

SINGER

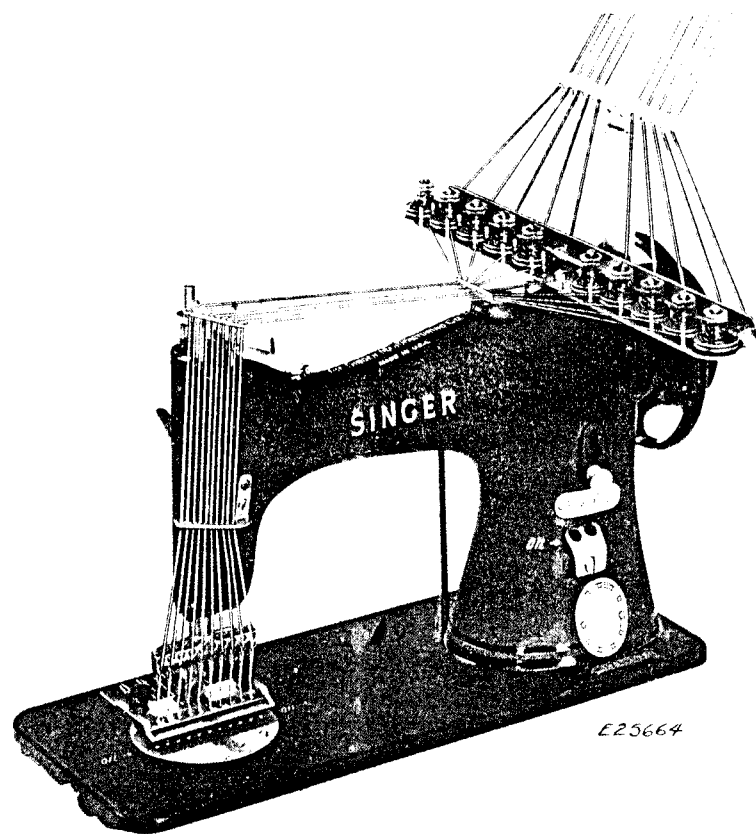
52

Form 19768
Rev. (760)

INSTRUCTIONS
FOR USING AND ADJUSTING
SINGER^{*}
SEWING MACHINES
OF
CLASS 52

SINGLE THREAD

CHAIN STITCH



THE SINGER COMPANY

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DESCRIPTION

Machines 52-52 to 52-60 have from two to ten needles, respectively, and a corresponding number of loopers. They make the single thread chain stitch and are used for a wide range of multiple line stitching, gathering and shirring.

Machine 52-62, having twelve needles and twelve loopers is otherwise similar to **Machine 52-60**.

Machines 52-73 to 52-80 have from three to ten needles, respectively, and are fitted with automatic tuck folders for tucking men's dress shirts, women's dresses, skirts, aprons, infants' wear, etc. These tuck folders, as regularly made, produce a number of tucks equal to the number of needles in the machine and all of the same width.

By varying the gauge and the width of tuck, many pleasing effects may be achieved such as forming a group of narrow tucks, a wide tuck, and then another group of narrow tucks; or such as having half the tucks fold to the right and half to the left.

The greatest distance between the two outside needles is 2-1/4 inches and the least distance between any two needles 1/8 inch. When the gauges are less than 3/16 inch, the feed is located at the rear of the needles, there being no room for a feeding surface between the needles of such narrow gauges. Machines fitted for gathering or shirring are not furnished in gauges less than 3/16 inch.

NOTE: Any **Class 52 Machine** required for use with elastic thread should be specified as such, when ordering, to be certain that it is properly equipped.

All **Class 52 Machines**, fitted for lastex thread or with a tucking attachment are furnished with wrench 169079 (for Allen-head Set Screws) for looper adjustment.

SPEED

Machines of Class 52 should be driven at a speed not exceeding **2700** stitches per minute for the first three days of operation, after which they can be driven up to their maximum speed of **3000** stitches per minute, depending upon the nature of the work and the ability of the operator.

TO OIL THE MACHINES

To insure easy running and prevent unnecessary wear of the parts which are in movable contact, the machines require oiling and, when in continuous use, the machines should be oiled at least twice each day.

Use "TYPE B" or "TYPE D" OIL, sold by Singer Sewing Machine Company. For description of these oils, see inside front cover of this book.

