

# INSTRUCTION BOOK

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## The FREE Sewing Machine

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MADE BY  
FREE SEWING MACHINE CO.  
ROCKFORD, ILLINOIS

## The Importance of Using Good Oil

One of the most essential features of the proper working and wearing qualities of this machine is *GOOD OIL*.

*POOR OIL MAKES THE MACHINE RUN HARD.*

*POOR OIL CLOGS AND FILLS UP THE OIL HOLES* making it necessary for the operator to pick out the accumulations, which is soon forgotten, thereby, entirely defeating the purpose of the oil holes.

*AVOID USING* oil which resembles castor or sweet oil in appearance or that looks thick and rancid. The oils should be *CLEAR* and of *BEST QUALITY*, about as thick as kerosene.

*WE GUARANTEE OUR OIL*, which is put up expressly for this and other light machinery. If you cannot get oil of this description from your local dealer, order from us.

### NEEDLES

*WE CANNOT GUARANTEE THE RESULTS IF SUBSTITUTE OR POOR GRADE NEEDLES ARE USED.*

THEY ARE GENERALLY THE CAUSE OF SKIP STITCHES OR BROKEN THREAD.

We recommend genuine needles which can be secured from the dealer from whom you purchased this machine or direct from us.

### THREAD

*CHEAP THREAD*, usually sold at the bargain counter, *IS NOT FIT FOR USE ON SEWING MACHINES*, because it is course and stiff and cannot be controlled by the tensions. It is made for basting and hand sewing. *NICE WORK CANNOT BE PRODUCED BY ITS USE.*

## General Instructions

**WE URGE YOU TO READ THIS BOOK CAREFULLY :: ::** Particularly the first half of the book, which tells you how to take care of the machine. This machine, before leaving our factory, has been carefully adjusted and inspected, and its sewing qualities have been tested on every class of work and found perfect in every respect.

**BEFORE THE MACHINE IS USED**, care should be taken to clean and oil it thoroughly, according to the instructions on pages 6, 7 and 8.

### A Few of the Simple Rules to Follow

- 1st. **KEEP** the machine **CLEAN** and **WELL OILED**.
  - 2nd. **USE** the **BEST QUALITY OF THREAD** and have the **RIGHT SIZE NEEDLE FOR THE THREAD**.
  - 3rd. **USE GENUINE NEEDLES**. Do not expect to do perfect work with poor needles.
  - 4th. **BE SURE** the machine is **PROPERLY THREADED**. Better see threading instructions on page 9.
  - 5th. **LEARN PLAIN SEWING BEFORE ATTEMPTING TO USE THE ATTACHMENTS**.
  - 6th. **DO NOT PULL ON THE CLOTH** in your efforts to help the machine feed faster. It will cause the **NEEDLE TO BE BROKEN**. Let the machine do its own feeding.
  - 7th. **DO NOT RUN THE MACHINE WHEN IT IS THREADED** without having **CLOTH UNDER THE PRESSER FOOT**.
- IN CASE OF DIFFICULTIES, DO NOT MAKE ANY ADJUSTMENTS** until you have referred to the subject treating on the complaint. It will then be an easy matter for you to locate the trouble and overcome it.

### About Repairing this Machine

Should you find it necessary to have the head of the machine repaired, **DO NOT** allow the agent offering some other machine for sale, or the handy man about town, to make any adjustments. They generally do more harm than good. If you cannot determine the remedy from the instructions in this book, **WRITE TO US**. We will gladly advise you promptly just what to do.

**SEWING MACHINE FACTORY**

**ROCKFORD, ILL.**

## Difficulties of Beginners

As in all things "Practice makes perfect," so in the operation of this Sewing Machine. All of the varied kinds of work which can be done on it will be accomplished with perfect ease, as you daily grow more accustomed to its use by closely following the instructions in this book.

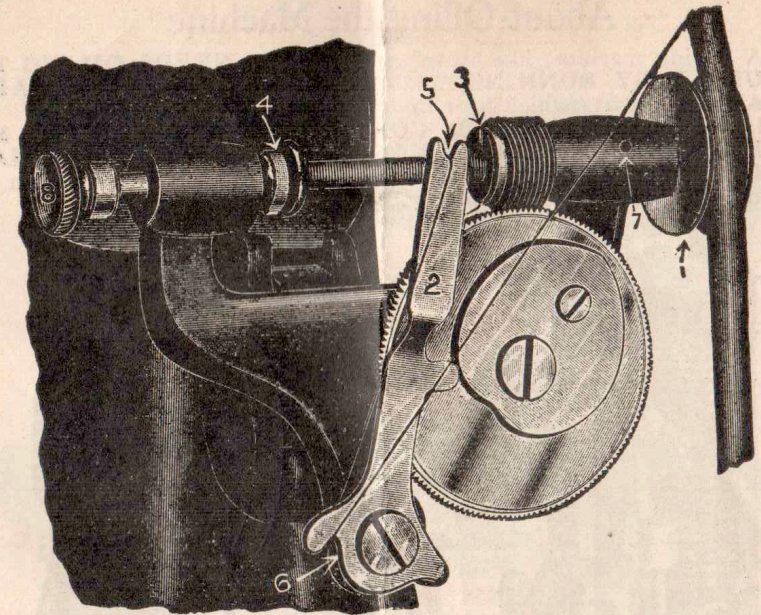
**WHEN DIFFICULTIES ARISE, REMEMBER** that your machine is seldom at fault and does not require the aid of a repair man. You will find on close observation that your trouble is generally due to your oversight or neglect in following out these simple rules:

**AN IMPERFECT OR CROOKED NEEDLE.**  
**CHEAP, INFERIOR QUALITY OF THREAD.**  
**FAILURE TO HAVE MACHINE PROPERLY THREADED.**  
**NEEDLE NOT LARGE ENOUGH FOR THE THREAD.**  
**TENSIONS CLOGGED OR OUT OF ADJUSTMENT.**  
**LACK OF OIL OR THE ACCUMULATION OF DIRT AND LINT AROUND THE FEED, NEEDLE WELL OR THE SHUTTLE.**

See index and quickly refer to the paragraph treating on these subjects.

## Treadle Practice

The beginner should first become thoroughly familiar with the treadle motion before attempting to operate. Sit down to the machine in position to sew. **RAISE THE PRESSER FOOT. UNTHREAD THE NEEDLE. REMOVE THE SHUTTLE. TURN THE HAND WHEEL TOWARDS YOU.** Run the machine until a smooth, even motion is acquired, as this greatly facilitates the proper working of the machine and permits the operator to center their attention upon the work when sewing.



## Winding the Bobbin

Hold the hand wheel with the left hand, and with the right hand release the clutch, turning it half-way around. This will permit the loose pulley to run free. Pull the bobbin winder towards you, **UNTIL THE SMALL PULLEY WHEEL (1) COMES IN CONTACT WITH THE BELT. TURN THE MACHINE UNTIL THE DISTRIBUTING LEVER (2) IS AS FAR TO THE RIGHT AS IT WILL GO.** Place one end of the bobbin in the socket (3) on the right side and the other end of the bobbin in the pivot point (4) in the plunger, on the left side. To do so, pull the plunger nut (8) towards the left to admit the bobbin, letting it spring back in place, which will hold the bobbin in the winder. Catch the end of the thread between the brass end of the bobbin and the socket (3) of the shaft on the right side. Place thread over the top of lever (5), then down through notch (6) in bottom of lever.

**NOTE**—Place the spool on spool pin and hold the thread, letting it run straight towards you from the spool over your finger and down to No. 6 guide on the bobbin winder, or the same results may be had by letting the thread run from the spool over the thread guide at top of face plate and then to No. 6. The illustration shows the thread being held in the hand above the bobbin winder.

**BE SURE TO STOP WINDING BEFORE THE THREAD IS WOUND HIGHER THAN THE BRASS END OF THE BOBBIN.** A drop of oil should be placed at friction point (4) at left end of bobbin (see illustration); also at (7).

When through winding the bobbin, push the winder back against the arm of the machine. Hold the hand wheel with the left hand and turn the release nut around until it locks the loose pulley to the wheel.

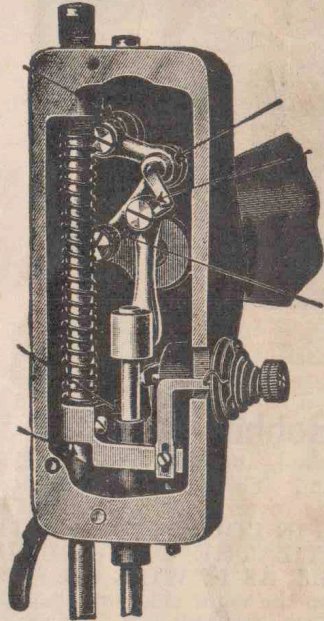
**WINDING THE BOBBIN CORRECTLY, AS A VERY IMPORTANT PART IN FORMING A PERFECT STITCH. PRACTICE THIS AND LEARN TO DO IT WELL.**

**CAUTION**—NEVER BEGIN WINDING A BOBBIN OVER ONE THAT IS PARTLY FILLED WITH DIFFERENT KIND OF THREAD.

## About Oiling the Machine

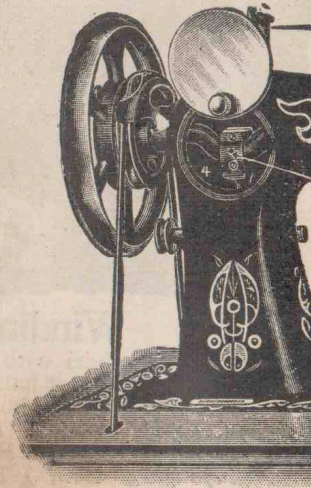
A sewing machine, like all other machinery, **NEEDS OILING TO INSURE EASY RUNNING**, and **TO PREVENT UNNECESSARY WEAR** of the parts which bear upon each other.

If the machine is **USED CONTINUALLY**, IT SHOULD BE **OILED EVERY DAY**. WITH **MODERATE USE**, an **OCCASIONAL OILING** is sufficient. **ONE DROP OF OIL** at each point shown in the following illustrations is plenty.



**TO OIL LINK MOVEMENT**

Remove the face plate held in place by thumb screw and place a **DROP OF OIL** in **EACH** of the five holes indicated by arrows. A drop of oil on the needle bar at bearing is required only occasionally. If oiled too freely it will run down bar, soiling the work. **DO NOT FAIL TO OIL THESE PARTS REGULARLY.**



**HOW TO OIL INSIDE ARM**

Loosen thumb screw holding arm shield in place, raising it up, as shown in illustration.

