INSTRUCTIONS
FOR OPERATING THE
Domestic
Rotary
Sewing Machine
No. 19

Domestic Sewing Machine Company, Inc.
Cleveland, Ohio
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Domestic Sewing Machine Company, Inc.
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How to Properly Set the 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 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 screwdriver to fasten the same, the needle nut 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, as it prevents the needle from glancing into the race and being caught by the shuttle.

If NEEDLE RUBS ON SIDE OF PRESSER FOOT, loosen small screw that fastens attachment holder to presser bar, adjust foot and tighten screw, the needle should be a little closer to right hand side of foot.

This is an illustration showing the exact length of the Genuine Domestic 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 us the number of the machine which you will find stamped on the bed plate near base of the arm underneath the bobbin winder or on bed plate directly under the motor.

When you order needles for this machine ask for Genuine Domestic Flat Shank Rotary Needles stamped W. S. M. Accept no other. You can send postage stamps for any amount you require. We send them by mail.
INSTRUCTIONS
FOR USING THE
DOMESTIC
ROTARY SEWING MACHINE

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

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 screwdriver to fasten the same, the needle nut 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, as it prevents the needle from glancing into the race and being caught by the shuttle.
<table>
<thead>
<tr>
<th>Size of Needles</th>
<th>Class of Work to Sew</th>
<th>Cotton Thread</th>
<th>Silk Thread</th>
</tr>
</thead>
<tbody>
<tr>
<td>00</td>
<td>Very Thin Muslins, Cambrics, Linens, etc.</td>
<td>150-300</td>
<td>000</td>
</tr>
<tr>
<td>0</td>
<td>Very Fine Calicoes, Linens, Shirtings, Fine Silk Goods, etc.</td>
<td>90-150</td>
<td>00</td>
</tr>
<tr>
<td>1</td>
<td>Shirtings, Sheetings, Bleached Calicoes, Muslins, Silk, General Domestic Goods and All Classes of General Work.</td>
<td>60-90</td>
<td>0-A</td>
</tr>
<tr>
<td>2</td>
<td>All kinds of Heavy Calicoes, Light Woolen Goods, Heavy Silk, Seaming, Stitching, etc.</td>
<td>40-60</td>
<td>B</td>
</tr>
<tr>
<td>3</td>
<td>Tickings, Woolen Goods, Trousers, Boys’ Clothing, Corsets, Cloaks, Mantles, etc.</td>
<td>30-40</td>
<td>C</td>
</tr>
<tr>
<td>4</td>
<td>Heavy Woolens, Tickings, Bags, Heavy Coats, Trousers, etc. Heavy Clothing Generally.</td>
<td>20-30</td>
<td>D</td>
</tr>
</tbody>
</table>
To Remove Shuttle From Shuttle Race

First remove the bobbin case. Turn the machine back on its hinges, then turn the machine 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 oil slightly pin W in shuttle. Also see that no thread is wound around bottom of center pin W.
To Replace Shuttle

Turn the top of the hand-wheel from you 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 point of shuttle will be from you and over arrow, this is imperative, so that the holes in the shuttle will drop on to driving pins in race, as shown by initials DP, 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 one inch from bobbin case tension.
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 cut, 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 the same.

Fig. 5. Shuttle.

Fig. 6. Shuttle Race Cover.
To Wind the Bobbin

Place the bobbin on bobbin winder spindle and push to the right as far as it will go. Hold the hand wheel with the left hand and turn the top of friction nut toward you (see illustration). This will release the sewing mechanism of the machine. Next, place a spool of thread on the spool spindle nearest the hand wheel. Take the end of the thread and pass it under hook $A$ and into slot $B$ as far as it will go; run end of thread through hole $C$ in the outer edge of bobbin case. Lift lever $D$ which will engage rubber pulley on bobbin winder with the hand wheel. Hold end of thread until you have run machine sufficiently to wind the thread around the bobbin several times, then break thread off at hole $C$ and continue to run machine until bobbin is filled to within $\frac{1}{8}$ of an inch from edges of bobbin. After the bobbin is wound and
removed, disengage rubber pulley from hand wheel by pushing lever D downward, then tighten friction nut by turning top of it from you while holding the hand wheel with your left hand. The machine is then ready for sewing.