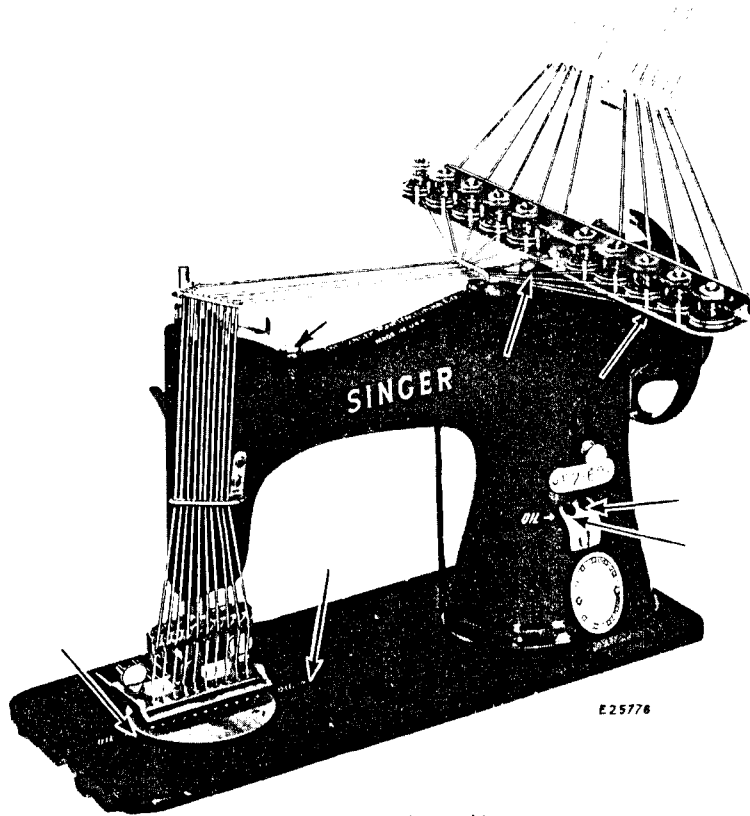


Fig. 2. Oiling the Machine

Apply oil to all oil holes in the arm and bed of the machine as indicated by the arrows in Fig. 2.

Remove the face plate and oil the bearings thus exposed, then replace the face plate. Loosen the thumb screw on the arm at the back of the machine, turn up the round cover plate and oil the bearings inside the arm. Replace the cover plate and tighten the screw.

Turn the machine back on its hinges and apply oil to the parts underneath the machine bed indicated by the unlettered arrows in Fig. 3.

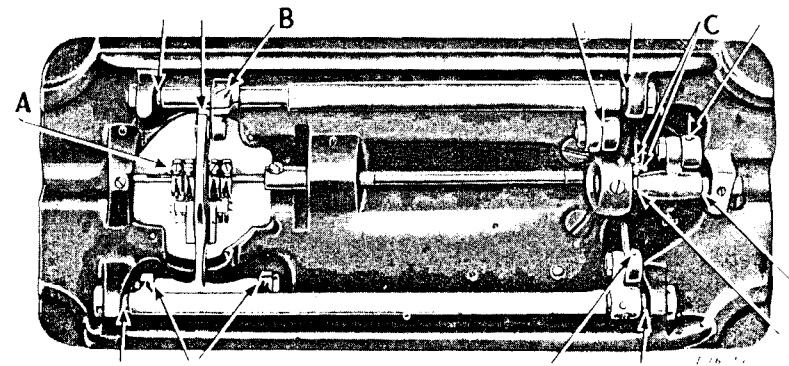


Fig. 3. Bottom View of Machine

NEEDLES

Needles for Machines of Class 52- are of **Class and Variety 52 x 5** and are furnished in **Sizes 14 and 16**.

The size of the needle to be used should be determined by the size of the thread, which must pass freely through the eye of the needle. Rough or uneven thread, or thread which passes with difficulty through the eye of the needle, will interfere with the successful use of the machine.

Orders for needles must specify the **quantity** required, the **size** number, and the **Class and Variety** numbers separated by the letter **X**.

The following is an example of an intelligible order:

"100 No. 14, 52 X 5 Needles"

The best stitching results will be obtained with needles sold by Singer Sewing Machine Company.

TO SET THE NEEDLES

Loosen the set screws in the needle clamp at the lower end of the needle bar and push the needles up into the clamp as far as they will go, with the long, deep grooves to the left and the eyes of the needles in line with each other and with the bed of the machine. When the needles are in position, tighten the set screw.