**THIS IS A VERY IMPORTANT BEARING AND MUST BE OILED REGULARLY.**

## When the Machine Runs Hard

It is generally due to **FAILURE TO KEEP THE MACHINE CLEAN AND WELL OILED WITH THE PROPER KIND OF OIL.**

**POOR OIL**, in time, **WILL FORM A GUM AND BIND THE MACHINE UNTIL IT CANNOT BE TURNED.**

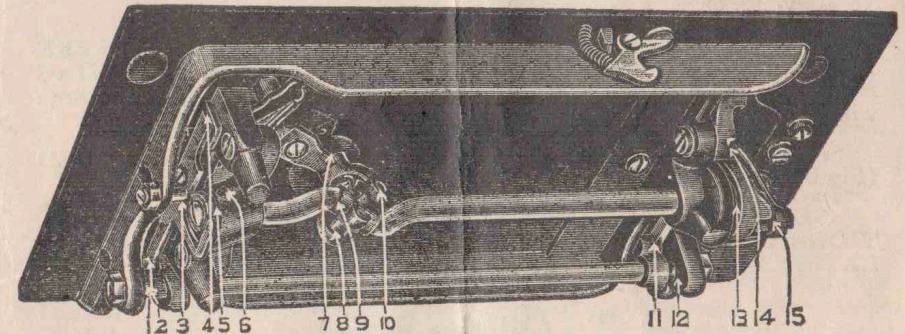
## How to Remove Gummed Oil

Remove the needle and shuttle and **APPLY KEROSENE OR COAL OIL** to all of the bearings in the head. Run the machine rapidly for a few moments and this gum will be dissolved by the kerosene. This accumulation should then be thoroughly removed and **THE MACHINE OILED IN EVERY BEARING. CAUTION—DO NOT OVER-LOO<sup>T</sup>** A SINGLE BEARING WHEN THIS PROCESS HAS BEEN FOLLOWED.

## Where to Oil the Head



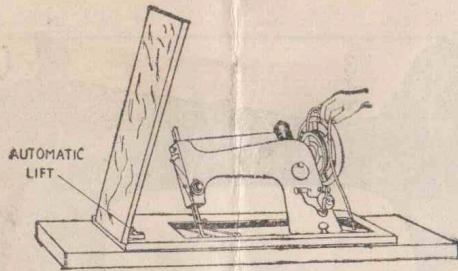
**FIGURE 1**



**FIGURE 2**

**BE SURE TO OIL EVERY BEARING** indicated by arrow and numeral each time the machine is oiled.

## To Unbelt and Oil Under Part of Head



### Automatic Lift Models

**THE BELT MUST BE THROWN OVER THE HAND WHEEL BEFORE HEAD CAN BE TIPPED BACK.** (See illustration above.)

When the machine is open, raise the lid about half way up, which will let the head down far enough to slip the belt over the hand wheel.

To tip the head back, **REMOVE** the shipping screw which passes through the bed plate a little to the left of the stitch regulator nut and under the bobbin winder.

### Hand Lift Models

remove the belt from the large wheel on stand instead of the hand wheel. No shipping screw used on hand lift models.

**REMEMBER ALL PARTS SHOULD BE OILED WHERE THERE IS ANY FRICTION CAUSED BY ONE PART MOVING AGAINST ANOTHER.** Arrows and numerals on illustrations, page 7, will show just where to oil.

**KEEP THE FEED CAMS, No. 6 AND No. 8, WELL OILED** (Figure 2, page 7.)

**BEFORE OILING THE MACHINE, REMOVE ALL COLLECTIONS OF LINT AND OLD OIL THAT MAY HAVE ACCUMULATED AROUND THE BEARINGS.**

### To Oil the Stand

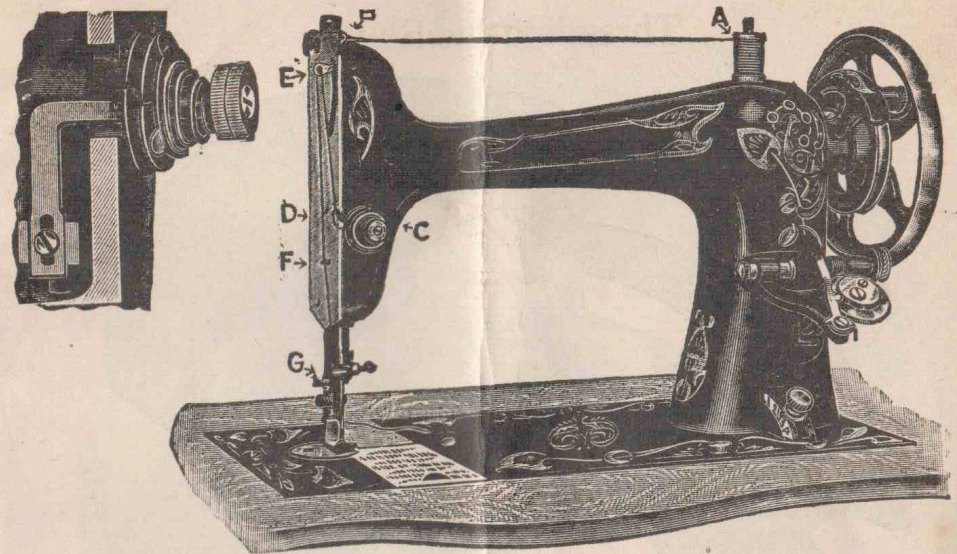
There are six places in the stand that should be oiled:

**EACH SIDE OF TREADLE.**

**EACH END OF PITMAN.**

**EACH SIDE OF DRIVE WHEEL.**

The stand does not require oiling as frequently as the upper part of the machine.



### How to Thread the Machine

Place the spool of thread on spool pin (A), then draw the thread through guide (B) at top of face plate, then down to the right of and **BETWEEN THE TWO TENSION DISCS (C)**, which also brings the thread into position against the automatic thread controller or check spring (D) (**SEE ABOVE**), then up through the slot in end of takeup lever (E), then down through the thread guide (F), near bottom of face plate, then through the thread guide (G) on bottom of needle bar, then through the eye of the needle from left to right.

**IF THE MACHINE IS NOT THREADED EXACTLY RIGHT,** it will not sew perfectly.

### To Remove the Shuttle

Draw out the front slide. Turn the handwheel toward you until the shuttle is as far forward as it will go. With one finger of the right hand pull the shuttle ejector toward you with a quick movement. This will throw the shuttle out of the carrier, bringing the large end in a position so that you can easily grasp it with the thumb and finger of the left hand.

**NEVER LIFT THE SHUTTLE OUT OF THE CARRIER WITH A SHARP INSTRUMENT OF ANY KIND. DO NOT LIFT THE SHUTTLE BY THE SPRING.**

### Shuttle Race Oil Pad

The face of the shuttle race **MUST BE KEPT CLEAN AND FREE FROM LINT.**

The felt pad under the front slide should be kept saturated with oil to insure the proper lubrication of the shuttle and race.

## Threading the Shuttle

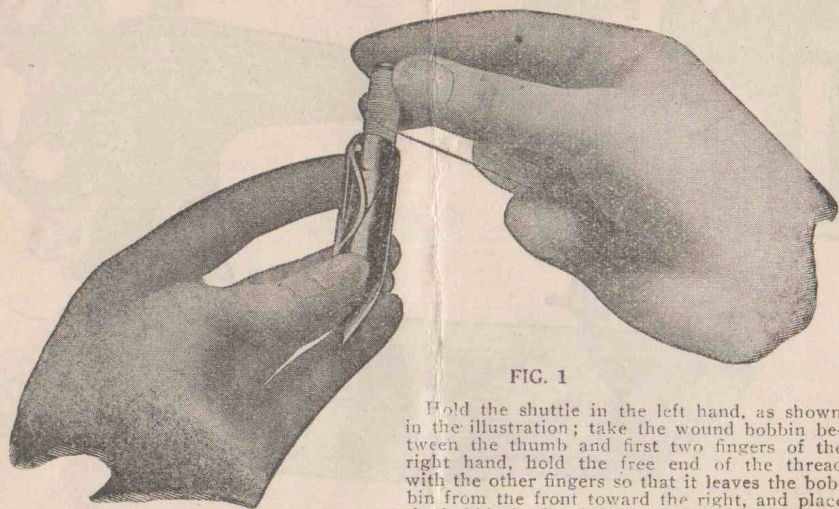


FIG. 1

Hold the shuttle in the left hand, as shown in the illustration; take the wound bobbin between the thumb and first two fingers of the right hand, hold the free end of the thread with the other fingers so that it leaves the bobbin from the front toward the right, and place the bobbin in the shuttle, as shown in the illustration, **PRESSING IT DOWN AS FAR AS IT WILL GO.**

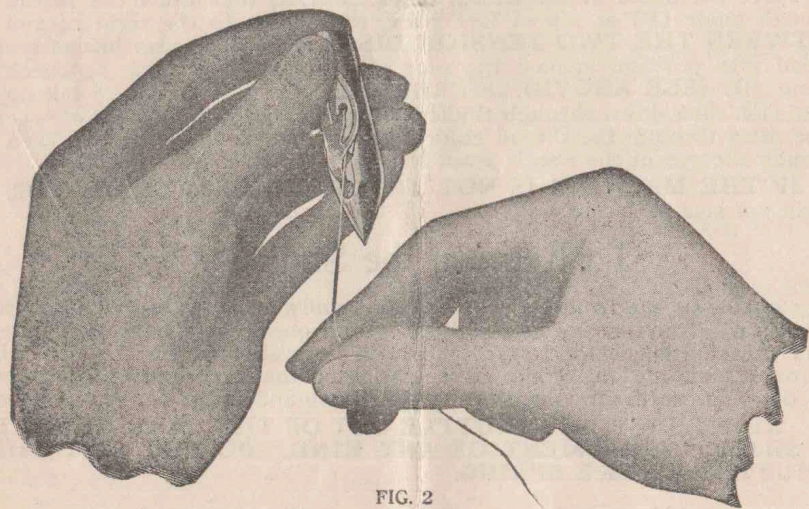


FIG. 2

With the fore finger of the left hand hold the bobbin to keep it from revolving too freely. Lead the thread with the right hand through the slot in side of shuttle until it appears to the left of the point of thread slot exactly as shown in Fig. 2.

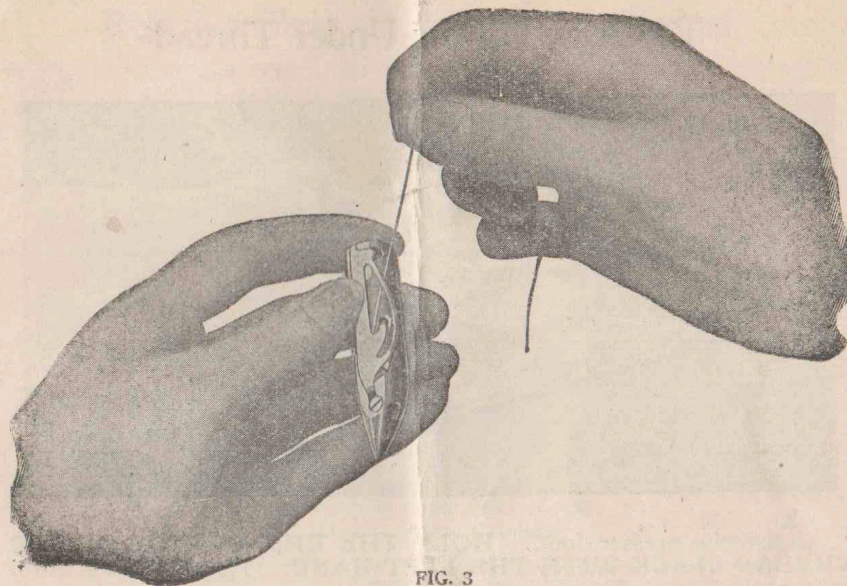
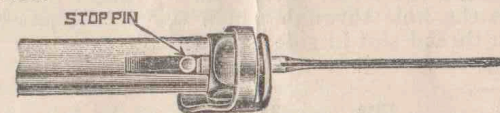


FIG. 3

With a circular movement of the right hand, draw the thread slightly to the left and upward until it is on the outside of shuttle barrel but under the guide on shuttle spring, being sure it is under the point on spring exactly as shown in picture. **Pull the thread to make sure that the bobbin revolves FREELY IN THE SHUTTLE.** Break off the thread so that about 4 inches hangs from the shuttle, then place shuttle in machine as directed.

