

SINGER
107W101

DESCRIPTION

Machine No. 107 w 101 makes the zigzag lock stitch and is especially adapted for automatically making innumerable embroidery designs. The designs are produced by means of a pattern cam one of which is furnished, as selected, with each machine. Cams for other designs are supplied at an extra charge. By making simple adjustments, each cam can be used to produce a great variety of embroidery designs, including the making of scallops, festoons, "coin spots," etc., for borders.

Speed

The maximum speed recommended for Machine No. 107 w 101 is 1500 stitches per minute. The machine should be run slower than the maximum speed at first until the parts which are in movable contact have become glazed by their action upon each other.

Needles

Needles for Machine No. 107 w 101 are of Class and Variety 61 N 7, and are made in sizes 7, 8, 9, 10, 12, 14, 16, 18 and 20.

The size of needle to be used should be determined by the size of thread which must pass freely through the eye of the needle, and care should be taken that the size of needle is no larger than necessary, so that the needle punctures in material will be small, to prevent disfiguration of the material by "shirring" or distortion.

Orders for needles must specify the *quantity* required, the *size* number, also the *class* and *variety* numbers separated by the letter N.

The following is an example of an intelligible order:

"50 No. 12, 61 N 7 Needles."

No other needles will give as good results as those furnished by the Singer Sewing Machine Company, and no other needles but those specified should be used with this machine as these needles 61 N 7 are especially designed for this work.

Thread

Left twist thread should be used in the needle. Either right or left twist thread can be used in the bobbin.

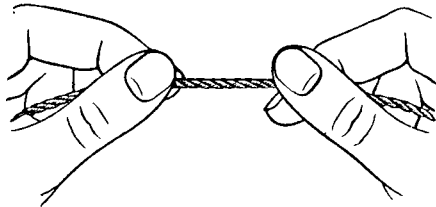


FIG. 1. HOW TO DETERMINE THE TWIST

Hold the thread as shown above. Turn the thread over toward you between the thumb and the forefinger of the right hand; if left twist, the strands will wind tighter; if right twist, the strands will unwind. Use soft finish thread of the same size for the needle and the bobbin.

To Remove the Bobbin

Draw out the slide in the bed of the machine; reach under the bed of the machine with the thumb and forefinger of the left

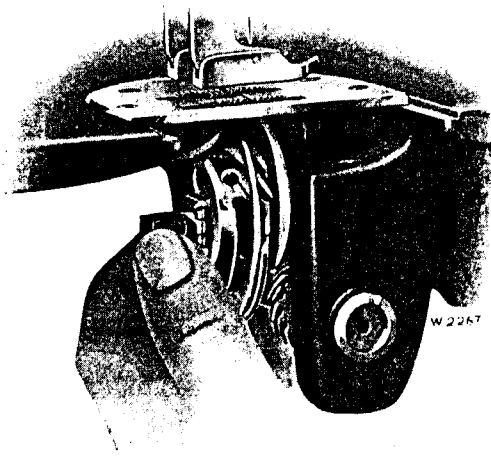


FIG. 2. TAKING OUT THE BOBBIN CASE

hand, open the bobbin case latch with the forefinger and lift out the bobbin case (see Fig. 2).

While the latch remains open the bobbin is retained in the bobbin case. Release the latch, turn the open end of the bobbin case downward and the bobbin will drop out.

To Wind the Bobbin

Fasten the bobbin winder on the table at the right of the machine with its pulley in front of the machine belt so that when the pulley is pushed back it will come in contact with the belt.

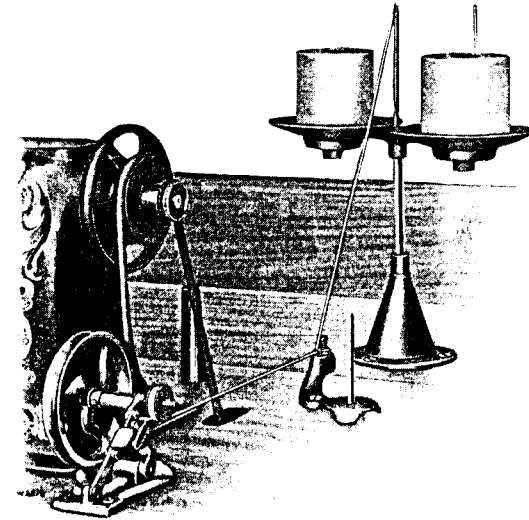


FIG. 3. WINDING THE BOBBIN

Fasten the spool holder for the bobbin winder near the back edge of the table with the wire thread guide on the tension bracket toward the front and about nine inches on a direct line from the bobbin on the bobbin winder spindle as shown in Fig. 3. If the thread does not wind evenly on the bobbin, swing the tension bracket to the right or left as desired.

Place the bobbin on the bobbin winder spindle and push it up closely against the shoulder, having the small pin in the spindle enter the slot in the bobbin. Put the spool of thread on the spool pin of the bobbin winder spool holder, or take the thread from the thread unwinder, lead the thread from front to back through the wire thread guide on the tension bracket, around the back from right to left between the tension discs and again through the wire thread guide; then wind the end of the thread around the bobbin a few times, push the bobbin winder pulley over against the belt and start the machine. When sufficient thread has been wound upon the bobbin, the bobbin winder will stop automatically. Bobbins can be wound while the machine is stitching.

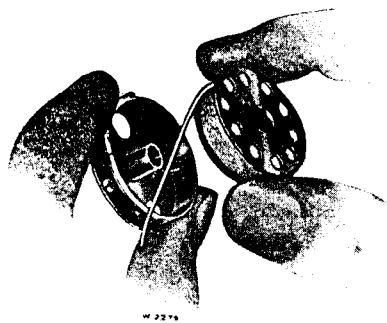


FIG. 4

the tension spring being at the front (see Fig. 4) and place the bobbin into it.

Then pull the thread towards the left into the slot in the edge of the bobbin case (see Fig. 5), draw the thread under the tension spring and into the second slot in the edge of the bobbin case; then

To Thread the Bobbin Case

Hold the bobbin between the thumb and forefinger of the right hand, the thread leading on top from the right towards the left.

With the left hand hold the bobbin case open side up,



FIG. 5

pull the thread between the bobbin and bobbin case and into the third slot in the edge of the bobbin case, then into the delivery eye, as shown in Fig. 6.