TO THREAD THE NEEDLES

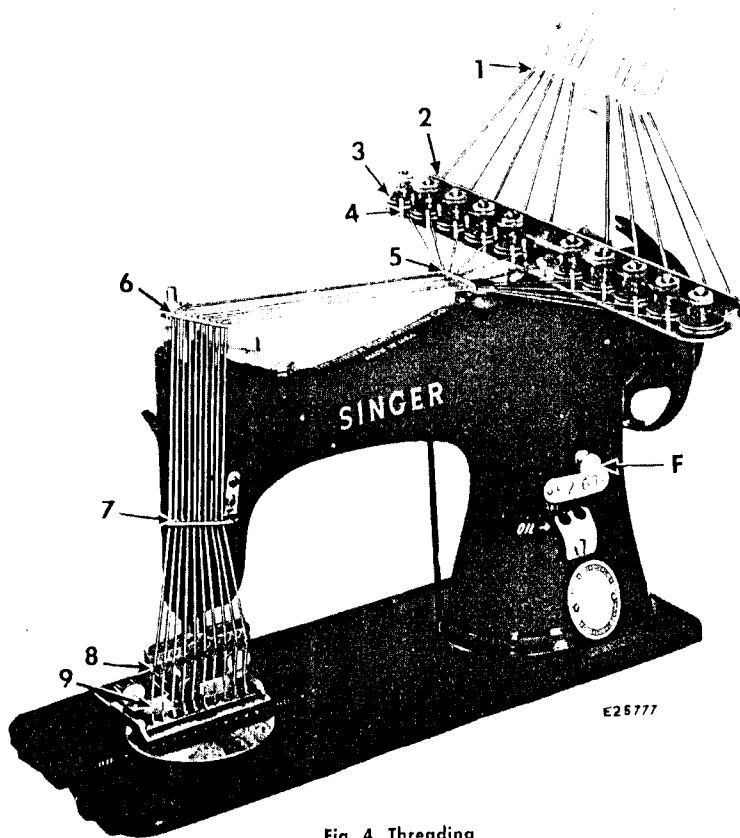


Fig. 4. Threading

To thread the needles, lead a thread over machine pulley and into eyelet 1, Fig. 4, down into eyelet 2, around and between tension discs 3, along side of pin 4 and into thread guide eyelet at top of arm 5. Then lead the thread through eyelet in thread take-up 6, down through eyelet in thread guide at side of arm 7 and through hole in needle bar clamp 8. Then insert the thread from left to right through the eye of the needle 9.

Proceed with the next thread in a parallel manner until all needles are threaded as shown in Fig. 4.

Allow about two inches of thread to hang free from each needle with which to start sewing.

TO COMMENCE SEWING

Turn the machine pulley over toward the operator, until the needle bar rises to its highest position, place the goods under the presser foot (and through the attachment), then lower the presser foot and commence to sew.

When the stitching is finished, raise the needle bar to its highest position. Then raise the presser foot and draw at least an inch of thread through the tensions. Pull the goods out straight back from the presser foot and snap off the threads. This will leave sufficient loose thread to begin stitching the next line.

TENSIONS

The thread tensions are regulated by the thumb nuts E, Fig. 5 above each pair of tension discs. As nearly as possible each thread should have the same tension to avoid drawing the material to one side or the other.

If stitches are loose when sewing, loosen screw H, Fig. 6 and raise thread upper pull-off G until satisfactory results are obtained. Tighten screw H.

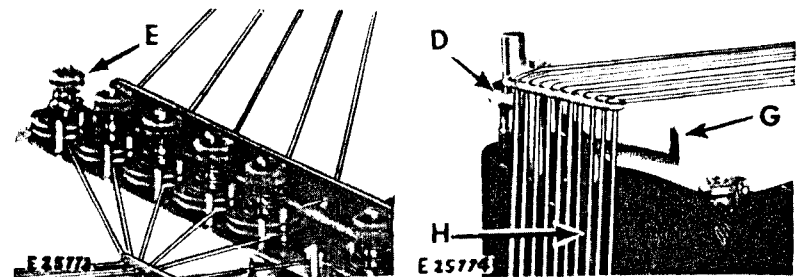


Fig. 5. Tension Discs

Fig. 6. Thread Pull-off

TO CHANGE THE LENGTH OF STITCH

The length of stitch is regulated by the thumb screw F, Fig. 4 in the slot in the front of the arm near the machine pulley. To **increase the length of stitch**, loosen this screw and move it **downward**. To **decrease** the length of stitch, move it **upward**. Then tighten the screw.

