

**SINGER**  
178-1

# USE SINGER\* OILS and LUBRICANTS

*They insure freedom from lubricating trouble and give longer life to sewing equipment*

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*The following are the correct lubricants for this machine:*

**TYPE B** — MANUFACTURING MACHINE OIL, HEAVY GRADE

*When an oil is desired which will produce a minimum of stain on fabrics, even after a long period of storage, use:*

**TYPE D** — MANUFACTURING MACHINE OIL, HEAVY GRADE

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## OTHER SINGER\* LUBRICANTS

### **TYPE E** — THREAD LUBRICANT

For lubricating the needle thread of sewing machines for stitching fabrics or leather where a thread lubricant is required.

### **TYPE F** — MOTOR OIL

For oil lubricated motors and plain bearings in power tables and transmitters.

**NOTE:** All of the above oils are available in 1 quart, 1 gallon and 5 gallon cans.

### GEAR LUBRICANT

This specially prepared grease is recommended for gear lubrication on manufacturing sewing machines.

### BALL BEARING LUBRICANT

This pure grease is specially designed for the lubrication of ball bearings and ball thrust bearings of motors and electric transmitters, ball bearing hangers of power tables, etc. **Furnished in 1 lb. and 4 lb. tins.**

Form 19011  
Rev. (662)

## INSTRUCTIONS

FOR USING AND ADJUSTING

# SINGER\*

## SEWING MACHINE

178-1

HAND OPERATED

SINGLE THREAD CHAIN STITCH

FOR

BUTTON SEWING

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THE SINGER MANUFACTURING COMPANY

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## DESCRIPTION

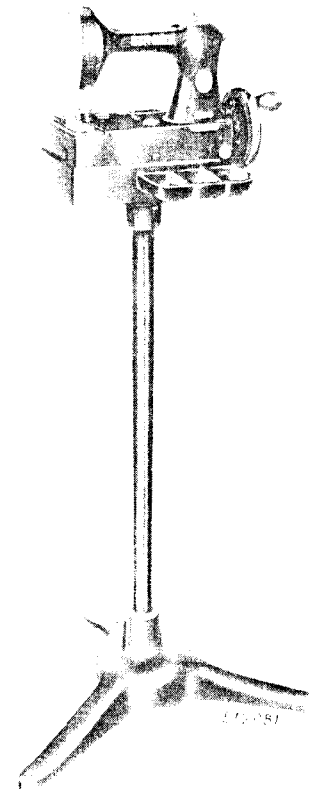
Machine 178-1 is hand operated and is especially designed for sewing two-hole and four-hole flat buttons to barbers' coats, waiters' coats, suits, clothing generally, shirts, waists, underwear, infants' wear and all light and washable fabrics.

It sews buttons ranging in sizes from 10 to 35 ligne.

Machine 178-1 makes two parallel bars of stitches in four-hole buttons, totaling twelve stitches including the cross-over stitch and the fastening stitch.

The machine stops automatically after each complete operation, and the thread is broken at the under side of the fabric when the clamp is raised upon completion of the operation.

This machine can be furnished with the column stand which is shown at the left in connection with the machine. This column stand is furnished only on order at an additional charge. Order for the same must specify the number 46923 Column Stand Complete.



Machine 178-1  
on Column Stand 46923

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NOTE - When Column Stand 46923 is not used, the machine base must be securely fastened to the table; otherwise, when the machine is turned back on its hinges as instructed and shown on page 6, it will fall backward and possibly sustain damage. Three holes are provided in the machine base for this purpose.

To reach certain oiling points not accessible through the oil holes in the top of the machine bed, loosen the lock thumb screw