Directions for Passing Thread Under Check Spring Washer

The illustration at the right is taken looking down on the head of your machine. It shows in detail the threading at this point, holding the thread in your left hand, pass the thread back of pin X, then in front of pin V and under washer K. Proceed with thread as directed in instructions below.

Directions for Threading

Refer to Fig. 9, Page 11

Place spool on spool pin, take the thread in your left hand, holding it taut with the right during the whole threading operation. Pass thread from spool back of pin X and under top check spring washer K at top of face and then through slot Y and down under point L; now pull thread upward until it passes through the eye of spring N and into notch O, then into end of take-up P, then down through slot R in end of needle bar and through eye of needle from left to right, allowing about two inches of thread when take-up is at its highest point.

To draw up the lower thread, raise the presser-foot, take hold of end of upper thread and turn the hand wheel once around (moving upper side of wheel from you), which will draw the lower thread up through the needle hole.

Pass the ends of both threads under the presser-foot and you will be ready to sew.

Note: Do not run the machine with the presser-foot down on the feed without cloth under it.

Do not pull cloth to or from you in such a manner as to bend the needle.
The illustration above shows the Tension regulator lever and index for the upper thread, an entirely new and useful device.

The plate (index) is marked with a scale running from 1 to 4 with the word “loose” at No. 1 and “tight” at No. 4, No. 1 being the loose and No. 4 the tightest tension.
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

To loosen the tension, move the lever up, which will move the pointer towards Figure 1. Tighten it, move the lever down, moving the pointer toward No. 4. By this means the same tension can always be duplicated, thus obviating the necessity of experimental trials, as is the case with other machines. 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 you desire the goods to look
alike on both sides, and be elastic, balance the tension, 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 gently revolve the hand-wheel
until the needle passes to its lowest point and returns, a loop
will be formed through which the shuttle will pass, and, as
the needle ascends it will draw up the lower or shuttle thread,
and the machine is ready for practical operation.

To Remove Work

Stop the machine with the take-up at its highest point;
raise the presser-foot with the lifter which slackens 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.
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 your own fault caused by pulling the goods to or from you in such a manner that the needle strikes the throat plate and is bound to break. 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 feed not being high enough, 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 get 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.
### List of Head Parts