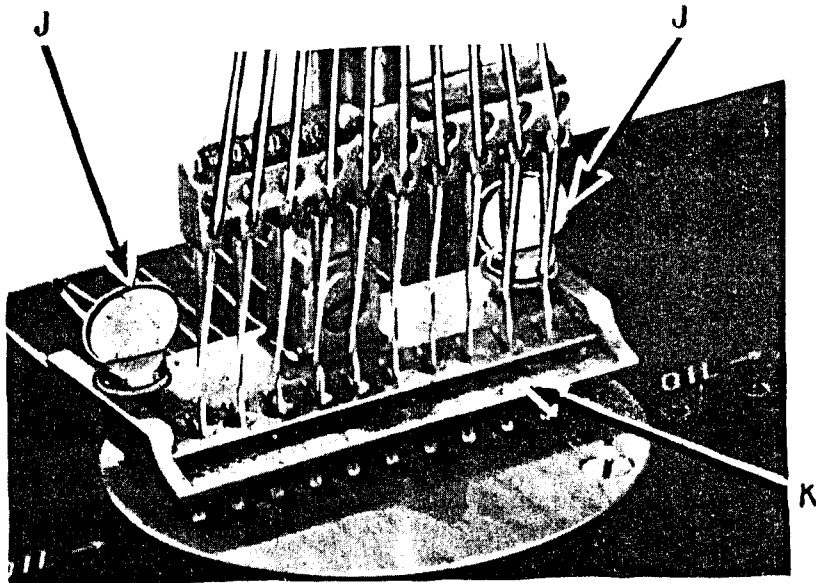
TO REGULATE THE PRESSURE ON THE MATERIAL

The pressure is regulated by the thumb screw **D**, Fig. 6 at the top of the presser bar. To **increase** the pressure, turn the thumb screw **down**, to **decrease** the pressure, turn the thumb screw **up**. The pressure should be light and seldom requires changing for ordinary work.

TO ADJUST GATHERING FOOT

To **increase the fullness** of the gathers, loosen the two thumb screws **J**, Fig. 7 and move gathering plate **K** toward the operator.

To **decrease the fullness** of the gathers, loosen the two thumb screws **J** and move gathering plate **K** toward the needles (away from the operator). Then tighten the two thumb screws.



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Fig. 7

TO APPLY TUCKING ATTACHMENT

The tucker, when it leaves the factory, is adjusted to suit the sample of material submitted. This adjustment should not be disturbed. Apply attachment to machine as described in steps 1 through 4.

1. Be certain position pins are properly seated, then fasten attachment holder bracket (containing top plate and tuck guides) to face plate end of machine with screw #161.
2. Raise the top plate by moving top plate lifter toward the operator.
3. Slide bottom plate into tuck guides without disturbing the guides.
4. Fasten the bottom plate to machine with screws #191.

NOTE: Reverse steps 1 to 4 to remove the attachment but be certain top plate is raised before removing or replacing bottom plate.

TO INSERT MATERIAL INTO THE TUCKER

Raise the presser foot. Then hold the material with both hands and insert it between the corner of the top and bottom plates. Then draw the material across the bottom plate and into the attachment for about one inch. While holding the material loosely, place both thumbs on top of the material and against sides of the top plate, then proceed to move the material to the tuck guides. Then lift both hands from the material and place the fingers of both hands about three inches from the tuck guides. In this manner, guide the material to the needles with both hands following sides of top plate. If the material does not reach the line of needles evenly, place a finger on top of the tuck guides and lightly push the material through the guides until the edge of material is even with the line of needles.

SEWING WITH TUCKING ATTACHMENT

Hold the material at the back of the attachment and make certain the material feeds in a straight line. If the material is held loosely, the attachment will take as much material as required. If the material is stretched tight across the folder, the folder will not take enough material and the attachment will become overloaded or choked.

A good practice is not to start the machine at full speed until the feed has carried the material beyond the heel of the presser foot.

TO RELEASE MATERIAL CAUGHT IN TUCKING ATTACHMENT

A slight pull away from the operator while the machine is running slowly should release the material. **CAUTION: Do not try to forcibly pull the material through.** If material still is caught, raise the needles to the highest position and draw some thread through the tension discs. Then remove the bottom plate and draw the material through the guides. If the jam is due to the thread being wrapped around the looper, or the material being drawn into the needle holes, the complete attachment must first be removed to permit removal of the throat plate.