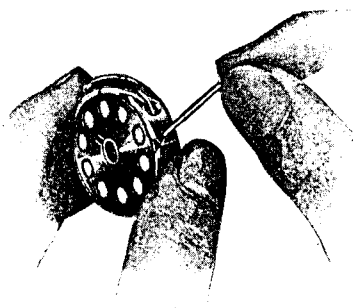


FIG. 6

To Replace the Bobbin Case

After threading take the bobbin case by the latch, holding it between the thumb and forefinger of the left hand, place the

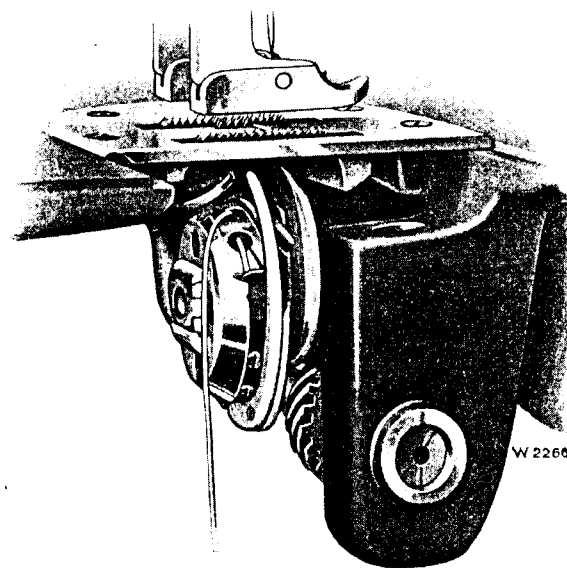


FIG. 7. BOBBIN CASE THREADED AND REPLACED

bobbin case on the centre stud of the bobbin case base, release the latch and press the bobbin case back until the latch catches the groove near the end of the stud (see Fig. 7). Allow the thread to hang free and replace the slide in the bed of the machine.

To Set the Needle

Turn the balance wheel over towards you until the needle bar moves up to its highest point; loosen the set screw in the lower end of the needle bar and put the needle up into the bar as far as it will go, with the long groove of the needle squarely towards you, then tighten the set screw.

To Thread the Needle

(SEE FIG. 8)

Pass the thread from the unwinder into the thread guide (1) at the top of the face plate, down and from left to right through

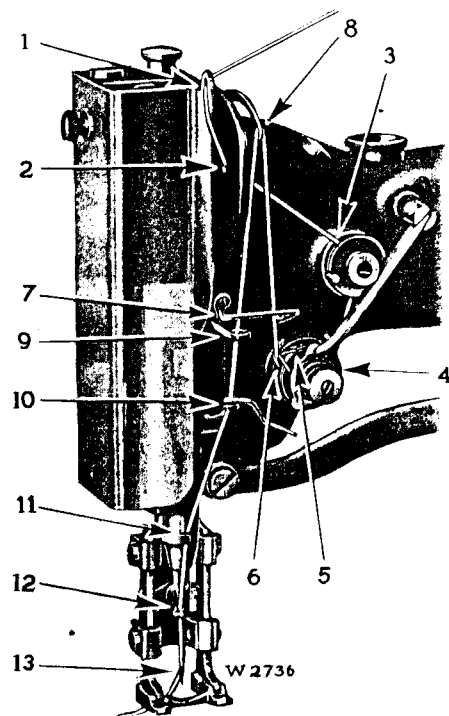


FIG. 8. THREADING THE NEEDLE

the hole (2) near the top of the machine, under the thread take-up lever and over from left to right between the discs of the thread controller (3) on the front of the machine, down under from right to left between the tension discs (4), up and into the hook (5) of the tension discs, down under the thread controller spring (6), up through the wire thread guide (7) on the front of the machine and from right to left through the eyelet in the end of the take-up lever (8), then down through the wire thread guide (7) again, through the auxiliary take-up (9) and through the small wire thread guide (10) below, into the thread guide (11) near the lower end of the needle bar frame and through the thread guide (12) at the lower end of the needle bar, then from front to back through the eye of the needle (13). Draw about three inches of thread through the eye of the needle with which to commence sewing.

To Prepare for Sewing

With the left hand hold the end of the needle thread, leaving it slack from the hand to the needle, turn the balance wheel over toward you until the needle moves down and up again to its highest point, thus catching the bobbin thread; draw up the needle thread and the bobbin thread will come up with it through the hole in the throat plate. Lay both threads back under the presser feet.

To Commence Sewing

After making the necessary adjustments as instructed in this book, place the material beneath the presser feet, lower the presser feet and commence to sew, turning the balance wheel over toward you.

To Remove the Work

With the thread take-up lever at its highest point, raise the presser feet and draw the work back and cut the threads close to the goods. Leave the ends of the threads under the presser feet.

To Regulate the Length of Feed

The length of feed or distance of the space between the points of the zigzag stitches is regulated by the thumb screw at the right of the balance wheel. To increase the length of feed turn the thumb screw over toward you. To decrease the length of feed turn the thumb screw over from you.

To produce the best covering effect of the embroidery thread, a longer feed should be employed when a coarse thread is used; a shorter feed should be employed when a fine thread is used.

To Regulate the Pressure on Material

The pressure on the material is regulated by the thumb screw at the top of the machine. To increase the pressure turn the thumb screw over to the right. To decrease the pressure turn the thumb screw over to the left. The pressure should be only heavy enough to enable the feed to move the work along evenly.

Tensions

It is customary in embroidery stitching for the tension on the under or bobbin thread to overpower the tension on the needle thread, causing the interlocking of the needle and bobbin threads to be visible at the under side of the material.

To Regulate the Tensions

The tension on the needle thread is regulated by the thumb nut at the front of the tension discs at the front of the machine. To increase the tension turn the thumb nut over to the right. To decrease the tension turn the thumb nut over to the left.

The tension on the bobbin thread is regulated by the screw nearest the centre of the bobbin case tension spring. To increase the tension turn the screw over to the right. To decrease the tension turn the screw over to the left.