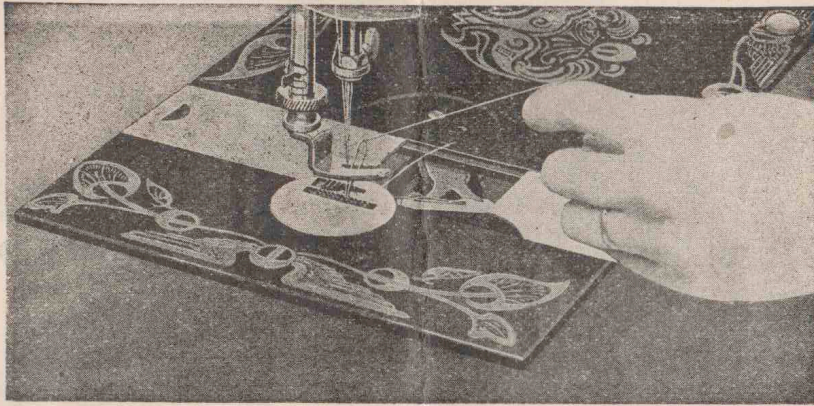


## To Set the Needle

**RAISE THE NEEDLE BAR TO ITS HIGHEST POINT,** and loosen the needle clamp screw. Hold the needle between the thumb and first finger of the left hand and pass the shank of the needle up through the guide on the bottom of the needle bar, with the **FLAT SIDE OF THE SHANK TOWARDS THE NEEDLE BAR, OR TO THE RIGHT.** **THE END OF THE NEEDLE MUST REST AGAINST THE NEEDLE STOP PIN WHICH IS VISIBLE IN THE NEEDLE BAR GROOVE JUST ABOVE THE NEEDLE CLAMP.** (See illustration.) Then clamp the needle securely with the thumb screw.

*Remember, genuine needles that are straight, perfectly finished at the eye and with a good point are necessary in producing nice work, and to avoid skip stitches and broken thread. See description page 13.*

## To Draw Up the Under Thread



Raise the presser foot. **HOLD THE END OF THE UPPER THREAD SLACK WITH THE LEFT HAND.** Turn the hand wheel once around towards you until the needle moves down, then up again to its highest point. The needle thread has been carried around the under thread, and can be drawn up through the hole in the needle plate by the upper thread. Draw the ends of both threads back under the presser foot towards the back of the machine; the upper thread through the opening in the foot.

**NOTE.**—Be sure the under thread runs straight from the prong on shuttle spring to the hole through which the needle passes and that it does not catch in thread slot in side of shuttle.

## Thread to Use

**THE BEST RESULTS ARE OBTAINED** when both the **UPPER AND LOWER** threads are the **SAME SIZE AND QUALITY.** **IT IS A COMMON MISTAKE** to think that No. 40 or No. 50 thread should be used in order to form a strong stitch. **BETTER RESULTS ARE OBTAINED BY USING NUMBER SIXTY (60), SEVENTY (70) OR EIGHTY (80) THREAD WITH A No. ½ NEEDLE,** for the reason that it draws more closely into the material, the wear and strain being on the material instead of the thread.

**CAUTION**—Don't use cheap basting thread purchased at the bargain counter at one or two cents per spool and expect to do nice work. This kind of thread is not made for use on sewing machines.

## Relative Sizes of Needle and Thread

SIZE OF NEEDLE	CLASS OF WORK TO SEW	SIZE OF THREAD OR SILK
O	Very Thin Muslins Cambrics, Linen, etc.	100 to 150 Cotton 000,00 Silk Twist
B	Very Fine Calicoes, Linens, Shirtings, Fine Silk Goods, etc.	30 to 100 Cotton Silk Twist
½	Shirtings, Sheetings, Bleached Calicoes, Muslins, Silk, General Domestic Goods, and All Classes of General Domestic Work	60 to 80 Cotton A and B Silk Twist
1	All Kinds of Heavy Calicoes, Light Woolen Goods, Heavy Silk, Seaming, Stitching, etc.	40 to 60 Cotton C Silk Twist
2	Tickings, Woolen Goods, Trousers, Boys' Clothing, Corsets, Cloaks, Mantels, etc.	30 to 40 Cotton D Silk Twist
3	Heavy Woolens, Tickings, Bags, Heavy Coats, Trousers, etc. Heavy clothes Generally	24 to 30 Cotton E Silk Twist 60 to 80 Linen

Exact Size of Needle for This Machine



The market is full of needles of inferior quality, made to sell cheap. We cannot guarantee satisfactory results if a cheap, inferior grade of needles are used.

Skip stitches and broken thread are almost always due to a poor needle. Therefore, be sure to use genuine needles, which you can get from the dealer from whom you purchased this machine, or direct from us.

**THE NEEDLE IS MEASURED FROM THE TOP OF EYE TO THE EXTREME TOP OF THE SHANK.** In case you are obliged to buy substitute needles, better lay the needle on the above illustration to see that it is correct length.

When sewing two thicknesses of calico, shirting or ordinary work, No. 70 thread and No. ½ needle will produce a beautiful stitch which is very firm and is strong enough for this class of work.

## Tensions

### WHAT TENSION MEANS

Tension means pressure on the thread, which prevents the machine from drawing off more thread than necessary to form a stitch. You can create a tension on thread by placing it between the thumb and fore finger, pressing firmly upon it, and with the other hand drawing it through the fingers. The harder the pressure, the greater the tension. Therefore, both upper and lower thread must be controlled by the tension like that formed by pressing the fingers firmly upon the thread.

### SHUTTLE TENSION

**NOTE.**—We would not advise changing the shuttle tension unless absolutely necessary to do so, as the adjustment is rather delicate. Should it be necessary to change the shuttle tension, do so with the shuttle out of the machine, to avoid a possible chance of the point of the screw driver injuring the shuttle carrier or scratching the point of the shuttle.

The tension in the shuttle is governed by the pressure of the spring on the shuttle and adjusted by the small screw which holds the spring to the shuttle. **THIS SCREW TURNS TO THE RIGHT TO TIGHTEN, TO THE LEFT TO LOOSEN.**

**IF UNABLE TO GET SUFFICIENT TENSION BY ADJUSTING THE SCREW IN THE SHUTTLE,** there may be a **PIECE OF THREAD,** or a **COLLECTION OF LINT,** under the spring, preventing the spring from bearing on the thread. This can be forced out with a fine needle. If still unable to get sufficient tension, remove the spring and bend it, to have more pressure directly over the point where the thread draws out of the shuttle. After replacing spring, should the tension be too tight when the screw is below the surface, the spring has been bent too much; in other words, the pressure is too great. The spring can be raised by using the smallest screw driver, prying the spring up gently.

**NOTE.**—Bear in mind that the **SHUTTLE TENSION SCREW MUST BE BELOW THE SURFACE OF THE SHUTTLE** or the thread will catch on the head of the screw while sewing.

The bobbin must be wound smoothly and not too full. The same size thread should be used in the shuttle as above. Use one kind and size of thread only on each bobbin.

### UPPER TENSION

Tension on the upper thread is formed by the thread passing between the tension discs or plates, and is regulated by the nut or screw in connection with same.

**BE SURE THE MACHINE IS CORRECTLY THREADED (READ THE THREADING INSTRUCTIONS CAREFULLY and have the right size needle for the thread.)**

### HOW TO TELL WHEN TENSION ON THE UPPER AND LOWER THREADS ARE CORRECTLY ADJUSTED

When the shuttle tension has been correctly adjusted according to the instructions and placed in the shuttle carrier, and the needle has been threaded, hold the end of the needle thread slack with the left hand, turn the hand wheel towards you once around and draw up the under thread. See illustration, page 12.

Lower the pressure foot. (**REMEMBER, THE UPPER TENSION IS ENTIRELY RELEASED WHEN PRESSER FOOT IS UP. THEREFORE, IT MUST BE DOWN ON THE FEED WHEN TESTING TENSIONS.**) Draw the upper thread through the eye of the needle to the right with the right hand, and the under thread through the opening in the presser foot to the left with the left hand, pulling both threads at the same time. You will then be able to tell when both threads pull alike.

Adjust the upper tension by turning tension nut (C) to the left to loosen and to the right to tighten.

When both tensions are properly adjusted, both threads are drawn into the fabric, thus:



If shuttle thread is too tight, or upper thread too loose, the thread on the under side will be straight, thus:



because there is not sufficient upper tension to draw the under thread in. To the contrary, if the shuttle thread draws off too easily, or the upper thread is too light, the under thread will draw up through the fabric and the upper thread will lay straight, thus:



## SKIP STITCHES

Skip stitches are more often caused by an imperfect needle or needle not correctly set, or not the right needle for the machine.

In setting the needle, be sure that the flat side of the needle shank is toward the needle bar and up as high as it will go. In case the needle does not go in freely, it must be forced up high enough to strike the needle stop screw. (See illustration, page 10.) The needle stop screw is plainly visible in the slot on the left side of the needle bar, directly above the needle clamp.

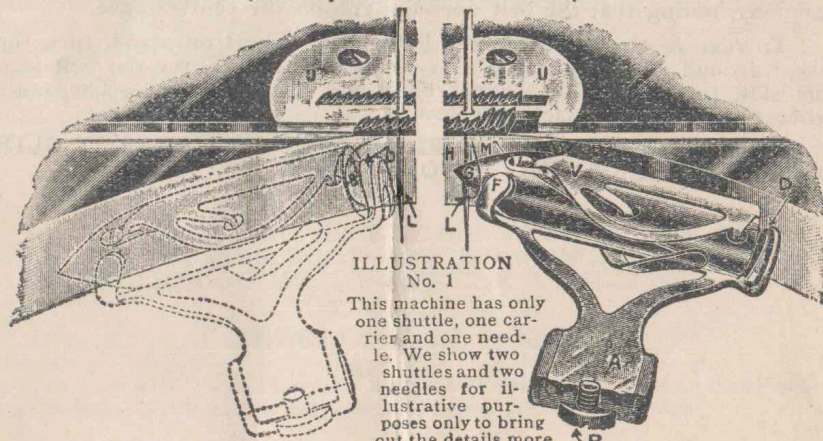


ILLUSTRATION  
No. 1

This machine has only one shuttle, one carrier and one needle. We show two shuttles and two needles for illustrative purposes only to bring out the details more clearly.

This View shows the position of the shuttle after it has passed the needle, also the position of the upper thread as it passes out behind the shuttle and locks the under thread into the cloth.

This view shows position of shuttle as it starts forward catching the loop of thread which is the formation of the stitch.