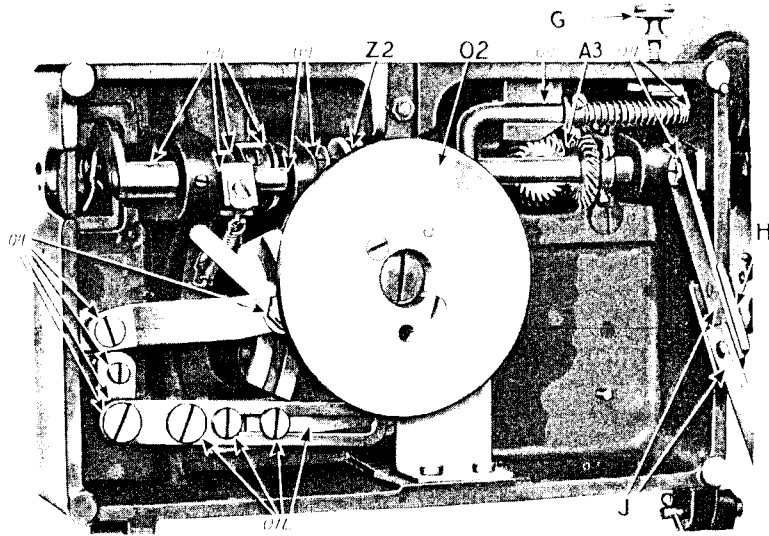


Fig. 4. Showing Oiling Points In Underside of Machine Bed

(G, Fig. 4) and lay the machine back on its hinges, then apply a drop or two of oil to the points indicated by arrows marked "oil" in Fig. 4. Also apply a small quantity of grease to the roller-way on the under side of each of the two cams in the machine bed. The lower cam (O2) is shown in Fig. 4, but the upper of these two cams is concealed, in Fig. 4, by the cam (O2). Also apply a small quantity of grease to the worm gear (Z2) and bevel gears at (A3).

When the machine is turned back on its hinges, as shown in Fig. 4, the lock slide (H) drops down and automatically locks the jointed support (J) to insure that the machine will remain in its turned back position until it is desired to again lower the machine onto the base. To do this, move the lock slide (H) upward and away from the joint in the support (J), then press in this support and it will fold inwardly as the machine is lowered down onto the machine base.

## To Thread the Machine

(STANDING AT THE FACE PLATE END AND THE REAR SIDE OF THE MACHINE AS INDICATED BY FIG. 5)

Place the spool of thread on the spool pin as shown in Fig. 5, and place the spool cover (1) on the spool pin and

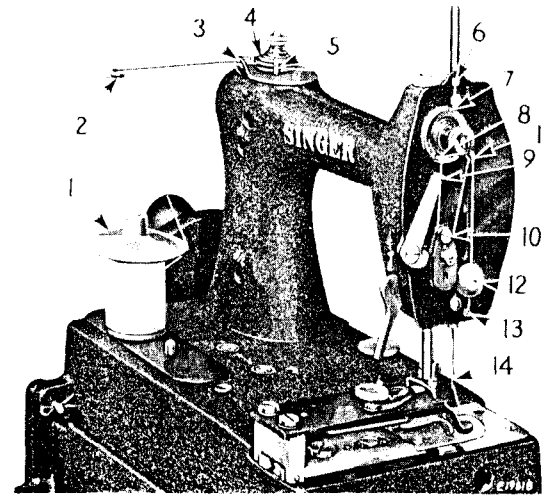


Fig. 5. Threading the Machine

tighten it. Lead the thread upward through wire guide (2) then through guide (3) on the rear side of the top cover plate, then to the right around and between the tension discs (4) and to the left of pin (5), then forward and through guide (6) at the top of the face plate, down to the left around and between the tension discs (7) and to the right of pin (8) down through guide (9) at the top of the thread pull-off, down and from left to right under the thread nipper (10) then up and from left to right through the thread take-up (11), down around the right side of the thread retainer (12), down through the guide (13) at the lower end of the face plate, and down and from front to back (toward the upright part of the machine arm) through the eye (14) of the needle, leaving about two and one half inches of thread hanging from the needle eye.

CAUTION: The eye of the wire guide (2, Fig. 5) should be directly over the spool pin (B3, Fig. 5). This will keep an even tension on the thread as it unwinds from the spool.

## Needles

The size of the needle to be used depends upon the size of the thread which must pass freely through the eye of the needle.

Do not use rough or uneven thread or thread which passes with difficulty through the needle eye, as such thread will interfere with the successful use of the machine.

Use Needles of Class and Variety 175 x 1, Sizes 16 and 18.

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

## Thread

Thread in sizes from 60 to 40 is recommended for this machine.