The Automatic Thread-Check or Controller

The action of the thread controller or automatic thread-check through which the thread passes just previously to entering between the regular tension discs is such, when in proper adjustment, that the thread is released when the take-up lever is nearing the end of its upward stroke, about $\frac{5}{8}$ to $\frac{3}{4}$ of an inch from its highest position, and is so set when the machine leaves the factory. In case this does not release the thread early enough, loosen the jam nut at rear side of discs and screw the knurled bushing inward or toward the right; or to make it release later, screw the bushing outward or toward the left. Be sure to re-tighten the jam nut to secure the bushing in its desired adjustment. When in proper adjustment as above indicated, the sewing may be done with a far lighter tension on the regular tension discs than is otherwise possible, thereby permitting the use of various kinds and qualities of thread and at speeds that would otherwise be impracticable.

To Regulate the Form of Seam

The form of the embroidery seam is automatically controlled by the pattern cam (K, Fig. 11, page 12), and, according to the

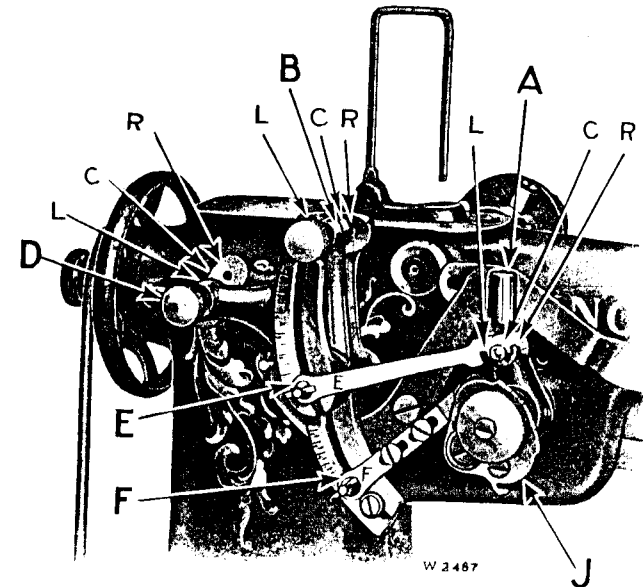


FIG. 9. ADJUSTMENTS AT THE BACK OF THE MACHINE

various adjustments of A, B, D, E, F and J (Fig. 9), as well as the pattern cam feed. Many different designs can be produced by using the same pattern cam.

The embroidery design must be selected from the charts shown on pages 15 to 24, and for each individual design it is necessary to set A, B, D, E, F and J in the exact adjustment indicated in the chart.

The letters C, L and R are used to indicate the positions in which A, B and D may be adjusted (see Fig. 9, above, also Fig. 10, page 10). Numerals are used to indicate the positions in which E, F and J may be adjusted.

To adjust A (Fig. 10), raise the notched end of the pitman (E, Fig. 9, page 9), and move A until its fastening stud

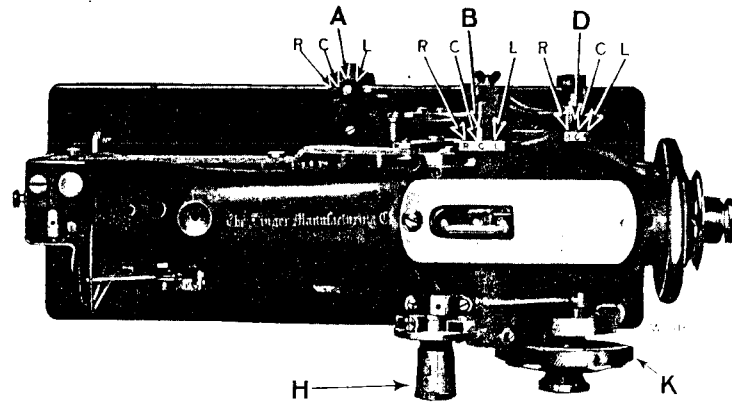


FIG. 10. TOP VIEW OF MACHINE SHOWING ADJUSTMENTS

is opposite the notch C, L or R as may be desired, then allow the fastening stud to enter the notch.

To adjust B and D (Fig. 10); pull back the spring plungers and move B and D until each plunger is opposite the hole C, L or R as may be desired, then release the spring plungers.

To disconnect B, pull back the spring plunger and turn it $\frac{1}{4}$ revolution or until the cross pin rests in the groove in the end of B. To reconnect B, turn the plunger until the groove in the deep groove on B and allow the plunger to enter the hole C, L or R as may be desired.

To adjust E and F (Fig. 9, page 9), loosen the thumb nuts and move E and F until each part is opposite the desired number indicated on the segment levers to which the parts are connected. When the proper adjustment has been obtained tighten the thumb nuts.

To adjust J (Fig. 9, page 9), loosen the large thumb nut and move J (having previously disconnected B, until the desired number on its upper edge is opposite the small pointer, then tighten the large thumb nut.

To disconnect J, loosen the large thumb nut, screwing it back as far as it will go. To re-connect J, tighten the large thumb nut after moving J to the desired position.

Whenever J is actively engaged, B must be disconnected, and reversely, whenever B is actively engaged J must be disconnected. It is imperative that this relation of B and J be maintained at all times for the reason that their actions are opposed to each other.

In the charts shown on pages 15 to 24, the numerals in the first column merely indicate the number of the design as a means of reference, and to make any one of these designs, A, B, D, E, F and J must be set as indicated by the letters and numerals in the columns beneath the respective parts and opposite the design required.

For example, to adjust the machine for making design No. 3 on page 15:

Set	A	at	R
"	B	"	R
"	D	"	R
"	E	"	O
"	F	"	O
		Disconnect	J

After being assured that the indicated adjustments have been correctly made, turn the pattern cam (K, Fig. 11, page 12), one revolution for the purpose of verifying the adjustments and making sure that the moving parts do not conflict.

The feed of the material is adjusted as instructed on page 7, so as to obtain the desired covering effect of the embroidery thread. In producing design No. 3, on page 15, ordinarily, the pattern cam feed regulator (H, Fig. 11, page 12) is set, as instructed on page 12, so as to read on its index somewhere between 35 and 50; likewise the smaller figure is produced by setting the regulator somewhere between 10 and 35 and similarly the longer figure at the right is produced by setting the regulator somewhere between 50 and 75. Thus it will be seen that the same general pattern may be stretched or diminished in length to suit the fancy.

To Regulate the Feed of the Pattern Cam

The feed of the pattern cam (K, Fig. 11), is regulated by the knurled thumb nut (H, Fig. 11).