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>140</td>
<td>Take up roller stud.</td>
</tr>
<tr>
<td>141</td>
<td>Take up roller.</td>
</tr>
<tr>
<td>200</td>
<td>Take up screw for needle bar bushing 279.</td>
</tr>
<tr>
<td>203</td>
<td>Screws to fasten stitch indicator plate 722 and take up plate 793 and latch spring 886 to 885.</td>
</tr>
<tr>
<td>204</td>
<td>Screw to fasten attachment holder 342 to presser bar 775.</td>
</tr>
<tr>
<td>206</td>
<td>Screw to fasten rear feed rock arm 723 to rock shaft 724 and thread pull off rock arm 755 to rock shaft 756 and 780 presser bar guide clamp screw and plate on back of arm.</td>
</tr>
<tr>
<td>208</td>
<td>Screw to bind screw 760 in shuttle race.</td>
</tr>
<tr>
<td>210</td>
<td>Screw to fasten face 9170.</td>
</tr>
<tr>
<td>215</td>
<td>Screw to fasten presser bar lifter block 779.</td>
</tr>
<tr>
<td>233</td>
<td>Quilter.</td>
</tr>
<tr>
<td>234</td>
<td>Screw to fasten quilter and thread cutter 9112.</td>
</tr>
<tr>
<td>245</td>
<td>Gouge screw.</td>
</tr>
<tr>
<td>271</td>
<td>Presser bar lifter washer.</td>
</tr>
<tr>
<td>279</td>
<td>Needle bar bushing.</td>
</tr>
<tr>
<td>280</td>
<td>Needle screw and clamp.</td>
</tr>
<tr>
<td>322</td>
<td>Bobbin winder rubber (when electric).</td>
</tr>
<tr>
<td>341</td>
<td>Washer for 728.</td>
</tr>
<tr>
<td>345</td>
<td>Hemmer.</td>
</tr>
<tr>
<td>348</td>
<td>Presser bar lifter screw.</td>
</tr>
<tr>
<td>357</td>
<td>Tension disc.</td>
</tr>
<tr>
<td>358</td>
<td>Tension spring on inside of face.</td>
</tr>
<tr>
<td>359</td>
<td>Screw and nut to connect 358 and 785.</td>
</tr>
<tr>
<td>360</td>
<td>Guide pin in slot of tension plate 785.</td>
</tr>
<tr>
<td>363</td>
<td>Screw to adjust lower end of face.</td>
</tr>
<tr>
<td>364</td>
<td>Screw to clamp feed bar centers 726 in feed rock shaft 724.</td>
</tr>
<tr>
<td>369</td>
<td>Needle bar.</td>
</tr>
<tr>
<td>448</td>
<td>Washer on 734.</td>
</tr>
<tr>
<td>536</td>
<td>Lock nut for 758.</td>
</tr>
<tr>
<td>540</td>
<td>Screw to fasten 767 and 728 in arm.</td>
</tr>
<tr>
<td>548</td>
<td>Foot gatherer.</td>
</tr>
<tr>
<td>701</td>
<td>Screw to bind needle bar link screw 784 in take up cam 762.</td>
</tr>
<tr>
<td>702</td>
<td>Screw to fasten feed cam 763, and to locate take up cam 762.</td>
</tr>
<tr>
<td>703</td>
<td>Screw to fasten 842 in arm.</td>
</tr>
<tr>
<td>704</td>
<td>Screw to fasten main connection stud 751 in arm.</td>
</tr>
<tr>
<td>705</td>
<td>Center for feed rock shaft 724 and thread pull off rock shaft 756.</td>
</tr>
<tr>
<td>706</td>
<td>Nuts for 705.</td>
</tr>
<tr>
<td>707</td>
<td>Screw to connect 714 with 723 and 754 with 756.</td>
</tr>
<tr>
<td>708</td>
<td>Nut for 707 and 721.</td>
</tr>
<tr>
<td>710</td>
<td>Pin in feed fork for shifting block 711.</td>
</tr>
<tr>
<td>711</td>
<td>Shifting block in feed connection 714.</td>
</tr>
<tr>
<td>714</td>
<td>Feed connection.</td>
</tr>
<tr>
<td>715</td>
<td>Feed connection link.</td>
</tr>
<tr>
<td>716</td>
<td>Pin for feed connection link 715.</td>
</tr>
<tr>
<td>718</td>
<td>Stitch adjusting stud.</td>
</tr>
<tr>
<td>719</td>
<td>Friction washer for 717.</td>
</tr>
<tr>
<td>720</td>
<td>Sleeve for 718.</td>
</tr>
<tr>
<td>721</td>
<td>Screw to connect 715 to 717.</td>
</tr>
<tr>
<td>723</td>
<td>Rock arm on rear end of feed rock shaft 724.</td>
</tr>
<tr>
<td>724</td>
<td>Feed rock shaft.</td>
</tr>
<tr>
<td>725</td>
<td>Feed bar.</td>
</tr>
<tr>
<td>726</td>
<td>Centers for feed bar 725.</td>
</tr>
<tr>
<td>727</td>
<td>Feed.</td>
</tr>
<tr>
<td>728</td>
<td>Screw to fasten feed 727 to feed bar 725 and table hinge to bed (when handlift only).</td>
</tr>
<tr>
<td>730</td>
<td>Shuttle race complete.</td>
</tr>
<tr>
<td>731</td>
<td>Latch to hold shuttle race cover 834 on race 730.</td>
</tr>
<tr>
<td>732</td>
<td>Spring for 731.</td>
</tr>
<tr>
<td>733</td>
<td>Pin for 731.</td>
</tr>
<tr>
<td>734</td>
<td>Spring pin to hold shuttle race cover 834 on race 730.</td>
</tr>
<tr>
<td>735</td>
<td>Spring for 734.</td>
</tr>
<tr>
<td>738</td>
<td>Thread guide plate on 834.</td>
</tr>
<tr>
<td>739</td>
<td>Screw to fasten 738 to 834.</td>
</tr>
</tbody>
</table>

(Continued on next page)
List of Head Parts—(Continued)