## To Set the Needle

Turn the hand wheel in the direction indicated by the arrow (S, Fig. 2), located on the rim of the hand wheel, until the needle bar reaches its highest position. Insert the needle as far as it will go up into the needle bar, having the long groove of the needle to the left (facing away from the upright part of the machine arm) and tighten the set screw (I2, Fig. 5). Make sure that the long groove of the needle is facing squarely to the left and is not turned toward either the front or back.

## To Regulate the Thread Tension

If the stitches are too loose, turn the thread tension thumb nuts (B2 and C2, Fig. 3) in a clockwise direction. If the stitches are too tight, turn these thumb nuts in a counter-clockwise direction.

## To Adjust the Thread Nipper

The thread nipper (S2, Fig. 6) is adjusted to hold the thread when the presser bar lifter (L) is raised to lift the button clamp. This grip upon the thread should be not too positive but

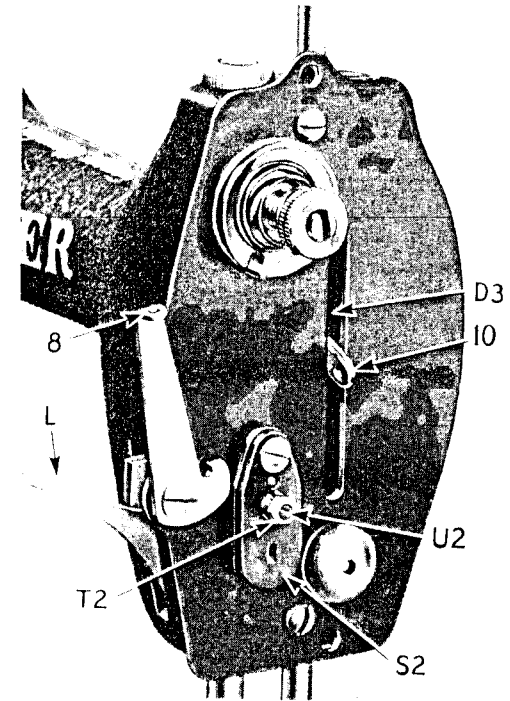


Fig. 6. To Adjust the Thread Nipper

just sufficient so that, by exerting some "pull", the thread can be drawn through the thread nipper.

Should adjustment become necessary, loosen the nut (T2) using, for this purpose, the special wrench furnished with the machine. Then, using a small screw driver, turn the thread nipper screw (U2) inward or outward until the proper degree of grip upon the thread is secured. With the button clamp raised, release the lever (L) and if the clamp does not lower with the lever (L), the thread nipper screw (U2) is too tight and should be readjusted.

When correct adjustment is obtained, tighten nut (T2).

### To Adjust the Button Clamp Jaws for Different Sizes of Buttons

By means of the spreader (M, Fig. 7) open the clamp jaws and insert therein a button of the size to be sewn. Loosen thumb screw

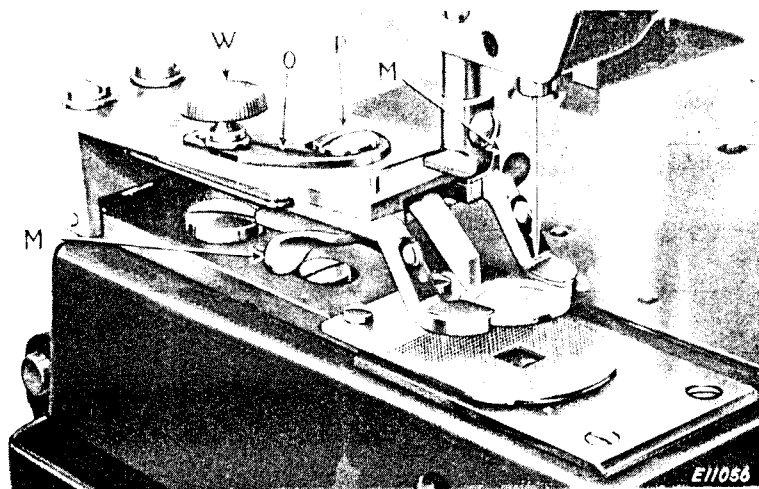


Fig. 7. To Adjust the Button Clamp Jaws  
For Different Sizes of Buttons

(W) and move the hooked end of the lever (C) against the center finger screw (P) as shown in Fig. 7, then tighten the thumb screw (W).