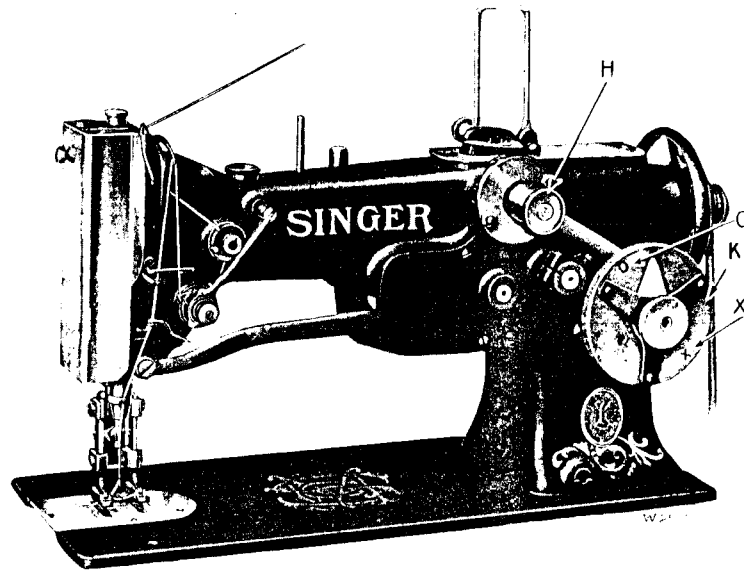


FIG. 11. FRONT VIEW OF MACHINE SHOWING PATTERN CAM (K) AND PATTERN CAM FEED REGULATOR (H)

The barrel of the regulator (H) is marked with numerals ranging from 0 to 9 which register with a mark extending from numerals ranging from 1 to 8 on the cylinder which is enclosed by the regulator. By reading one figure on the cylinder and one on the regulator a series of definite readings indicating various rates of speed of the pattern cam may be had from 10 to 80, each figure on the cylinder representing ten, and those on the regulator, units.

To shorten the figure, increase the speed of the pattern cam (K) by turning the thumb nut (H) over to the left. To lengthen the figure decrease the speed of the pattern cam by turning the thumb nut over to the right.

To Repair the Seam

Should the thread break while stitching, the seam can be quickly repaired, the pattern cam (K, Fig. 11, page 12) being marked at opposite points with the letters O and X, which enable the operator to start the repair at the narrowest or widest part of the seam as desired, no matter what pattern is being stitched.

To start the repair at the widest part of the seam, turn the pattern cam (K) until the letter (X) marked on the cam registers with the pointer at the front of the cam. To start the repair at the narrowest part of the seam turn the pattern cam until the letter (O) registers with the pointer.

To Oil the Machine

To ensure easy running and prevent unnecessary wear of the machine, all parts which are in movable contact require oiling,

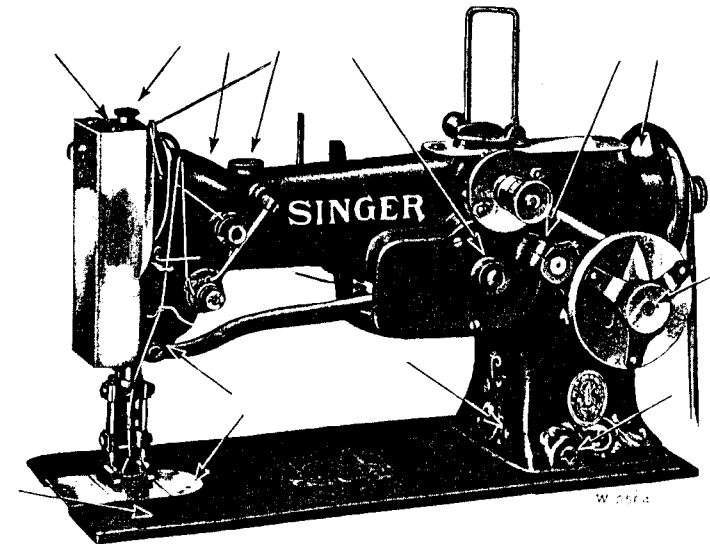


FIG. 12. OILING POINTS AT THE FRONT OF THE MACHINE

and when the machine is in continuous use, oil should be applied frequently. The places where the machine should be oiled are indicated in Figs. 12, 13 and 14 by arrows pointing to the oil holes and bearings.

Remove the face plate and oil all of the bearings which are thus uncovered, then replace the face plate. Turn back the cap

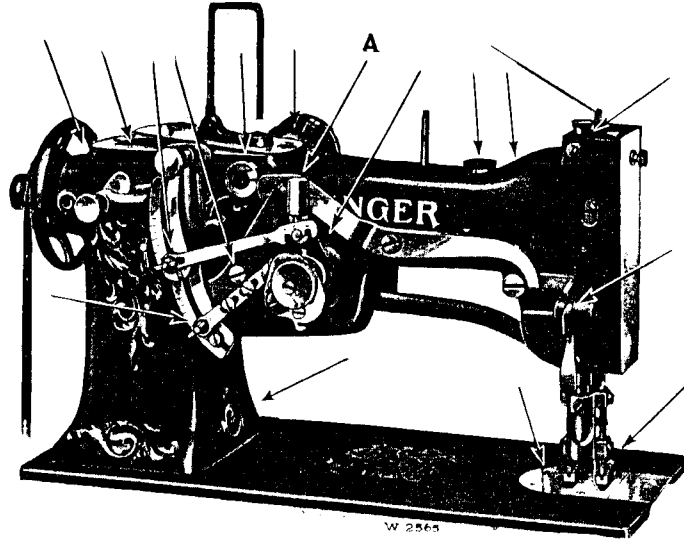


FIG. 13. OILING POINTS AT THE BACK OF THE MACHINE

which is at the top of the machine and oil the bearings which are thus uncovered, then replace the cap. The arrow (A, Fig. 13, above) points to a tube by means of which oil is applied to bearings which would not otherwise be lubricated.