No.  
744 Bobbins.  
746 Crank on rear end of shuttle shaft 808.  
747 Main connection complete.  
748 Main connection roll.  
749 Screw to adjust main connection to slide block 750.  
750 Main connection slide block.  
751 Main connection stud.  
752 Screw raising and thread pull off cam.  
753 Screw to fasten 752 to 808 and to locate 782 needle bar block on needle bar.  
754 Eccentric connection for thread pull off.  
755 Thread pull off rock arm.  
756 Thread pull off rock shaft.  
757 Thread pull off.  
758 Screw to connect 757 to 755.  
759 Thread pull off slide block.  
760 Screw to connect 759 to shuttle race 730.  
762 Take up cam (for extras only).  
763 Feed cam.  
765 Forward bushing for upper shaft 761.  
766 Screw to fasten 765 in arm 6161, and 782 to 869.  
767 Rear bushing for upper shaft 761.  
775 Presser bar.  
778 Presser bar spring.  
779 Presser bar lifter block with pin and screw.  
780 Presser bar guide.  
781 Needle bar link.  
782 Needle bar block.  
784 Screw to connect 781 to take up cam 762.  
786 Auxiliary spring.  
787 Adjusting washer for 786.  
789 Screw to connect 839 to 834 and 840 to inside of face 9170.  
792 Spring for latch 839.  
804 Screw to clamp shuttle race 730 and to take up rear bearing of shuttle shaft 808.  
807 Gauge.  

No.  
808 Shuttle shaft driver and thread cast off complete.  
809 Screw to adjust auxiliary spring 786.  
813 Bed (Domestic No. 19 brown).  
820 Screw to fasten tension indicator 9091 to 9170.  
821 Washer on auxiliary spring 786.  
822 Washer under latch 839.  
823 Stud for lower end of main connection 747.  
824 Screw to fasten crank 746 on rear end of shuttle shaft 808.  
825 Plate for 725.  
826 Washer for 826.  
828 Washer for 826.  
834 Shuttle race cover.  
835 Shuttle.  
836 Bobbin case complete with spring.  
837 Bobbin case tension spring.  
838 Bobbin case tension screw.  
839 Latch to retain bobbin case 836.  
840 Auxiliary cam.  
842 Bearing for feed fork stud.  
843 Screw in end of feed fork stud.  
890 Dowel to dowel arm to bed.  
894 Whisker pin.  
2003 Tension adjusting lever screw.  
2004 Tension adjusting lever spring washer.  
6042 Rotary take up cam.  
6158 Take up collar.  
6159 Take up stud.  
6189 Screws to fasten arm to bed.  
6486 Washer for 9143.  
9045 Upper shaft.  
9046 Upper shaft lock nuts.  
9047 Set screw for 9055.  
9049 Washer for hand wheel.  
9055 Counter balance nut.  
9060 Thread guide complete.  
9068 Bobbin winder lever.

(Continued on next page)
<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
<th>No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>9064</td>
<td>Bobbin winder spring.</td>
<td>9101</td>
<td>Needle screw nut.</td>
</tr>
<tr>
<td>9065</td>
<td>Clamp stop nut.</td>
<td>9105</td>
<td>Attachment holder complete.</td>
</tr>
<tr>
<td>9067</td>
<td>Bobbin winder center.</td>
<td>9106</td>
<td>Presser foot.</td>
</tr>
<tr>
<td>9068</td>
<td>Bobbin winder pivot screw.</td>
<td>9107</td>
<td>Presser bar lifter complete.</td>
</tr>
<tr>
<td>9070</td>
<td>Bobbin winder complete.</td>
<td>9112</td>
<td>Thread cutter complete.</td>
</tr>
<tr>
<td>9078</td>
<td>Ball race assembled.</td>
<td>9114</td>
<td>Stitch adjusting lever.</td>
</tr>
<tr>
<td>9080</td>
<td>Screw in 9065 clamp nut.</td>
<td>9116</td>
<td>Feed fork and stud complete.</td>
</tr>
<tr>
<td>9083</td>
<td>Hand wheel.</td>
<td>9117</td>
<td>Needle plate.</td>
</tr>
<tr>
<td>9086</td>
<td>Presser bar cap.</td>
<td>9118</td>
<td>Screw to hold needle plate.</td>
</tr>
<tr>
<td>9087</td>
<td>Needle bar cap.</td>
<td>9121</td>
<td>Tension plate on front of face.</td>
</tr>
<tr>
<td>9088</td>
<td>Thread check.</td>
<td>9122</td>
<td>Hand hole cover plate.</td>
</tr>
<tr>
<td>9090</td>
<td>Tension adjusting lever.</td>
<td>9124</td>
<td>Take up lever complete.</td>
</tr>
<tr>
<td>9091</td>
<td>Tension index plate.</td>
<td>9125</td>
<td>Bobbin winder pulley.</td>
</tr>
<tr>
<td>9092</td>
<td>Stitch index plate.</td>
<td>9129</td>
<td>Spool pins assembled.</td>
</tr>
<tr>
<td>9093</td>
<td>Take up cover plate.</td>
<td>9143</td>
<td>Screw to hold down head.</td>
</tr>
<tr>
<td>9094</td>
<td>Caps for holes in back of arm.</td>
<td>9140</td>
<td>Plate for back of arm.</td>
</tr>
<tr>
<td>9095</td>
<td>Arm.</td>
<td>9170</td>
<td>Face assembled.</td>
</tr>
</tbody>
</table>
Hemming