TO ADJUST THE TOP PLATE

To adjust the top plate for thickness of material, lay three thicknesses of material on the bottom plate. Then set the top plate by adjusting the lifting bracket link (located at top plate lifter) until the material is held firmly but still can be withdrawn from between the two plates without raising the top plate.

TO ADJUST THE TUCK GUIDES

First, raise the top plate then remove the bottom plate. Remove all the tuck guides from the tuck guide bracket.

NOTE: Remove the bottom plate each time a tuck guide is to be removed or inserted.

Each tuck guide stud contains a number. Insert tuck guide #1 into the extreme left side of the tuck guide bracket. Insert the bottom plate and then set the tuck guide to insure equal clearance around and between the tuck guide and the corresponding rib on the bottom plate. For correct adjustment, a strip of the material to be stitched (about 1-1/2 inches wide) should pass freely through and between the tuck guide and the bottom plate rib.

Next follow the same procedure with the highest numbered tuck guide and place it into the extreme right side of the tuck guide bracket. Insert the bottom plate and be sure it is in alignment with the tuck guide bracket. Follow the same procedure for tuck guides #2 and #3, etc. All tuck guides must be set on one level.

NOTE: Remove the tuck guide from the extreme right side of the bracket before inserting the tuck guide which is set next to it. Then replace the tuck guide for the extreme right side of the bracket.

TO SET THE NEEDLE BAR AT THE CORRECT HEIGHT

Set the needle bar so that when it reaches its lowest position on downward stroke the distance from the top of the needle bar (excluding the take-up) to the top of the machine casting will be about 5/32 inch.

If the needle bar is not set correctly, insert a screwdriver through the lowest hole in the face plate and loosen the two needle bar connecting stud clamp screws. Then raise or lower the needle bar to the required height. Securely tighten the two screws.

TO SET THE LOOPERS RELATIVE TO THE NEEDLES

The loopers should be at the end of their backward stroke, with the points farthest from the needles, at the same time that the needle bar is at its lowest point. In this position, the points of the loopers should be 5/64 inch from the centers of the needles.

If the loopers are not in this position, loosen screws C, Fig. 3 and turn the looper shaft to the right or left, as required.

TO SET THE LOOPERS AT THE CORRECT HEIGHT

The loopers must be set at the correct height in the looper holders to avoid striking the underside of the throat plate.

To set the loopers, first remove the throat plate and feed dog. Then place a three inch strip of metal, or other straight-sided object, across the throat plate seat from left to right over the loopers. Loosen the looper retaining screws and raise or lower the loopers so that when the machine pulley is turned, the loopers will barely touch the metal strip. Tighten the looper retaining screws.

TO SET THE LOOPER HOLDER NEEDLE GUARDS

The looper holder and needle guards should be set so that the needles center in the slots of the needle guards. To set the needle guards, loosen the screws A, Fig. 3 and move the looper holders to the right or left as required, then tighten the screws.

TO SET THE LOOPERS SIDEWISE RELATIVE TO THE NEEDLES

The loopers should be set as close as possible to the needles without actually touching them. To set the loopers, loosen the screws which retain them in the looper holders and move the loopers toward or away from the needles as required. After the loopers are correctly set, tighten the screws.

TO RAISE OR LOWER THE FEED DOG

The feed dog should be set so that when it is raised to its highest point, the full depth of the teeth project above the upper surface of the throat plate.

If the feed dog is not set at the correct height, loosen screw **B, Fig. 3** and raise or lower the feed dog as required, then securely tighten the screw.

TO TIME THE FEED

The feed should be timed so that it starts its feeding movement just as the needles leave the goods, and should finish its feeding movement before the needles enter the goods on their downward stroke.

If it is necessary to time the feed, turn the machine pulley until the feed eccentric screw inside the arm appears at the hole in the machine casting near the arm side cover; loosen this screw and turn the machine pulley until the feed is timed, as instructed above, then tighten the eccentric screw.