Remove the belt and turn the machine back on its hinges and apply oil at the places designated by arrows, as shown in Fig. 14,

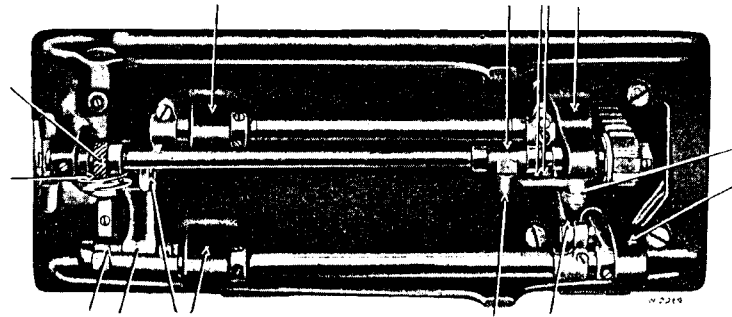


FIG. 14. OILING POINTS IN BASE OF MACHINE

and all other places where there are parts in movable contact, then bring the machine forward into place. Occasionally oil the bobbin case bearing in the bobbin case race.

DESIGNS MADE WITH PATTERN CAM NO. 233137

DESIGN	ADJUSTMENTS						Medium Feed of Pattern Cam 35 to 50	Rapid Feed of Pattern Cam 10 to 35	Slow Feed of Pattern Cam 50 to 75
	A	B	C	D	E	F			
1	C	C	C	0	0	0	Disconnected	Disconnected	Disconnected
2	C	C	C	0	0	6	Disconnected	Disconnected	Disconnected
3	R	R	R	0	0	0	Disconnected	Disconnected	Disconnected
4	R	R	R	0	0	6	Disconnected	Disconnected	Disconnected
5	L	L	L	0	0	0	Disconnected	Disconnected	Disconnected

CAUTION. The designs shown in above table are safely made on the machine. Other designs can be produced by varying the adjustments, but if such adjustments are made, the pattern cam (K, Fig. 11, page 12) should be turned one revolution by hand to make sure that moving parts do not conflict and cause breakage. It is recommended that the pattern cam be turned one revolution by hand in all cases before starting the machine.

DESIGNS MADE WITH PATTERN CAM NO. 233137

ADJUSTMENTS

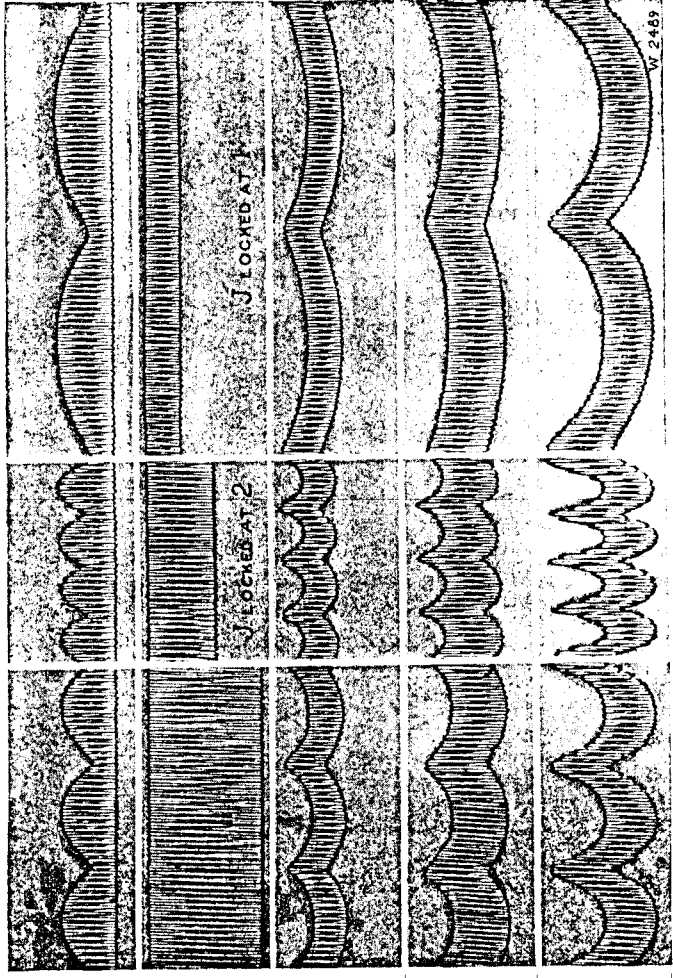
DESIGN	A	B	D	E	F	J
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Medium Feed of Pattern Cam
35 to 50

Rapid Feed of Pattern Cam
10 to 35

Slow Feed of Pattern Cam
50 to 75

6	L	L	L	0	6	Disconnected
7	R	R	0	Idle	4	Locked at
8	R	R	2	Idle	1	Locked at
9	R	R	3	Idle	2	Locked at
10	R	R	6	Idle	2	Locked at



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DESIGN

ADJUSTMENTS

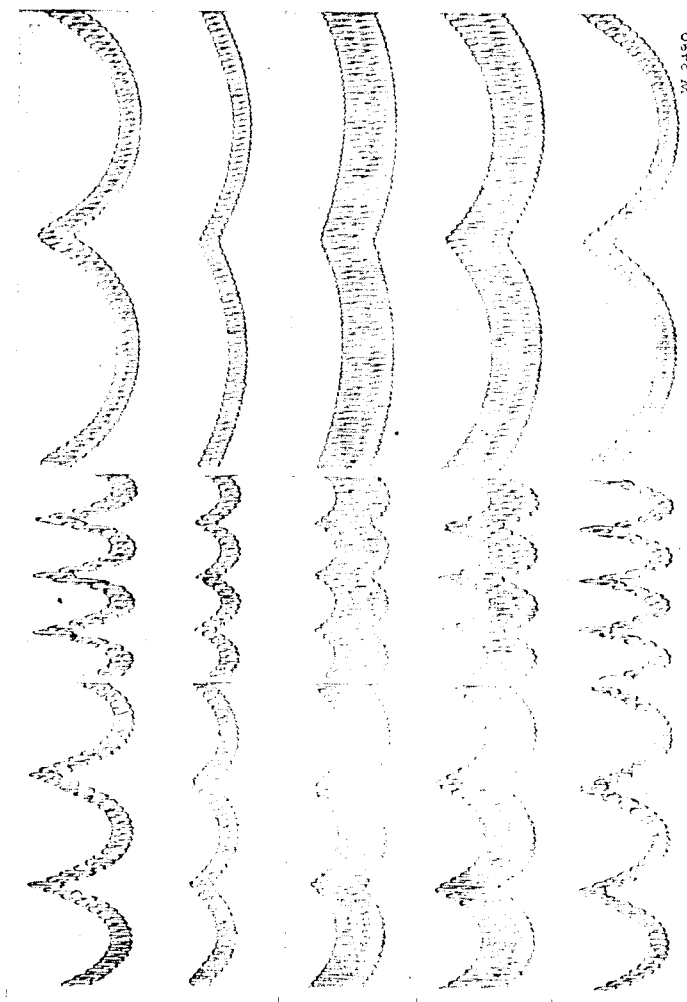
DESIGN	A	B	D	E	F	J
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Medium Feed of Pattern Cam
35 to 50