The needle should pass down through the hole in the needle plate slightly to the right of center. When the needle is correctly set and securely clamped to the needle bar the eye of the needle should be about one-eighth inch below the shuttle point. (See illustration showing the correct relative position of the shuttle point to the eye of the needle on page 15.)

**BEWARE OF CHEAP OR BOGUS NEEDLES.** They are not uniform. The location of the eye varies, consequently the needle eye will not be the right distance from the shuttle point when the shuttle is ready to pass through the loop.

Cheap thread or basting cotton is also a common cause for skipped stitches. **Buy and use only the best spool cotton.** If the needle is too fine for the thread the thread will not pass through the eye of the needle freely, interfering with the formation of the loop. (Refer to instructions on needle and thread sizes on page 13.)

The presser foot and attachments should be set back on the presser bar as far as they will go and securely fastened. If the presser foot or attachments are not correctly attached to the machine, the needle or thread may strike or rub in the needle hole in the attachment, causing skipped stitches.

Dirt or lint in the needle well, under the needle plate, will also cause skipped stitches.

## The Belt

The machine works best with the belt tight enough only to keep it from slipping on the pulley. If the belt is too tight it will cause the machine to run hard.

If necessary to replace an old belt, be sure that it passes over the center brace, running direct from the hand wheel through the hole in the back of the table and around the large wheel. Open all three drawers part way, noting that the belt does not rub on the center brace.

To remove the belt from the large drive wheel on stand, turn the wheel around until you find a slot cut in the rim. Force the belt into this slot, turn the wheel once around and it is unbelted. The same process will belt the machine below.

**KEEP THE BELT FREE FROM OIL. IT MAKES IT SLIP ON THE PULLEY, AND ALSO ROTTS IT.**

## To Remove the Work

Stop the machine with the needle at its highest point. **RAISE THE LIFTER CRANK, WHICH AUTOMATICALLY RELEASES THE UPPER TENSION. DRAW THE WORK DIRECTLY BACK OF THE NEEDLE, CUT THE THREAD CLOSE TO THE GOODS, leaving the ends under the presser foot.**

## To Change the Pressure of the Presser Foot

Turn the large thumb screw at top of arm directly over presser bar to the right, or down, to make the pressure heavier. To the left, or up, to make it lighter. The pressure should be **HEAVY ENOUGH ONLY** to prevent the material rising with the needle and to insure that the feed moves the goods along evenly. Too heavy pressure is of no practical benefit. **IT MAKES THE MACHINE RUN HARDER AND MAY INJURE THE GOODS.**

## Sewing Over Thick Seams

If the pressure on the presser foot is too great, the feed will not catch in the goods sufficiently enough to force an extremely thick seam between the foot and the feed, so that it will be carried through. **DO NOT PULL ON THE MATERIAL** in your effort to make it feed through, as this will pull the needle out of line, causing it to strike the needle plate and break. **THE REMEDY IS TO RAISE THE PRESSER FOOT SLIGHTLY AND RUN THE MACHINE SLOWLY** until the seam has passed into the feeding surfaces. This is only necessary in extreme cases.

## To Change the Length of Stitch

The stitch adjusting nut is directly under the bobbin winder, and when the regulator is pulled forward in the slot nearest the operator, the stitch is the shortest. When pushed to the extreme end of the slot, nearest the arm of the machine, the stitch will be at its greatest length. Adjust the stitch regulator to the desired position according to the class of work being done, and be sure that the **THUMB NUT IS TIGHTENED** when in correct position.

## To Turn a Corner

Stop the machine, with the **NEEDLE STILL IN THE GOODS, RAISE THE PRESSER FOOT AND TURN THE MATERIAL IN THE DIRECTION DESIRED, USING THE NEEDLE AS A PIVOT.**

## Flannel or Bias Seams

Use a **SHORT STITCH** and **LIGHT TENSION**, so that there will be sufficient thread in the seam to allow the goods to stretch.

## When Machine Does Not Feed Properly

Turn hand wheel slowly forward and note carefully that the feed comes up through the hole in the needle plate, moves forward, drops down under the plate and repeats this operation, as the wheel is moved. The feed when at its highest point should be the depth of the teeth, above the level of the needle plate.

**THE PRESSER FOOT MUST BE CLEAR BACK ON THE PRESSER BAR AND SECURELY CLAMPED BY THE NUT HOLDING IT IN PLACE, and MUST REST PERFECTLY LEVEL UPON THE SURFACE OF THE FEED.** The needle must pass through the opening in the foot without interfering.

Note carefully that the stitch regulator nut which is directly under the bobbin winder is not pulling to the extreme end of the slot nearest the operator. When in this position, the feed is entirely turned off.

## Breaking Needles

**IS GENERALLY DUE TO THE OPERATOR PULLING ON THE WORK,** in their effort to assist the feed or make the machine sew faster. **THIS MUST NOT BE DONE.** It is bound to pull the needle out of line, causing it to strike the needle plate and break.

This may also be due to the **PRESSER FOOT or ATTACHMENTS** not being pushed **CLEAR BACK ON THE BAR AND SECURELY CLAMPED.** When the attachments or foot are placed, a test should be made after the attachment is clamped, **TO SEE THAT THE NEEDLE PASSES THROUGH THE ATTACHMENT WITHOUT INTERFERING.** If the needle does not interfere on its downward course, or is not pulled out of line by the operator through their carelessness in pulling on the work, the needle will seldom break.

(Needles are frequently broken by forcing cheap, coarse thread through a needle that is too small.)

## Breaking the Upper Thread

May be caused by

**THE MACHINE NOT BEING PROPERLY THREADED;  
AN IMPERFECT NEEDLE;  
A CROOKED NEEDLE;  
UPPER TENSION BEING TOO TIGHT;  
NEEDLE EYE TOO SMALL FOR THE THREAD;  
NEEDLE RUBBING AGAINST ATTACHMENT OR  
PRESSER FOOT.**

## Breaking the Lower Thread

May be caused by

**THE SHUTTLE BEING INCORRECTLY THREADED;  
THE TENSION BEING TOO TIGHT;  
THE BOBBIN BEING WOUND TOO FULL, so that it will  
not revolve freely;  
THE HOLE IN THE NEEDLE PLATE BECOMING  
ROUGH, caused by the needle striking the plate.**

An accumulation of lint and dirt at the bottom of shuttle cavity would prevent the bobbin from turning freely.



## To Adjust the Automatic Lift

When the machine is open the head should be level and parallel with the table. If the head should sag below the surface of the table at the rear edge of the head, this can be overcome, as shown in the illustration, by turning to the right just a little the automatic lift adjusting nut and locking with the lower or lock nut.

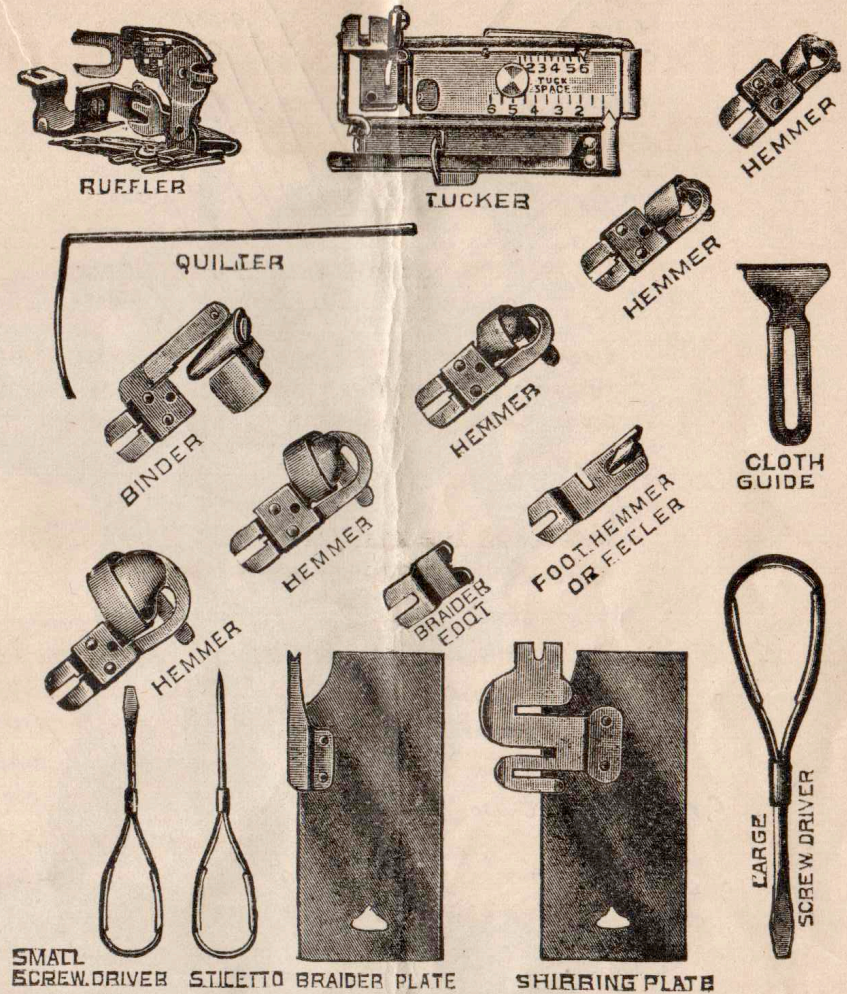
## Caution

The leverage of the lid on the automatic lift is powerful and the adjustment very sensitive; therefore, if the above adjustment is set up too much the lift chain will be broken. Move the adjusting nut a little at a time, and after changing the adjustment, raise the head to sewing position, that you may see that the adjustment is not too tight.

# Important Instructions

## Things You Should Not Do

- FIRST** Do not make unnecessary adjustments.
- SECOND** Don't tamper with the adjustments or allow repairers or others to attempt to repair your machine, unless you are sure they are capable.
- THIRD** Don't run the machine when it is threaded without cloth under the presser foot.
- FOURTH** Do not pull on the cloth in your effort to help the machine feed faster. It will cause the needle to be broken. Let the machine do its own feeding.
- FIFTH** Don't try to use the attachments until you are thoroughly familiar with plain sewing and can handle the machine easily.
- SIXTH** Don't buy cheap imitation needles and expect to do nice work.
- SEVENTH** Don't think that cheap basting cotton will produce as good work as good thread.
- EIGHTH** Don't use poor oil on your machine.



In addition to the above, we supply the following accessories:  
 5 Assorted Needles.  
 3 Bobbins.  
 1 Oil Can filled with the best quality Sewing Machine Oil.

