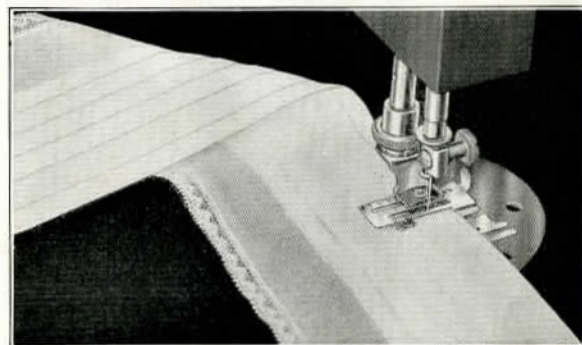
When the attachment is properly adjusted, the most inexperienced operator may sew yards of lace or material together with no difficulty.

Tucking

The numbers 2 to 6 inclusive stamped on the back edge of the sliding guide represent the width of tuck in eighths of an inch. After folding the material for the first tuck, put the folded edge into the guide slot which is nearest the needle. When the left edge of the friction spring *H* coincides with the number 2 on the scale a $\frac{1}{4}$ " tuck results.

In like manner, set the guide at 3 for a $\frac{3}{8}$ " tuck.
set the guide at 4 for a $\frac{1}{2}$ " tuck.
set the guide at 5 for a $\frac{5}{8}$ " tuck.
set the guide at 6 for a $\frac{3}{4}$ " tuck.

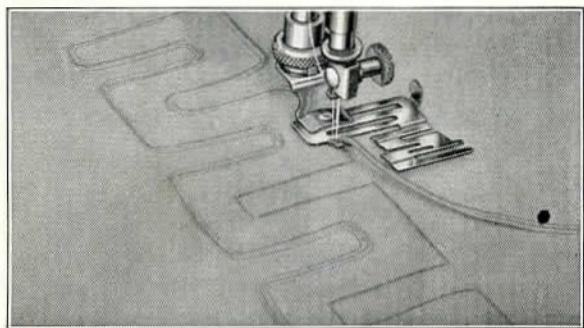
For tucks narrower than $\frac{1}{4}$ " move the guide *G* as far as desired to the left.



Braiding

Move the guide *G* to the right until the braiding guide hole *K* is exactly in line with the needle hole of the attach-

ment. The design to be braided should be plainly marked or stamped on the top or right side of the fabric. Start the soutache braid into hole *K* and stitch along design, being sure that the soutache braid is feeding freely into hole *K* without twisting. To turn a corner, stop the machine *with the needle down through the braid* in the exact corner of the design, raise the presser-bar *just enough* to permit the turning of the fabric in the desired direction, lower the presser-bar and proceed as before.



The Scissors Gauge

For cutting bands of various widths, either straight or bias. The sliding scale is adjustable for the widths of band desired.

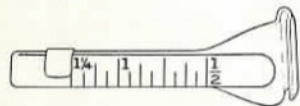
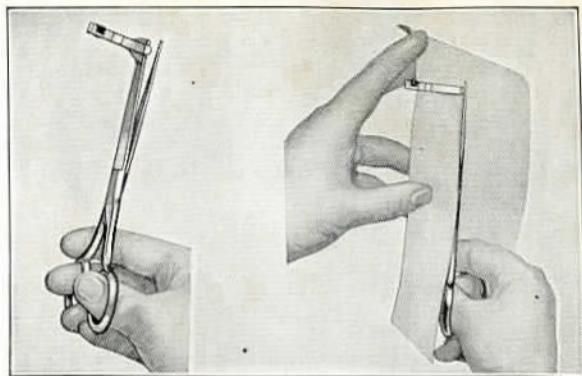


Fig. 32

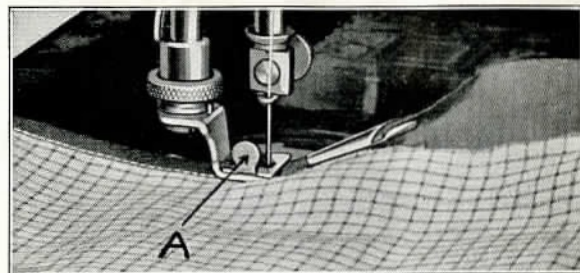
One inch indicates the width for cutting bias bands which are used with the binder.

One-half inch is for corded or plain piping. The piping is cut bias and folded double to use with the ruffler.



Place the gauge upon the scissors, as shown; slip the edge of the cloth in the gauge and proceed to cut the band. The tape for the binder should always be cut on the bias, also the piping which is used with the ruffler.