Rapid Feed of Pattern Cam
10 to 35

Slow Feed of Pattern Cam
50 to 75

11	R	R	6	Idle	1	Locked at
12	L	L	2	Idle	1	Locked at
13	L	L	3	Idle	2	Locked at
14	L	L	6	Idle	2	Locked at
15	L	L	6	Idle	1	Locked at



CAUTION. The designs shown in above table are safely made on the machine. Other designs can be produced by varying the adjustments, but if such adjustments are made, the pattern cam (K, Fig. 11, page 12) should be turned one revolution by hand to make sure that moving parts do not conflict and cause breakage. **It is recommended that the pattern cam be turned one revolution by hand in all cases before starting the machine.**

DESIGNS MADE WITH PATTERN CAM NO. 233137

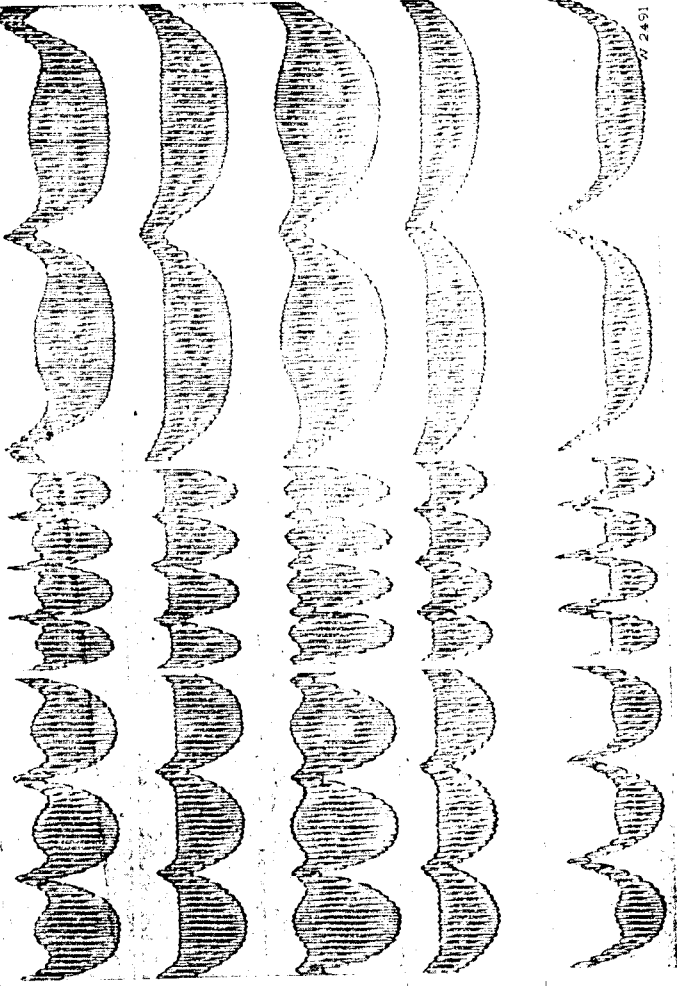
ADJUSTMENTS

Medium Feed of
Pattern Cam
35 to 50

Rapid Feed of
Pattern Cam
10 to 35

Slow Feed of Pattern Cam
50 to 75

A B D E F J



16	R	R	R	6	6	Disconnected
17	R	R	R	3	5	Disconnected
18	R	R	R	3	2	Disconnected
19	R	R	R	2	6	Disconnected
20	L	L	L	6	6	Disconnected

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DESIGNS MADE WITH PATTERN CAM NO. 233137

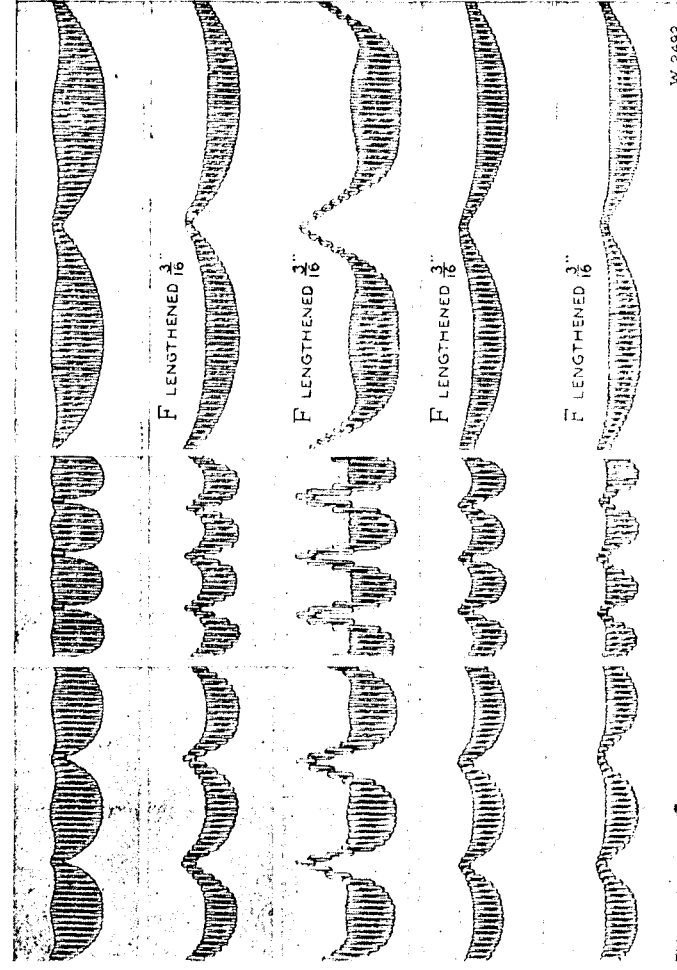
ADJUSTMENTS

Medium Feed of
Pattern Cam
35 to 50

Rapid Feed of
Pattern Cam
10 to 35

Slow Feed of Pattern Cam
50 to 75

A B D E F J



21	L	L	L	3	6	Disconnected
22	R	R	R	2	6	Disconnected
23	R	R	R	6	6	Disconnected
24	R	R	R	1	6	Disconnected
25	R	R	R	1/2	6	Disconnected