**PRICE LIST OF ATTACHMENTS AND SUPPLIES FOR MACHINES**

Shuttle .....	\$1.20	Hemmer and Feller.....	\$0.60
Bobbins, per dozen.....	.60	Presser Foot.....	.50
Needles, per dozen.....	.40	Quilter .....	.15
Ruffler .....	1.50	Shuttle Screw Driver.....	.10
Tucker .....	1.50	Stiletto .....	.10
Hemmer (set including binder).....	.90	Large Screw Driver.....	.10
Braider Plate .....	.20	Oil Can .....	.10
Braider Foot .....	.25	Edgestitcher .....	.25
Shirring Plate .....	.20		



PRICE LIST OF PARTS FOR MODEL "C", "CE" AND "E" HEADS

CAST IRON PARTS

Price, Each

C-200	Arm (Round) for C Head	\$5.00
E-200	Arm (Square) for E Head	5.00
C-201	Bed	5.00
C-202C	Handwheel	1.40
C-204	Belt Guard	.30
C-205	Bobbin Winder Frame only	.45
C-205A	Bobbin Winder Assembled, complete	1.50
C-206	Main Shaft Arm Bushing	.40
C-207	Main Shaft Head (See No. C-300BA)	.35
C-208	Feed Lifting Rock Arm (See No. C-332A)	.14
C-209	Feed Driving Rock Arm (See No. C-332A)	.12
C-210	Main Connection Lever only	*
C-210A	Main Connection Lever Assembled (includes C-210, C-211 and two C-625)	1.00
C-211	Main Connection Lev. Cap (included in C-210A)	*
C-212	Main Connection Lever Guide Bracket only	*
C-212A	Main Connection Lever Guide Bracket Assembled (includes C-212, C-425, and C-908)	.75
C-213	Lower Shaft Bridge Bearing	.40
C-216	Wrist Wheel only	*
C-216A	Wrist Wheel Assembled (includes C-216, C-441, C-627 and C-909)	.80
C-217	Shuttle Lever only	*
C-217A	Shuttle Lever Assembled (includes C-217, C-218A, and C-905)	1.50
C-218A	Shuttle Lever Driver Assembled (included in No. C-217A)	*
C-221	Take-up Shaft Head Link (see No. C-409A)	.40
C-222	Take-up Angle Link (see No. C-409A)	.40
C-223	Take-up Needle Bar Link (See No. C-409A)	.40
C-227	Presser Bar Lift Bracket only	*
C-227A	Presser Bar Lift Bracket Assembled (includes C-227, C-421, and C-618)	.40
C-228	Stitch Regulator Lever only	*
C-228A	Stitch Regulator Lever Assembled (includes C-228, C-425, and C-906)	.80
C-230	Handwheel Brake Collar	.65
C-231	Handwheel Brake Button	.55

PARTS MADE FROM ROUND STEEL, SUCH AS SHAFTS, BARS, ETC.

C-300B	Main Shaft only	*
C-300BA	Main Shaft Assembled (includes C-300B, C-207 and C-800)	2.00
C-301	Lower Shaft	2.00
C-302	Feed Rock Shaft only (See No. C-332A)	*
C-303	Presser Bar	.50
C-304	Presser Bar Adjusting Cap Screw	.25
C-305	Needle Bar	.50
C-310	Shuttle Body only	*
C-310A	Shuttle Assembled (includes C-310, C-1101, and C-640B)	1.00
C-311B	Needle Bar Link Stud (See No. C-409A)	.35
C-312	Bobbin Winder Worm Shaft	.20
C-332A	Feed Rock Shaft Assembled (includes C-302, C-208, C-209, C-617, C-628, and C-802)	.80

PARTS MADE FROM FLAT STEEL, SUCH AS PLATES, WASHERS, BLOCKS, ETC.

C-400	Face Plate only	\$ *
C-400A	Face Plate Assembled (includes C-400, C-1125 and C-822)	.70
C-401	Presser Foot	.30
C-402	Shuttle Race Cover, Front	.38
C-403	Shuttle Race Cover, Rear	.38
C-404	Arm Shield, for C and E Heads	.20
CE-404	Arm Shield, for CE Head, Electric	.20
C-406	Tension Disc (two used)	.12
C-408	Needle Plate	.40
C-409	Take-up only	.20
C-409A	Take-up Assembled (includes C-409, C-221, C-222, C-223, C-311B, C-620, C-621, C-611B, C-612, C-804, C-901, and two C-823)	2.00
C-412B	Shuttle Carrier only	*
C-412BA	Shuttle Carrier Assembled (includes C-412B, C-1102B, C-824, C-413B, C-1115, and C-616B)	.50
C-413B	Shuttle Ejector (See No. 412BA)	.10

Parts marked with an asterisk (\*) in the price column not furnished separately. They can be secured in assembled form only.

PRICE LIST OF PARTS FOR MODEL "C", "CE" AND "E" HEADS  
PARTS MADE FROM FLAT STEEL, SUCH AS PLATES, WASHERS, BLOCKS, ETC.  
(Continued)

Price, Each

C-414	Feed Point (or Feed Dog)	\$.50
C-415	Bobbin Winder Worm Wheel only	*
C-415A	Bobbin Winder Worm Wheel Assembled (includes C-415, C-417 and C-606)	.40
C-416	Bobbin Winder Distributing Lever	.20
C-417	Bobbin Winder Heart Cam (See No. C-415A)	.15
C-418	Feed Lifting Bar Cam (See No. C-444A)	.20
C-419	Feed Driving Bar Cam (See No. C-445A)	.22
C-420	Presser Bar Lift Lever	.15
C-421	Thread Check Spring Stop Arm (See No. C-227A)	.06
C-422	Brake Collar Clutch	.08
C-423	Tension Tripod	.06
C-424B	Tension Release Lever	.08
C-425	Main Conn. Lever Guide Block (See No. C-212A)	.15
C-425	Stitch Regulator Lever Block (See No. C-228A)	.15
C-426	Wrist Wheel Key	.04
C-427	Head Latch only	*
C-427A	Head Latch Assembled (includes C-427, C-945, and C-810)	.35
C-431	Stitch Regulator Indicator	.06
C-433	Presser Bar Spring Washer	.04
C-434	Tension Release Washer	.04
C-435	Main Conn. Lever Guide Bracket Screw Washer (two used)	.04
C-436	Stitch Regulator Friction Screw Washer	.04
C-441	Wrist Wheel Block (See No. C-216A)	.15
C-443A	Foot Hemmer	.70
C-444	Feed Lifting Bar only	*
C-444A	Feed Lifting Bar Assembled (includes C-444 and C-418)	.60
C-445	Feed Driving Bar only	*
C-445A	Feed Driving Bar Assembled (includes C-445 and C-419)	.58

SCREWS

C-600	Face Plate Thumb Screw	\$.10
C-600	Arm Shield Thumb Screw	.10
C-601	Feed Point Screw	.06
C-601	Shuttle Carrier Screw	.06
C-602	Belt Guard Screw	.06
C-603	Thread Cutter Screw	.06
C-605	Bobbin Winder Worm Wheel Screw	.10
C-606	Bobbin Winder Heart Cam Screw	.06
C-607	Bobbin Winder Distributing Lever Screw	.10
C-608	Bobbin Winder Friction Screw	.06
C-609	Needle Clamp Screw (See No. C-940A)	.10
C-610	Needle Bar Thread Guide Screw	.06
C-611B	Needle Bar Link Stud Screw (See No. C-409A)	.06
C-611B	Presser Bar Lift Bracket Set Screw	.06
C-612	Take-up Needle Bar Link Screw (See No. C-409A)	.10
C-615	Needle Plate Screw	.06
C-616B	Shuttle Ejector Screw (See No. C-412BA)	.06
C-617	Feed Rock Arm (pointed) Set Screw	.06
C-618	Thread Check Spring Stop Arm Set Screw (See No. C-227A)	.06
C-619	Tension Release Lever Screw	.06
C-620	Take-up Shaft Head Link Screw (See No. C-409A)	.10
C-621	Take-up Angle Link Screw (See No. C-409A)	.10
C-624	Main Shaft Arm Bushing Set Screw	.06
C-625	Main Connection Lever Cap Screw (two used) (See No. C-210A)	.06
C-626	Main Conn. Lever Guide Bracket Screw (two used)	.06
C-627	Wrist Wheel Set Screw (See No. C-216A)	.06
C-628	Feed Rock Arm (flat) Set Screw (See No. C-332A)	.06
C-629	Feed Lifting Bar Stud Screw	.06
C-630	Feed Driving Bar Screw	.06
C-631	Feed Bar Guide Screw	.06
C-632	Stitch Regulator Friction Screw	.06
C-633	Stitch Regulator Adjusting Screw	.25
C-636	Feed Rock Shaft Center Screw (two used)	.06
C-637	Feed Lifting Cam Screw	.06
C-638	Shuttle Lever Driver Screw (two used) (See No. C-218A)	.06
C-640B	Shuttle Tension Spring Screw (See No. C-310A)	.06
C-643	Head Latch Screw	.06
C-653	Lower Shaft Bridge Bearing Screw (two used)	.08
C-654	Bed Screw (three used)	.06
C-655	Brake Button Screw	.06
SV-701	Head Hinge Set Screw (two used)	.06

Parts marked with an asterisk (\*) in the price column not furnished separately. They can be secured in assembled form only.

PRICE LIST OF PARTS FOR MODEL "C", "CE" AND "E" HEADS

PINS, RIVETS, ETC.

Price, Each

C-800	Main Shaft Head Pin (See No. C-300BA)	.04
C-801	Feed Cam Pin	.03
C-802	Feed Rock Arm Pin (See No. C-332A)	.04
C-803	Brake Collar Dowel Pin	.04
C-803	Main Connection Lever Guide Bracket Pin	.04
C-804	Take-up Shaft Head Link Pin (See No. 409A)	.02
C-805	Tension Release Pin	.03
C-806	Spool Pin	.06
C-810	Head Latch Plunger Pin	.02
C-819	Presser Bar Lift Bracket Pin	.04
C-820	Presser Bar Lift Lever Pin	.04
C-821	Bed Dowel Pin (two used)	.06
C-822	Face Plate Thread Guide Rivet (See No. C-409A)	.02
C-823	Take-up Stud Rivet (two used) (See No. C-409A)	.02
C-824	Shuttle Carrier Spring Rivet (See No. C-412BA)	.02

STUDS, PLUGS, ETC

C-900	Face Plate Stud	.08
C-901	Take-up Stud (See No. C-409A)	.18
C-904	Tension Stud	.25
C-905	Shuttle Lever Stud (See No. C-217A)	.15
C-906	Stitch Regulator Lever Block Stud (See No. C-228A)	.05
C-908	Main Conn. Lever Guide Block Stud (See No. C-212A)	.10
C-909	Wrist Wheel Block Stud (See No. C-216A)	.15
C-915	Bobbin Winder Spindle	.12
C-925	Spool Pin Sleeve	.10
C-935	Bobbin Winder Pulley	.14
C-940	Needle Clamp only	*
C-940A	Needle Clamp Assembled (includes C-940 and C-609)	.35
C-945	Head Latch Plunger (See No. C-427A)	.10
C-946	Head Latch Hole Plug	.08
C-950	Needle Bar Hole Plug	.07

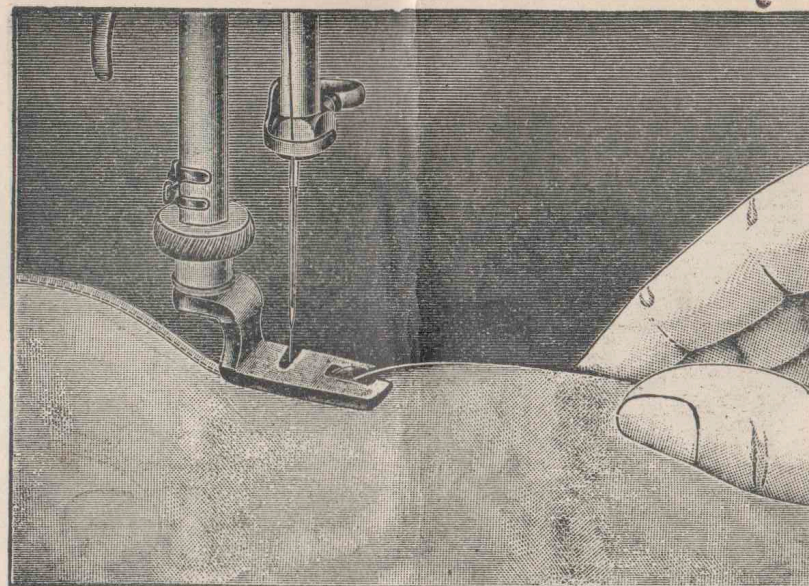
NUTS

C-1000	Presser Foot Lock Nut	.20
C-1001	Tension Stud Nut	.10
C-1002B	Bobbin Winder Worm Wheel Screw Nut	.05
C-1003	Bobbin Winder Spindle Nut	.10
C-1005	Wrist Wheel Block Stud Nut	.05
C-1005	Feed Bar Guide Screw Nut	.05
C-1006	Feed Rock Shaft Center Screw Nut (two used)	.05

SPRINGS AND MISC.