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INSTRUCTIONS

FOR USING

==== SINGER =====
KILTING MACHINES
Nos. 49K1 and 49K2
10-INCH

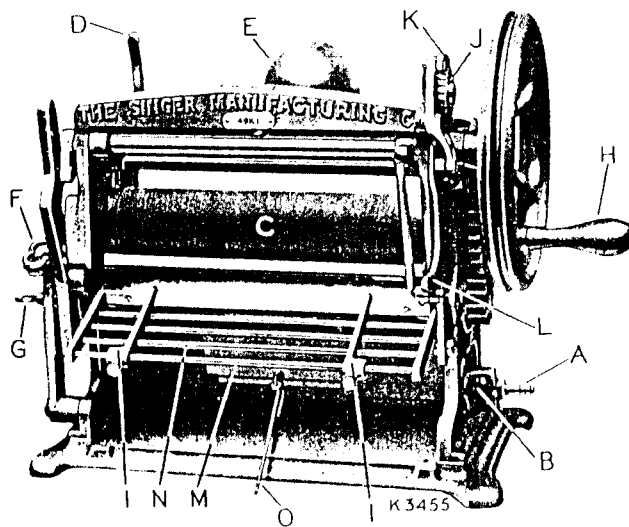


The Singer Manufacturing Co.

INSTRUCTIONS FOR USING
SINGER KILTING MACHINES

Nos. 49K1 and 49K2

(FOR 10" KILTING)



THESSE machines are fitted for heating by gas, but are also furnished with four heating irons for use when gas is not available.

If the lower feed roller is to be heated by gas, connect the inlet pipe (A), by means of a rubber tube, to the gas supply. Turn on the gas and, after waiting a few seconds, pull the small rod (O) towards you and apply a lighted match or taper at the back of the door (M), so as to light the burner (B) at its centre. Should the gas light at the inlet pipe, it will be because the light has been applied too soon. In this case turn off the gas and allow a rather longer interval between turning on the gas and applying the light. All the holes of the burner should burn with a

blue flame; if they burn white, turn the gas lower. If the gas pressure is not sufficient, some of the holes may remain unlit, and when the gas is obtained from an ordinary bracket, the burner must be removed.

When gas is not available, the lower roller may be heated by inserting therein one or two of the heating irons, changing the latter as often as may be required. To heat the irons, place them in a fire until red hot, two irons being in service while the other two are heating.

General Instructions.

Before heating the lower roller be careful to raise the upper feed roller (C) by pressing down the lever (D). If this is not done, the covering on the upper roller will become scorched through remaining too long in contact with the lower hot roller. If the machine be heated by gas, the balance wheel should be turned frequently after the burner is lit, so that the feed rollers may be equally heated.

Always turn the balance wheel from you as indicated by the arrow cast in the wheel.

The upper feed roller must always be raised when the machine is not in use.

The lower feed roller should be as hot as possible without burning the material, which it will not do if kept moving. Should it be necessary to stop the machine while pleating, lift the upper feed roller (C) until ready to start again.

When machines are heated by gas, it is easy to regulate the heat of the lower roller by raising or lowering the flame.

All cotton goods may be pleated quickly and with light pressure, but woollens and merinos must be pleated more slowly and with a heavy pressure in order that they may be sufficiently pressed. To increase the pressure, move the weight (E) further out.

To produce kilting so that each pleat just touches the next one, the kilting blade should move double the width of the pleat or fold, and the feed just the width of the fold. To lengthen the stroke of the kilting blade move the adjusting stud (F) upwards and to lengthen the feed move the feed adjusting stud (G) downwards.

To commence kilting, turn the wheel handle (H) down, as shown in the illustration; when in this position the kilting blade will be on its return motion and raised. Now pass the material over and under each of the tension rods (N) in turn and push the end of the cloth onwards under the upper feed roller (C) by means of the plate screw driver supplied with the machine. See that the material is straight and square, and adjust the edge guides (I,I) to the width of the material and tighten their screws. Then lower the upper roller (C) and commence to work the machine, but only as fast as will allow of the work being properly pressed to retain the fold.

Automatic spacing, or groups of pleats with plain or unpleated material between each group, can be done by inserting screw studs into as many holes in the ratchet spacing wheel (J) as it may be desired to make spaces. When the ratchet wheel is revolved by the pawl (K) each screw head prevents the dropping of the kilting blade, thus allowing the material to pass between the rollers without a pleat being formed. A variety of pleasing patterns may be obtained by changing the number and position of the screws.

To stop the ratchet spacing wheel, turn back the driving pawl (K) and see that the upper end of the sliding bar (L) is out of contact with the heads of the screws in the spacing wheel (J) or the kilting blade will not drop.