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DESIGNS MADE WITH PATTERN CAM NO. 233137

DESIGN

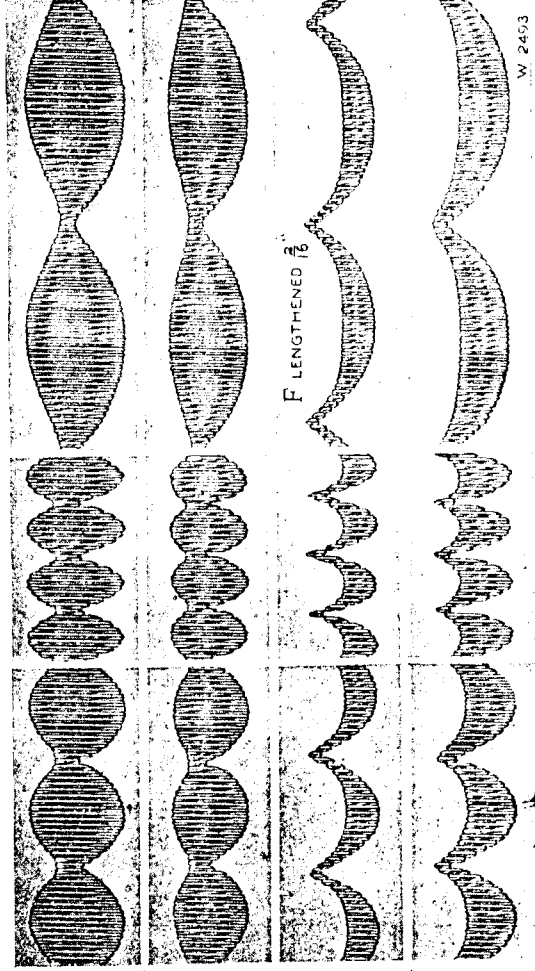
A	B	D	E	F	J
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Medium Feed of Pattern Cam
35 to 50

Rapid Feed of Pattern Cam
10 to 35

Slow Feed of Pattern Cam
50 to 75

26	C	C	C	1	1	Disconnected
27	C	C	C	1	3	Disconnected
28	C	C	L	3	6	Disconnected
29	C	C	L	3	6	Disconnected



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DESIGN

ADJUSTMENTS

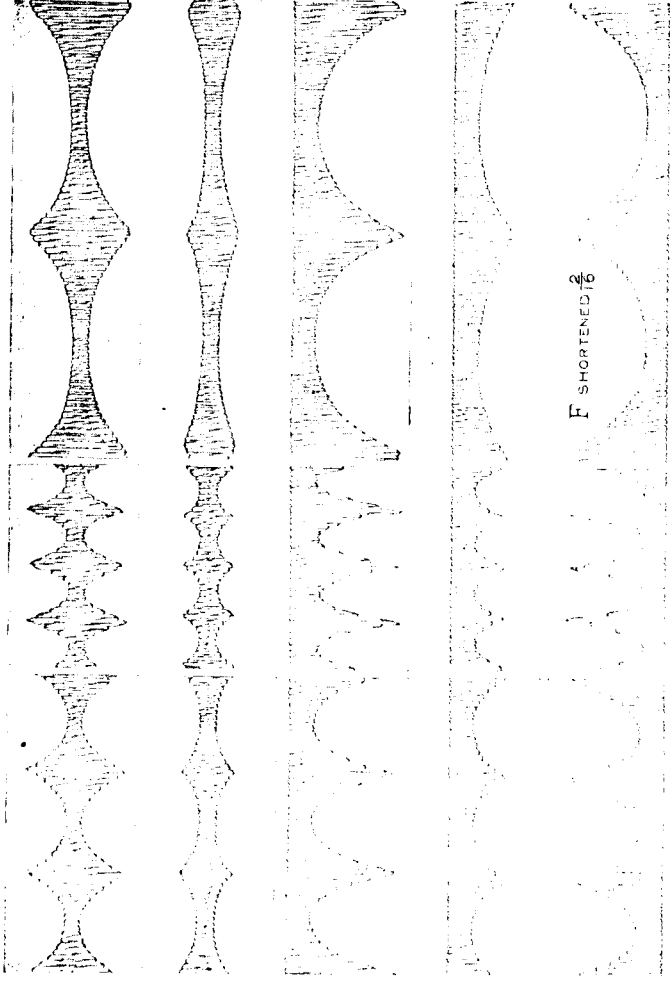
A	B	D	E	F	J	
1	C	C	C	0	0	Disconnected
2	C	C	C	0	6	Disconnected
3	R	R	R	0	0	Disconnected
4	R	R	R	0	6	Disconnected
5	L	L	L	0	3	Disconnected

DESIGNS MADE WITH PATTERN CAM NO. 233138

Medium Feed of Pattern Cam
35 to 50

Rapid Feed of Pattern Cam
10 to 35

Slow Feed of Pattern Cam
50 to 75



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DESIGNS MADE WITH PATTERN CAM NO. 233138