NOTE - Whether the button be a two-hole or a four-hole button, it must be placed in the clamp jaws with the holes in the button parallel with the front of the machine.

### To Adjust for Two-Hole and Four-Hole Buttons

TO SEW TWO-HOLE BUTTONS, move the adjusting handle (Q, Fig. 8) to the extreme right to the two-hole button pictured on the machine bed.

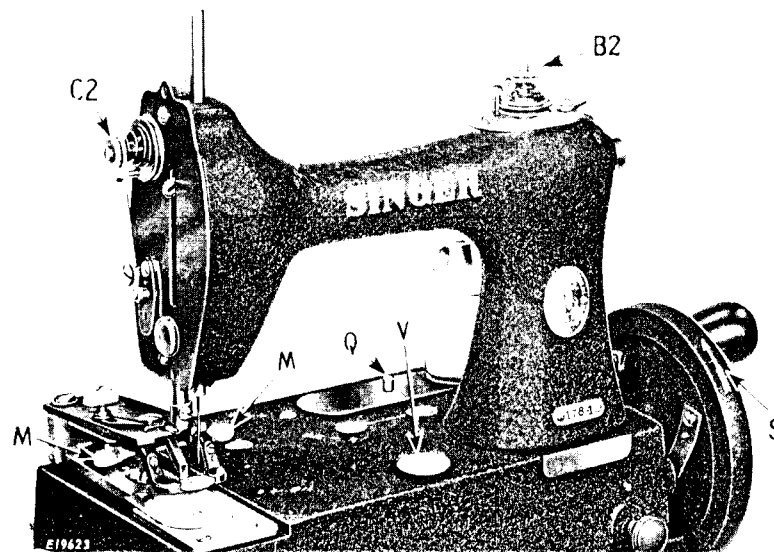


Fig. 8. Adjustment for Two-Hole or Four-Hole Buttons

(a) When changing from one size two-hole button to another size two-hole button, in which the distance between the holes is different, lay the machine back on its hinges as instructed on page 6, and make sure that the lock slide (H, Fig. 4) drops down over the joint (J, Fig. 4) and holds it.

(b) Using the special wrench attached to the machine, loosen the nut (X, Fig. 9) at the end of the vibrating arm (Z, Fig. 9). Move the vibrating arm (Z) upward for holes which are wider apart, or move the arm (Z) downward for holes which are closer together, then tighten the nut (X).

After adjustment is made, try the machine without thread in the needle to make sure that the needle centers in the holes in the button.

TO SEW FOUR-HOLE BUTTONS, move the adjusting handle (Q, Fig. 9) to the extreme left to the four-hole button pictured on the ma-

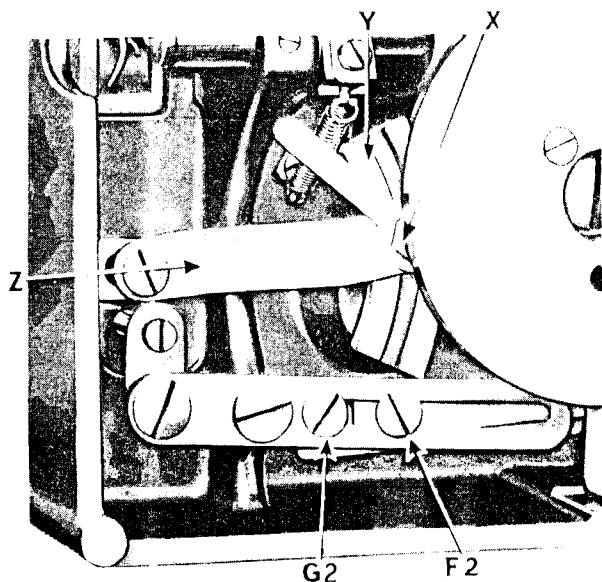


Fig. 9. Adjust for Greater or Less Distance Between Holes in the Buttons

chine bed, for the longest cross-over stitch. For less distance (shorter cross-over stitch) move the adjusting handle (Q) from the four-hole button on the machine bed slightly toward the left.

To change from one size four-hole button to another size four-hole button, in which the distance between the holes is different, make adjustment exactly as instructed on page 11 under paragraphs (a) and (b).