C-4100	Presser Bar Spring	.10
C-1101	Shuttle Tension Spring (See No. C-310A)	.12
C-1102B	Shuttle Carrier Spring (See No. C-412BA)	.10
C-1105	Tension Spring (Beehive shape)	.10
C-1106	Thread Check Spring (Automatic Thread Controller)	.12
C-1107	Head Latch Spring	.05
C-1108	Bobbin Winder Distributing Lever Spring	.07
C-1109	Bobbin Winder Spindle Spring	.05
C-1112	Bobbin Winder Friction Spring	.08
C-1115	Shuttle Ejector Spring (See No. C-412BA)	.05
C-1125	Face Plate Thread Guide (See No. C-400A)	.06
C-1130	Needle Bar Thread Guide	.15
CE-1135	Bobbin Winder (rubber) Spooler Ring, for Electric	.05
C-1142	Shuttle Race Oil Pad (felt)	.04
C-1245	Thread Cutter	.05

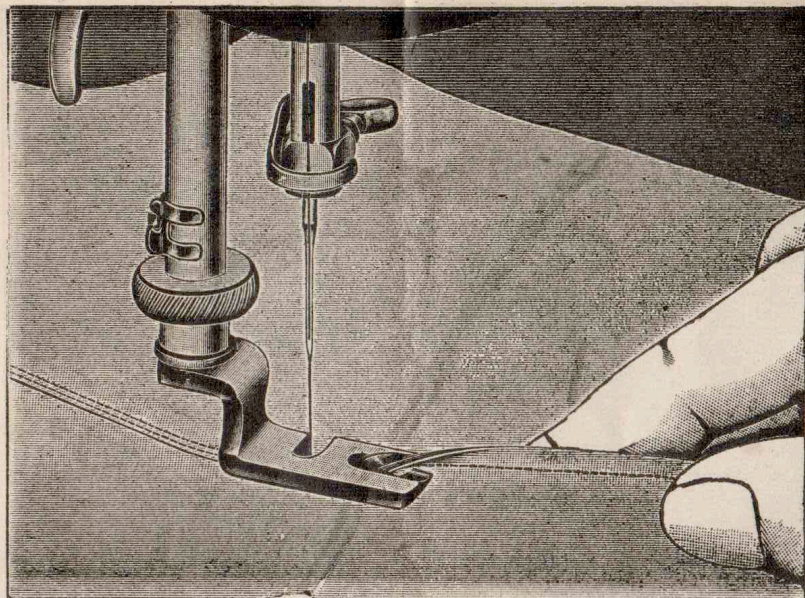
Parts marked with an asterisk (\*) in the price column not furnished separately. They can be secured in assembled form only.



Narrow Hemming

Remove the presser foot and insert in its place the foot hemmer. Raise the presser bar lifter. Clip off the right-hand corner of the cloth and turn up the edge about one-quarter of an inch, so as to enable it to pass easily into the scroll of the hemmer. Push it forward to the needle. Let the hemmer down and start the machine. Gently hold back on the work and keep it smooth and allow the edge of the goods to pass between the thumb and forefinger of the right hand while it is being hemmed (see illustration above), keeping the goods rolled up on the edge as it passes into the hemmer. Should the edge of the goods begin to run out of the hemmer, move the hand to the right. If too much cloth turns in, then carry it to the left.

In hemming a curve on flannel or very elastic goods, draw gently on the edge being hemmed, resisting the feed slightly and guiding the work accordingly.



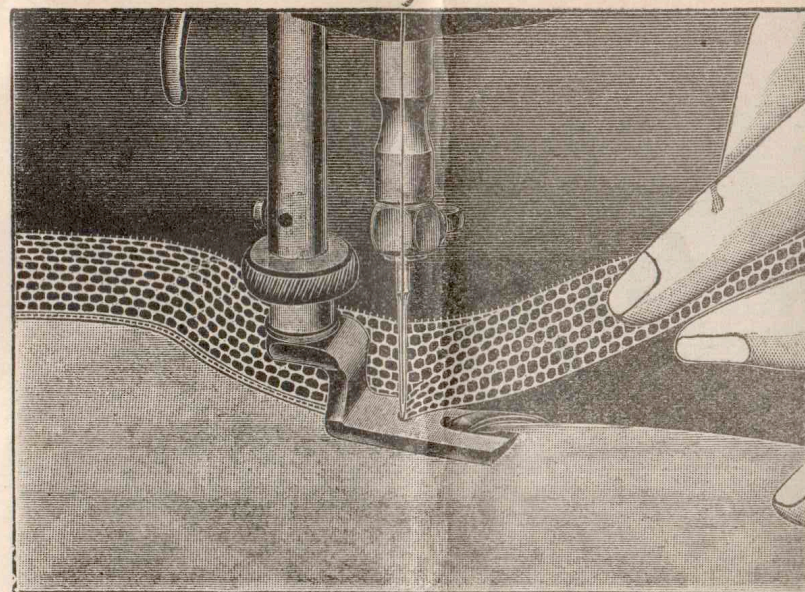
### Felling

To make a felled seam, stitch two pieces of cloth together, the under one projecting  $\frac{1}{4}$  inch beyond the upper; sew as closely to the upper edge as security permits; then open the work flat, draw the wide edge of the seam into the scroll of the hemmer and feller. Proceed as in ordinary narrow hemming, taking care to keep the fold smooth.

### French Seam

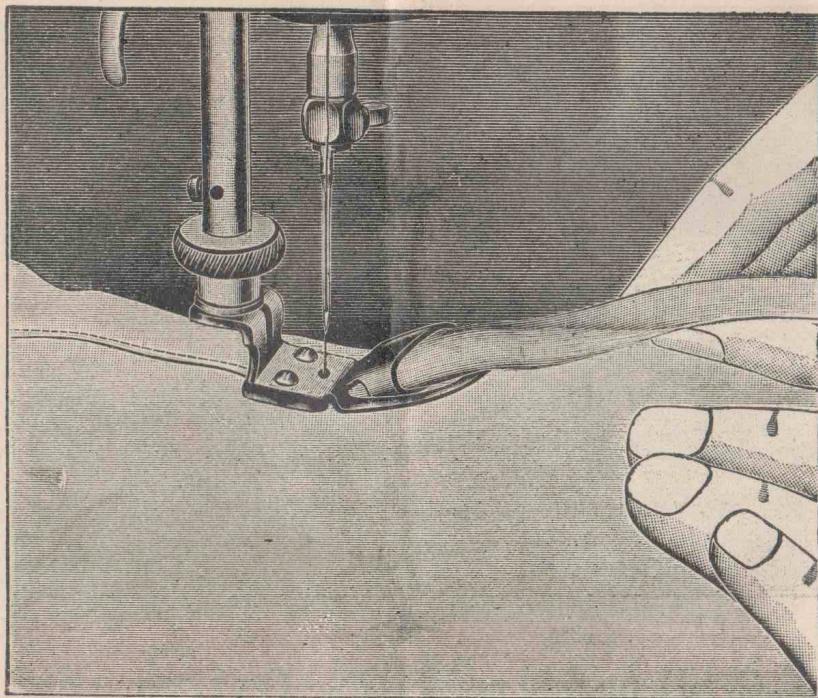
This is made by sewing the edges of two pieces of cloth together, making a hem in one and sewing the edge of the second piece securely within it.

French seam is either made with the smallest hemmer or the foot hemmer. The hem is formed as described for these two attachments. Before lowering the presser bar, the second piece of cloth is inserted in the hem well inside the line of stitching, but not far enough to be folded over with the hem. Lower the presser bar and proceed to sew, keeping the edge of the two pieces of cloth parallel.



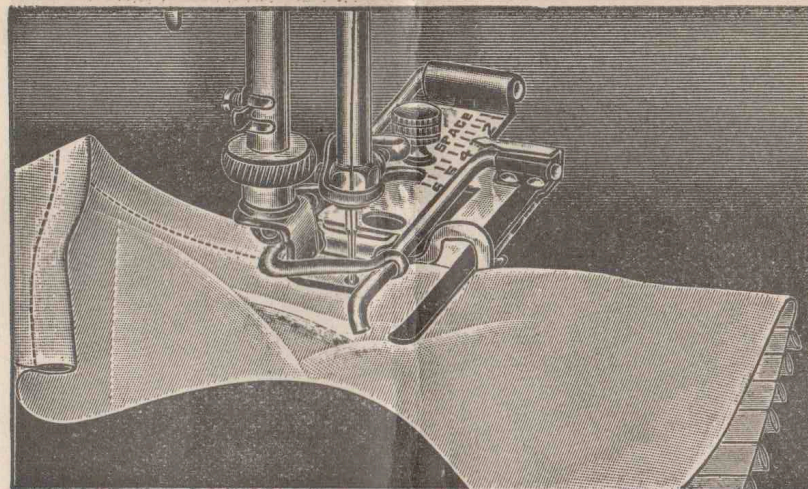
### Hemming and Sewing On Lace One Operation

The hemmer and feller which accompanies this machine is made with a slot for the needle to pass through instead of a round hole, as in most of the attachments. This slot is to enable the operator to make a hem and sew on lace at the same time. Proceed as follows: First start a narrow hem, and when the goods are well under control and passing smoothly into the hemmer, stop the machine, raise the hemmer with presser bar lifter, raise the needle to its highest point, and then carefully pass the end of the lace through the slot in the side of the hemmer, carrying it under the back of the hemmer and on top of the hem. Then lower the hemmer and proceed as in ordinary hemming. Guide the lace over the front of the hemmer, keeping it well in the slot, that the needle will catch it every time it passes into the goods.



## Wide Hemming

Substitute the wide hemmer in place of the presser foot. Raise the needle to its highest point, insert the goods into the hemmer, draw it back and forth until the hem is formed, stopping with the end under the needle. Lower the presser foot and commence to sew, being careful to guide the cloth so as to keep the hemmer full.