Raise the take-up to its highest point, remove the presser-foot and in its place attach the hemmer. Trim the edge of cloth on a curve and insert in hemmer far enough to permit the needle to enter the cloth at its extreme edge, then proceed to sew, keeping the edge turned as it feeds through.

Felling

The hemmer is also the feller. Sew together two pieces of cloth with the under edge projecting between \( \frac{3}{8} \) and \( \frac{3}{4} \) inch beyond the upper edge; then trim the edges if necessary and open the work flat wrong side up, and fold down the wider edge, toward the left, over the narrow edge, and then pass the folded edge into the feller the same as in ordinary hemming.

Illustration above represents an operator in the act of completing a fell.
Hemming and Sewing on Lace, One Operation

Our hemmer and feller which accompanies each machine, is now made with a slot (see illustration). In this slot place the edge of the lace and sew it on at the same time as in ordinary hemming. The right side of material should be down.

Wide Hemming

Any width hem can be made with the hemmer and feller upon thin fabrics by simply folding the goods the desired width of hem and then passing the edge through as in narrow hemming.

We furnish with each machine our assorted widths of hemmers. Select the width desired and substitute it for the presser-foot. Take the cloth in both hands, the right hand in front of the hemmer and the left behind. Place the edge of the cloth in the hemmer drawing it back and forth until the hem is formed, stopping with the end under the needle. Drop presser-foot and commence to sew. Guide the cloth so as to keep the hemmer full. To change stitching near or far from edge, loosen thumb screw and move hemmer to right or left as desired and tighten screw.
Tucking

Loosen the thumb-nut on presser bar and remove presser-foot, adjusting slot of tucker on holder, after which tighten the thumb-nut.

To regulate the size of tuck, loosen thumb screw on tucker and place gauge for any desired width, moving to the right for wide and to the left for narrow tuck.

To regulate the space between tuck, loosen thumb screw on tucker and move the marker to the left for a wide space and to the right for narrow. After adjusting, tighten thumb screw.

The figures on the back of the cap show the width of tuck, and those on the front the width of space.

By adjusting gauge and marker so that the indicators will point to the same figures, the tucks will meet.

To Commence Tucking, fold the cloth for the first tuck and place it beneath the creaser and lip, with folded edge against the guide; drop the presser-foot and sew as usual.

The edge of the last tuck made should always pass under the spur placed immediately in front of the marking blade. This will prevent the finished tuck from passing over the marker and will greatly assist in guiding the work.

To tuck without marking, throw the marking lever up.
Quilting

Pass the quilter through hole in presser bar, adjust the quilter guide to the right of the needle according to the desired space between seams, and high enough to allow the goods to pass freely under it, and then fasten the quilter securely by 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 quilter guide follow the crease; quilt the remainder by keeping the guide in a line and over the last seam stitched.

**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.

Ruffling

Remove the presser-foot from machine by turning the knurled thumb-nut on presser bar to left. 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 and turn thumb-nut to the right, fastening firmly. See that needle goes down in center. 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 ⅛ 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 band 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.

Making Gathers or Plaits in Groups

You will find it desirable when making garments, such as petticoats, shirts, etc., to make or have the gathers or plaits in groups, especially where the gathers are used at the side with a plain space or surface between.

This type of work can be done by pushing adjustment E forward. The ruffler will then sew plain until the adjustment E is again pulled toward the operator. You will no doubt find it necessary to mark your material in order to measure for even spaces between the gathers or plaits. Your ruffler should be well oiled at place indicated.
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.

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.

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 adjustment $D$ down. Pull adjustment $E$ toward you and move stitch regulating lever on arm of sewing machine to between 1 and 2.