Binding



Remove the presser-foot and substitute the binder. Cut the binding 15/16 inch wide (on the bias if convenient). Pass the binding through the scrolls of binder and under the needle hole in the attachment. Place the edge of the goods to be bound *between* the scrolls of the binder, drop presser-

foot lifter, guide the cloth with the left hand, and let the binding guide easily through the fingers of the right hand. To change the stitching, near or far from the edge, move binder lug A to right or left as desired.

Attaching Two Bindings

Contrasting Colors—One Operation

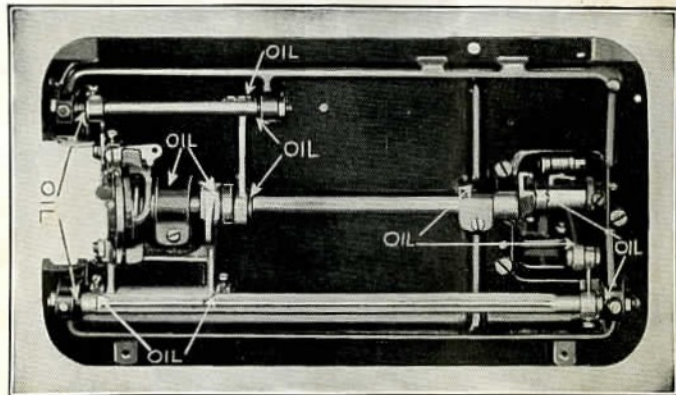
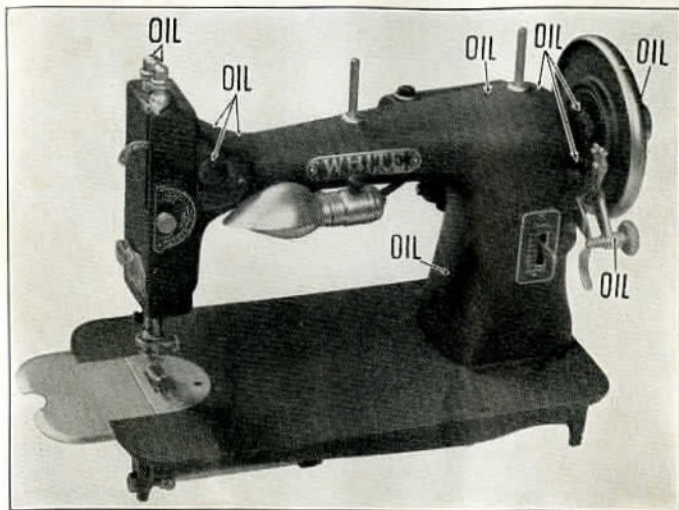
There are five slots of various widths in the right side of the scroll of the binder. These correspond in width to the five sizes of *folded* bias tape which are obtainable in most any dry goods or department store. Be sure that the binding used is inserted in the slot of corresponding width. Adjust the binder to left or right with lug A to bring the line of stitching the correct distance from the edge of the binding. It is well to make sure of this adjustment (by making a preliminary sample) before proceeding with the article which you have to sew.

Two tapes may be used at the same time, the wider inside of the narrower. The two are thus sewn to the edge of the fabric by the one line of stitching, with the result that the edge of the wider tape appears as a piping in relation to the narrow or outside tape.

For smooth operation and good results it is necessary to use high grade oil. White Sewing Machine Oil is recommended for use on your machine.

Keep Machine Well Oiled

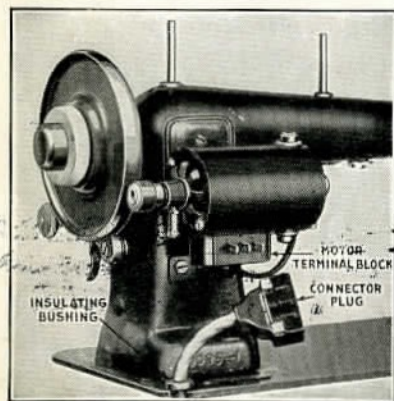
Oil in all the places indicated below. To oil the under side of machine, turn the machine back on its hinges.



ELECTRICAL EQUIPMENT

Connections

Be sure the motor pulley is adjusted so it centers on the hand wheel for proper drive; next, see that the insulating bushing on cord leading from the rheostat on the inside of the cabinet is properly placed in the hole in the corner of the bed of the machine (see illustration); next, connect the three-contact connector plug to motor terminal as shown in illustration; next, unwind the long wall plug cord from the storage reel and connect it to any electrical outlet.



Lubrication

Two cups (one at each end of the motor shaft) provide for motor lubrication. Unscrew the caps and fill with vaseline occasionally, depending upon the use of the machine.

Control

The desired control is obtained by the amount of pressure on the knee lever. Increased pressure on the knee lever increases the speed of the machine. The same method of controlling the speed applies in the case of Portable Electrics where the foot pedal is the means of speed control.

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