## The Tucker

When attaching the tucker, be careful to have it pushed back on the bar as far as it will go, noting that it is securely clamped by the nut that holds it in place.

A test should be made by turning the hand wheel slowly towards you and see that the needle passes through the hole in the attachment without interfering. If the needle should happen to rub the attachment in passing the hole, it would probably cause skipped or looped stitches or broken thread.

The width of the tuck is determined by the gauge on the tucker frame at the right of the needle hole, its indicator point showing on the back edge of the tucker frame.

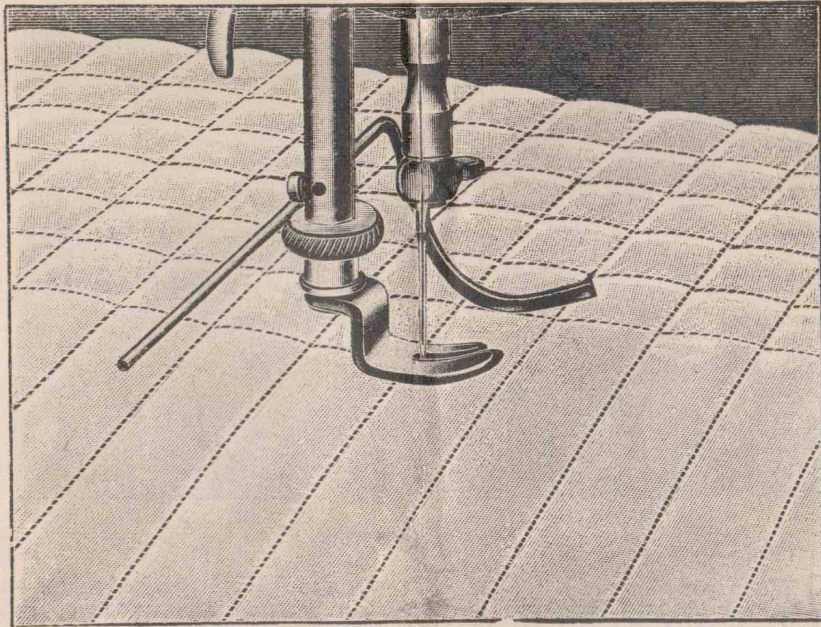
The distance between the tucks is regulated by moving the creaser bar, which extends out to the left of the needle, the scale being shown on the front edge of the tucker frame. Both gauges are held in place by the thumb screw on top of the tucker frame.

## To Operate the Tucker

Make the first fold in the usual manner by hand. Pass the folded edge under the spring on the marking plate, with the part that is to be tucked on the top. Draw to the right until the edge comes against the gauge, and from you until it covers the feed. Lower the presser foot and sew as usual, being careful to keep the folded edge against the guide. Fold carefully the crease in making substituting tucks and proceed as before. After the first tuck has been made, the edge of each preceding tuck should pass under the small prong on the tucker directly underneath the marker. By placing the cloth in this position it will not be necessary to guide the work.

**WHEN MAKING THE LAST TUCK**, the lever, upon which the needle clamp strikes, should be turned up and back, to avoid making a mark where a tuck is not desired.



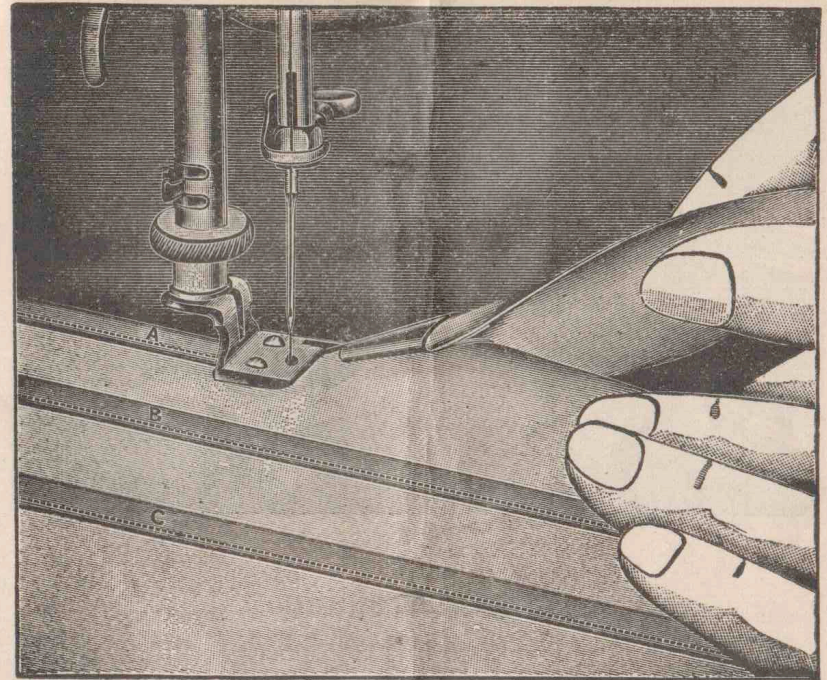


## Quilting

Insert the quilter through the small hole in the lower end of the presser bar. Move the quilter guide as far from the needle as the distance required between the rows, raising the guide high enough to allow the goods to pass under freely, then fasten firmly, with **THE SMALL** set screw.

## To Quilt

Let the quilter guide follow the edge of the goods, a straight crease or a chalk line, as the case may be, for the first row of stitching; all succeeding rows are made straight and at a uniform distance by keeping the row steadily under the guide.



## The Binder

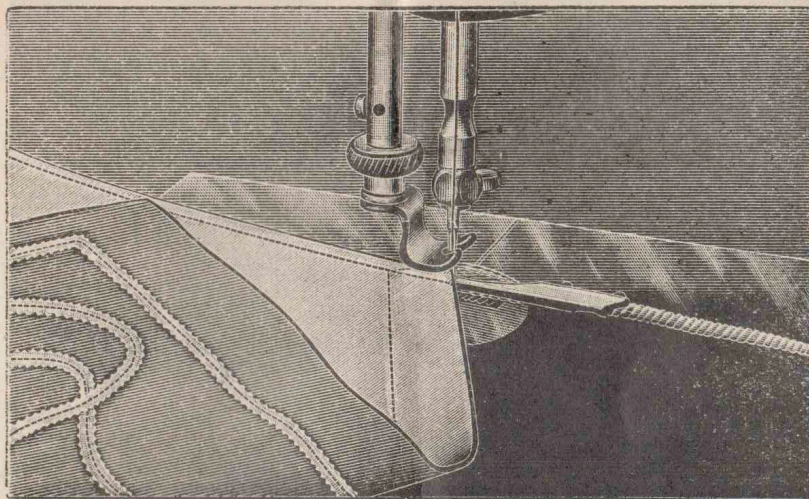
Substitute the binder in place of the presser foot. If bias binding is used, it must be cut  $\frac{7}{8}$  inch wide. Draw the binding through the scroll of the binder and pass the edge of the material to be bound between the folded edges of the binding. (See illustration A.)

## To Make French Folds

Proceed as directed for binding, except that the fold is stitched onto the face of the material instead of on the edge. (See illustration B and C.)

## To Bind with Dress Braid

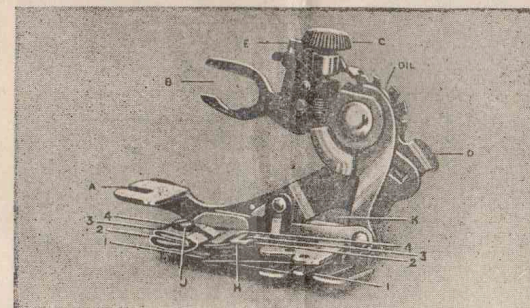
Proceed the same as when using bias binding, as explained above. The only difference is, the dress braid being narrower, the edges will not be turned under.



### Under Braiding

Insert the braider foot in place of the presser foot. Attach the braider foot plate to the bed of machine, placing the little prong into the hole in the front slide and the downwardly bent part between the slides. Next, draw the braid through the tube a little past the needle. The pattern to be braided should be stamped on the wrong side of the cloth.

## The Five-Stitch Ruffler



The Five-Stitch Ruffler will make ruffling, plaiting or shirring, by simple adjustments to the Attachment without removing the Ruffler from the machine.

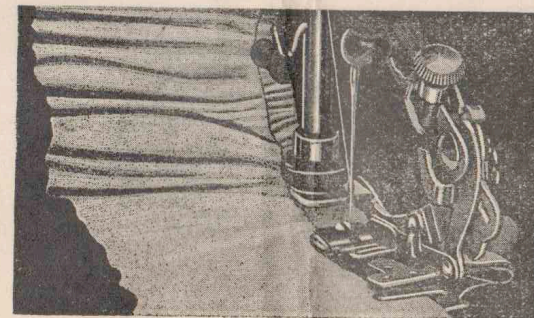
Remove the presser-foot from the bar and attach the Ruffler-foot (A) in its place, with the fork arm (B) astride the needle clamp screw. Tighten the holder screw firmly, turn the hand wheel slowly to see if the needle passes through the center of the needle hole in the foot of the Ruffler.

Place the goods to be gathered between the blue blades following line 1, push forward until under the needle hole, lower the presser bar and commence to sew.

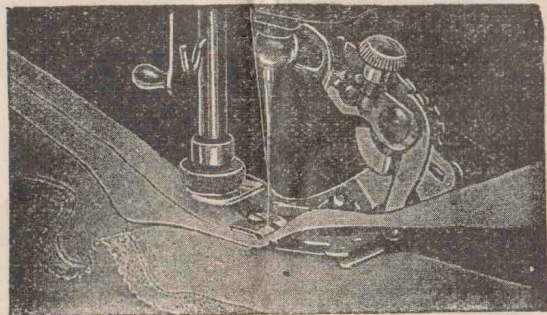
To make a scant ruffle, shorten the stitch and turn the adjusting screw (C) to the left one turn at a time until the fullness is satisfactory. To make a fuller ruffle turn the screw (C) to the right and shorten the stitch.

By regulating the adjusting screw and the length of the stitch you can make all variations from the very scant to the very full ruffle.

If you use a loose upper tension the fullness may be drawn up to be made to fit a given space.



## Making a Ruffle and Sewing It to a Garment



To make and sew a ruffle to a garment in one operation, place the material to be ruffled between the blue blades following line (1), place the garment under the Ruffler.

To add a facing at the same time place the facing on top of the blue blades following line (2). (See preceding page).

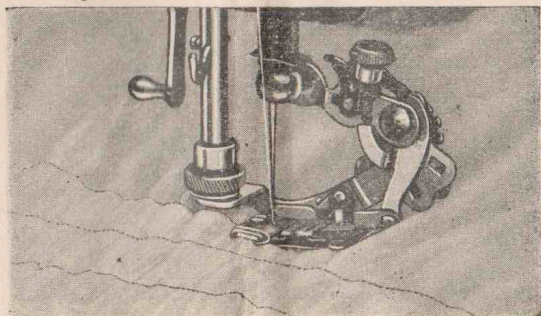
To pipe a ruffle insert the material for piping in the slot, following line (3) and the band to which the ruffle is to be attached in the guide following line (4). To bring the stitching close to the edge of the band loosen the screw (J) and move the guide (H) to the left Guide (K) will keep the ruffle of uniform width when piping. (See preceding page).