ADJUSTMENTS

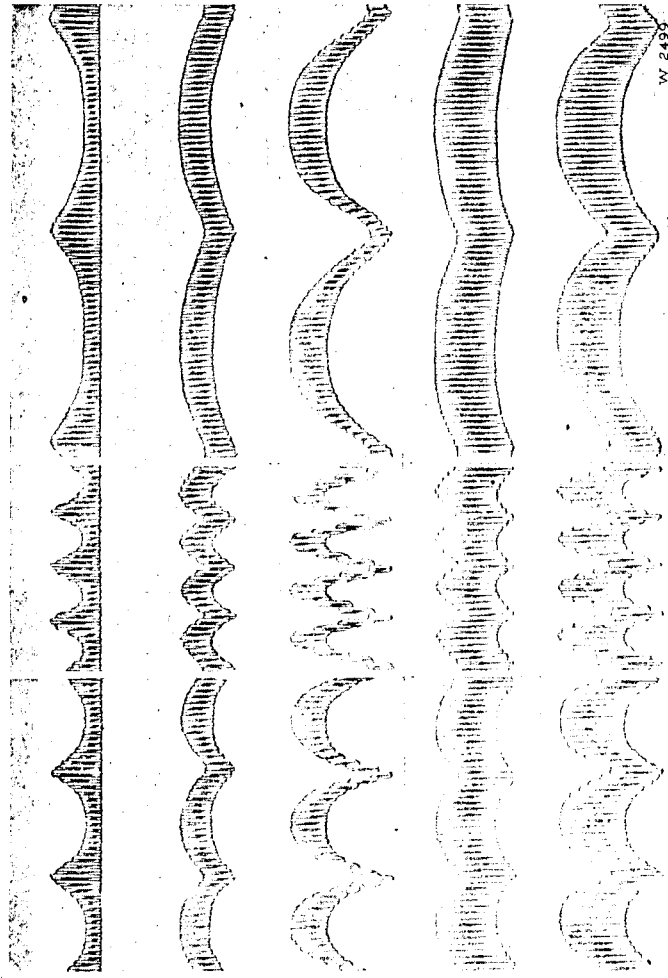
DESIGN	A	B	D	E	F	J
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Medium Feed of
Pattern Cam
35 to 50

Rapid Feed of
Pattern Cam
10 to 35

Slow Feed of Pattern Cam
50 to 75

6	L	L	L	0	6	Disconnected
7	R	Disconnected		R	2	Idle
		Disconnected		R	6	Locked at 1
8	R	Disconnected		R	3	Idle
		Disconnected		R	6	Locked at 2
9	R	Disconnected		R	3	Idle
		Disconnected		R	6	Locked at 2
10	R	Disconnected		R	6	Idle
		Disconnected		R	6	Locked at 2



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DESIGNS MADE WITH PATTERN CAM NO. 233138

ADJUSTMENTS

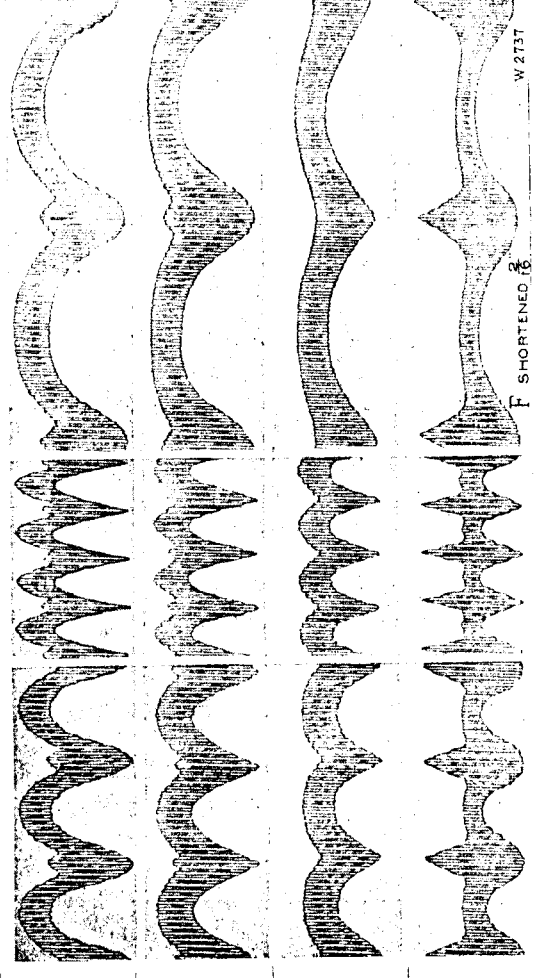
DESIGN	A	B	D	E	F	J
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Medium Feed of
Pattern Cam
35 to 50

Rapid Feed of
Pattern Cam
10 to 35

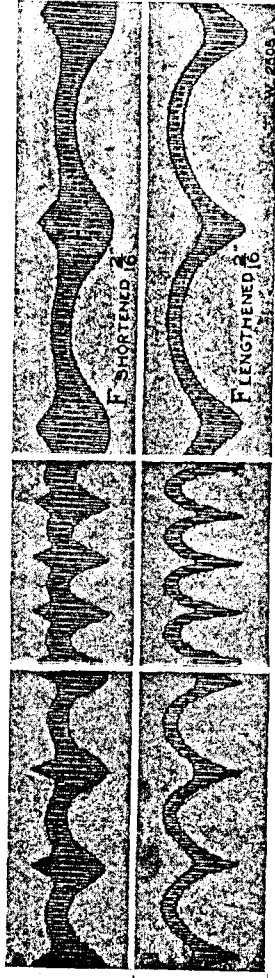
Slow Feed of Pattern Cam
50 to 75

11	R	R	R	6	6	Disconnected
12	R	Disconnected		R	3	Disconnected
		Disconnected		R	2	Disconnected
13	R	Disconnected		R	3	Disconnected
		Disconnected		R	6	Disconnected
14	L	Disconnected		L	3	Disconnected
		Disconnected		L	3	Disconnected



CAUTION. The designs shown in above table are safely made on the machine. Other designs can be produced by varying the adjustments, but if such adjustments are made, the pattern cam (K, Fig. 11, page 12) should be turned one revolution by hand to make sure that moving parts do not conflict and cause breakage. **It is recommended that the pattern cam be turned one revolution by hand in all cases before starting the machine.**

DESIGN		DESIGNS MADE WITH PATTERN CAM No. 233138					
		ADJUSTMENTS			Medium Feed of Pattern Cam 35 to 50	Rapid Feed of Pattern Cam 10 to 35	Slow Feed of Pattern Cam 50 to 75
A	B	D	E	F	J		
15	L	L	L	3	6	Disconnected	
16	C	C	L	3	6	Disconnected	



CAUTION. The designs shown in above table are safely made on the machine. Other designs can be produced by varying the adjustments, but if such adjustments are made, the pattern cam. (K, Fig. 11, page 12) should be turned one revolution by hand to make sure that moving parts do not conflict and cause breakage. **It is recommended that the pattern cam be turned one revolution by hand in all cases before starting the machine.**