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.
Shirring

Remove hand-hole cover, insert ear of shirring plate into gauge screw hole in needle plate, and holding down the shirring plate, replace hand-hole cover over ear on shirring plate. With a screwdriver loosen screw on right side of ruffler and remove the lower blue blade or separator, placing the goods to be shirred between the blades and shirr at any desired distance from edge of goods. Be careful not to use ruffler without the separator or shirring blade and cloth between, for in so doing, the ruffling teeth will be broken or injured against the feed.

The Edge-Stitcher

The Edge-Stitching Attachment is fastened to the machine in the same manner as the Presser-Foot. The different slots which are numbered from 1 to 5 in the illustration serve as guides for sewing together laces, insertions, embroideries, sewing in position folded or hemmed edges, bias-folded material or piping, etc.
This Attachment is very useful in trimming such articles of clothing as aprons, women's and children's dresses and underwear, shirt-waists, silk blouses, boys' rompers and suits, or for articles for household decoration such as fine bureau scarfs and thin curtains, baby carriage covers and doilies.

Very beautiful effects may be obtained in yokes, guimpes, sleeves, collar and cuff sets, vestees, fichus, lace waists, camisoles, etc., by joining rows of lace insertion, alternate rows of lace and embroidery insertions, or alternate rows of tucking and lace insertions.

How to Adjust the Edge-Stitcher

To adjust, move lug A (see cut, page 24) at the left of the attachment 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 the guide.
Under Braider

Substitute the under braider foot (which is found in the box of attachments) for the regular presser-foot. Place under braider on machine same as the shirring plate; draw the braid under and through the tube and a little past the needle. The pattern to be braided should be stamped on the wrong side of the cloth. Place the goods under the presser-foot same as in regular sewing, following pattern carefully. This stitches the braid on the cloth from the underside.

Binding

Remove the presser-foot and substitute the binder. Cut the binding ¼ inch wide (on the bias if convenient). Pass the binding through the scrolls of the binder and under the presser-foot. Place the edge of the goods to be bound between the scrolls of the binder, drop presser-foot, guide the cloth with the left hand, and let the binding glide easily through the fingers of the right. To change the stitching near or far from the edge, move binder lug A to right or left as desired.
Using No. 6 Folded Tape With Binder

Cut the end of the tape bias and thread it through the outside slot in the scroll of the binder. The seam or edge to be bound is then inserted in the binder in the regular way. Folded tape can be purchased in any department store in a variety of colors.

The Scissors Gauge

Just one more time saver which the busy user will eagerly welcome—a Scissors Gauge with which one can easily and accurately cut bands of various widths, either straight or on the bias.

It's an attachment, the value of which will be grasped on sight by every sewer and highly appreciated for its thorough utility.

This attachment is included free with the attachments supplied with this machine.

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

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

The letter \( F \) indicates the proper width for a bias fold, which is to be \( \frac{1}{2} \) inch wide when finished.

The letter \( B \) indicates the width for cutting bias bands which are used with the binder.

\( C \) is for corded or plain piping. The piping is cut bias and folded double to use with the ruffer.
With the aid of this gauge any number of folds may be cut of exactly the same width. Those who have tried know the difficulty of doing this with the scissors alone. Everyone who uses a bias gauge is delighted with it.

Placing the Gauge on the Scissors.

Buy a yard of 44-inch lawn. Cut it into bias strips 3/8 to 1/2 of an inch wide. Roll it on cardboard and keep it in the machine drawer. It will furnish the binding for the inside seams of the white sewing for months to come.

Cutting a Bias Band with the help of the Gauge.
Keep Machine Well Oiled

Oil in all the places indicated on page 12. To oil the underside of machine, slip the belt off the balance wheel and turn the machine back on its hinges and oil in places indicated above.

To Clean Machine

If the machine is dirty or gummed up with poor oil, oil thoroughly in places indicated above and on page 12, using Kerosene (coal oil) run the machine for a short time, wipe dry and oil with good sewing machine oil.

USE ONLY OIL ESPECIALLY PREPARED FOR SEWING MACHINES
ELECTRICAL EQUIPMENT

Connections

Be sure that the motor pulley is so adjusted that it centers on the hand wheel for proper drive; next, see that the insulating bushing found on three-wire cord leading from the rheostat on the inside of the cabinet is properly placed in the hole found 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.

Motor Lubrication

Two cups (one at either 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. There are six speeds, 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.