### Shirring

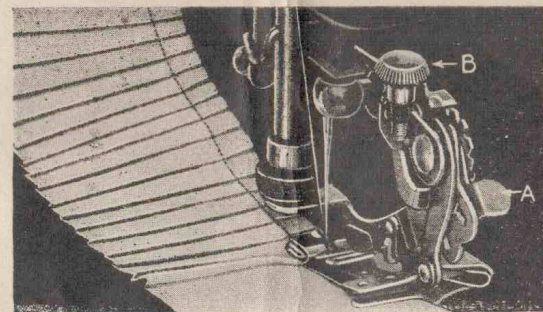
For shirring in rows or for a heading more than one inch wide use the Shirring Plate with the Ruffler. This permits the material to feed in from either side of the attachment and should never be used with the separator or under blade.

Remove from the bed of the machine the plate that covers the shuttle raceway and substitute the Shirring Plate. Place the Ruffler on the presser-bar in the regular way. Loosen the small screw on the right hand side of the Ruffler and remove the under blue blade from the attachment.

Adjust the tensions, the stitch and the amount of fullness, insert the material in the guide as if for plain ruffling, and proceed to shirr.



## Making Plaiting with the Five-Stitch Ruffler



The scope of the ordinary Ruffler is multiplied many times by a simple device that enables the Ruffler to make a gather or plait every fifth stitch instead of at every stitch as in the ordinary ruffling.

To make plaiting pull the lever (A) up as far as it will go and turn down the thumb screw (B), insert the material between the blue blades, then proceed to sew as if for ordinary ruffling.

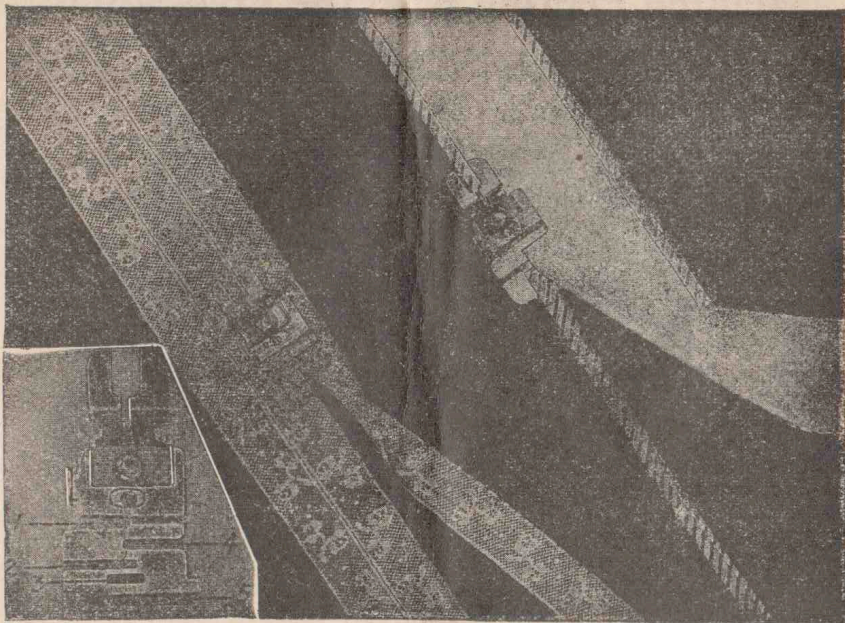
The widest plaits are made when the screw (B) is turned down as far as it will go, but narrower plaits are made by turning the screw up. The narrowest plait will be merely a scratched gather.

A moderately long stitch should be used with the widest plait, shorter stitches when the plaits are made narrower. Any desired effect may be had by changing the width of the plait and the length of the stitch.

Plaiting can be attached to a garment with a facing or piping added by following the same directions as given for ordinary ruffling.

To readjust the Ruffler for plain gathering stop the machine, push lever (A) down, turn up the screw (B), regulate the stitch until the right amount of fullness is obtained.

All adjustments are made without removing the Ruffler from the machine.



ADJUSTED TO STITCH DIRECTLY ON THE EDGE

## 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 above 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, shirtwaists, 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 insertion.

The folded tape, which may be purchased in any department store in all colors, qualities and widths, is indispensable to use with this attachment. The folded piping, which also may be purchased ready turned, will exactly fit the piping slot in this Attachment.

The Edge-Stitcher is adjustable for the stitching in relation to the edge of the garment, lace, etc., by means of the lug at the side. This makes it possible to stitch any material exactly on the edge.

# SPECIAL INSTRUCTIONS

FOR

ELECTRIC  
MACHINES

## INSPECTION

After the machine is unpacked, examine carefully both the sewing machine and the motor to see that no damage has been done during shipment and that the shaft of the motor and the hand wheel of sewing machine turn freely.

## MOTOR VOLTAGE

The voltage for which the motor is designed is given on the name plate attached to the motor. Check this carefully to determine that it corresponds with the voltage of the circuit from which it is to be operated. The motor will operate satisfactorily on any voltage within 10 per cent of that shown on the name plate.

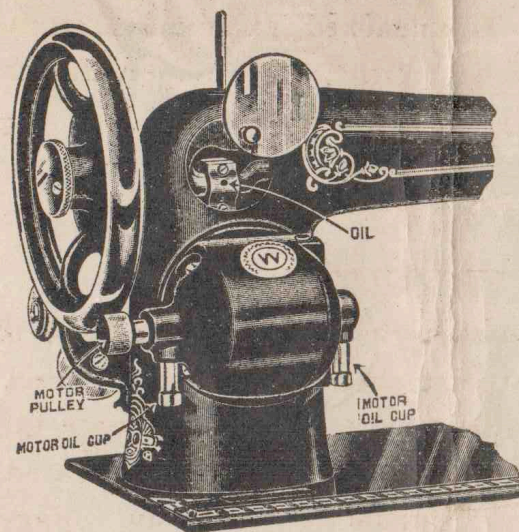
## ABOUT REPAIRING THIS MACHINE AND MOTOR

Should you find it necessary to have the head of the machine repaired, DO NOT allow the agent offering some other machine for sale, or the handy man about town, to make any adjustments. They generally do more harm than good. If you cannot determine the remedy from the instructions in this book, address a letter describing trouble to us.

### SEWING MACHINE FACTORY, ROCKFORD, ILL.

Should trouble develop with motor or wiring, consult the local electric shop from whom you purchased this machine or address your letter of information to us as above, giving number of motor and full particulars.

## Motor Lubrication



The motor on this machine is lubricated by means of grease contained in the small cups under the motor bearings which are indicated by the arrows. This grease is fed to the motor shaft through felt-wicks held in contact with the shaft by wire springs contained in the cups.

To replenish the lubricant, unscrew the cups and fill them with a good grade of **unmedicated** vaseline. Then replace the cups, making sure that the small felt wick is in contact with the motor shaft and that the cups are securely screwed in place to prevent leakage of grease.

The cups should be removed and filled as described every one to three months, depending on the amount the sewing machine is used.

**THE OIL SUPPLIED FOR THE OTHER PARTS OF THE SEWING MACHINE IS NOT SUITABLE FOR THE MOTOR BEARINGS AND SHOULD NEVER BE USED IN THESE CUPS.**

Good lubrication of the bearings is of prime importance to the successful operation of any electric motor and if the above instructions are followed the motor should have a practically indefinite life.

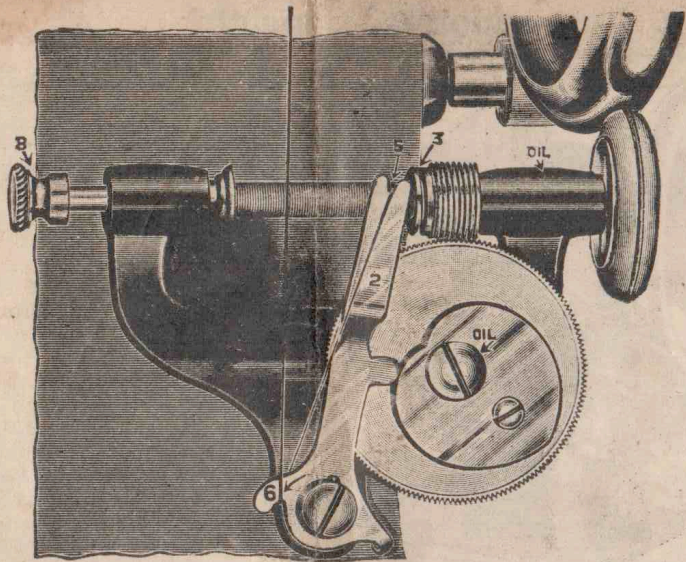
If for any reason extra parts of the motor or sewing machine are needed at any time write to Sewing Machine Factory, Rockford, Ill., giving full particulars as to parts wanted together with the style number and voltage shown on the name plate attached to the motor.

## To Start the Motor

After connecting the cable to the lamp socket or electrical outlet, gradually press the speed controller until the sewing machine starts. If machine does not start readily on heavy goods when motor pulley revolves, take hold of hand wheel and turn it forward; the motor will then keep machine running. The controller provides for several speeds of the sewing machine—the harder you press the faster the speed. A little practice with the manipulation of the controller will make it easy to obtain any desired speed from very slow to as high as you can sew.

If the motor does not start, examine the electrical connections to see that they are tight and be sure that all switches, both in the wall and at the lamp socket, are turned on. Sometimes house wiring is arranged with a switch in the wall for turning on or off all of the lights in the room and in addition to this there may be a key switch at each lamp socket. It is, of course, necessary that both of these switches be turned on before the current will be available at the sewing machine.

The knee operated controller on desk and console models can be swung up or down to suit operator.



HOLD HAND WHEEL WITH LEFT HAND AND WITH THE RIGHT RELEASE THE CLUTCH, TURNING IT HALF WAY AROUND. THIS WILL PERMIT THE LARGE WHEEL TO RUN FREE. PUSH BOBBIN WINDER UP UNTIL IT COMES IN CONTACT WITH AND BEARS GENTLY AGAINST WHEEL.

TURN THE MACHINE UNTIL THE DISTRIBUTING LEVER (2) IS AS FAR TO THE RIGHT AS IT WILL GO. Place one end of the bobbin in the socket (3) on the right side and the other end of the bobbin in the pivot point (4) in the plunger, on the left side. To do so, pull the plunger nut (8) towards the left to admit the bobbin, letting it spring back in place, which will hold the bobbin in the winder. Catch the end of the thread between the brass end of the bobbin and the socket (3) of the shaft on the right side. Place thread over the top of lever (5), then down through notch (6) in bottom of lever.

**NOTE**--Place the spool on spool pin and hold the thread, letting it run straight towards you from the spool over your finger and down to No. 6 guide on the bobbin winder, or the same results may be had by letting the thread run from the spool over the thread guide at top of face plate and then to No. 6. The illustration shows the thread being held in the hand above the bobbin winder.

When through winding bobbin, pull winder away from wheel and tighten clutch nut.

**WINDING THE BOBBIN CORRECTLY HAS A VERY IMPORTANT PART IN FORMING A PERFECT STITCH. PRACTICE THIS AND LEARN TO DO IT WELL.**

**CAUTION**--Never begin winding a bobbin over one that is partly filled with different kind of thread.