When it is necessary to change from four-hole to two-hole buttons, and then return to the same size four-hole buttons, DO NOT SHIFT THE HANDLE (Q) TO THE TWO-HOLE BUTTON UNTIL AFTER ADJUSTMENT IS MADE TO RETAIN THE SETTING FOR THE LENGTH OF CROSS-OVER STITCH REQUIRED FOR THE FOUR-HOLE BUTTONS. This adjustment is made as follows:

Lay the machine back on its hinges as instructed on page 6. Loosen stop screw (G2, Fig. 9) and move it against the screw (F2), then tighten the screw (G2). Then move the handle (Q) over to the two-hole button on the machine bed for sewing the two-hole buttons. To return to the same size four-hole buttons as before, move the handle (Q) back toward four-hole button on the machine bed until the handle (Q) is stopped by the cross-over stitch setting.

## To Sew the Buttons

With the machine in stopped position, raise the button clamp by means of the presser bar lifter lever (L, Fig. 10).

With the clamp jaws set for the size button to be sewn, as instructed on page 10, insert the button in the button clamp jaws. Whether the button be a two-hole or four-hole button, it must be placed with the holes parallel with the front of the machine.

Place the fabric under the clamp and, by means of the presser bar lifter lever (L, Fig. 10), lower the clamp onto the fabric.

Press the stop motion releasing button (V, Fig. 8) and rotate the hand wheel in the direction indicated by the arrow (C, Fig. 8) until the machine stops automatically, the sewing of the button being completed.

By means of the lifter lever (L, Fig. 10) raise the button clamp. This automatically breaks the thread at the under side of the fabric and pulls the correct length of thread for the next button.

## To Remove and Replace the Looper

Should it become necessary to remove the looper, lay the machine back on its hinges as instructed on page 6. Rotate the hand wheel to bring the needle bar up so that the needle is above the throat plate. Loosen screw (N2, Fig. 12) and remove the looper from its shaft.

When replacing, have the flat side of the looper stem where it will be engaged by the screw (N2, Fig. 12) and set the looper so that its point passes the needle as closely as possible but without actually touching the needle. Tighten screw (N2, Fig. 12).

### To Set the Needle Bar

The needle bar should be set with its upper end flush with the top of the machine head as shown at (P2, Fig. 10) when the needle bar connecting link (Q2) is in its lowest position as shown in Fig. 10.

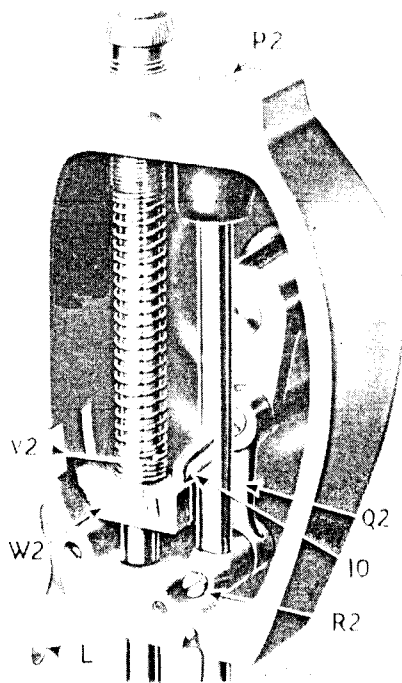


Fig. 10. To Set the Needle Bar

Should resetting be required, loosen the set screw (R2) and turn the hand wheel until the connecting link (Q2) reaches its lowest position, then set the needle bar with its upper end flush with the top of the machine head as shown at (P2). Make sure that the needle bar is set with the thread take-up (I0) squarely to the left so that it will not rub against either side of the slot (D3, Fig. 6) in the face plate. Tighten set screw (R2) and replace the face plate, making sure that the lug (X2, Fig. 5) is between the spring projection (V2) and the bracket (W2) as instructed at the bottom of page 5.

### To Time the Automatic Thread Tension

When the needle bar (P2, Fig. 10) rises 1-3/8" above the top of the machine head on its upward stroke, the automatic thread tension should start to open.

To adjust the automatic thread tension, turn the hand wheel until cam set screws can be reached through the opening (G3, Fig. 2).

Loosen cam set screws and move cam as required. Then securely tighten cam set screws.

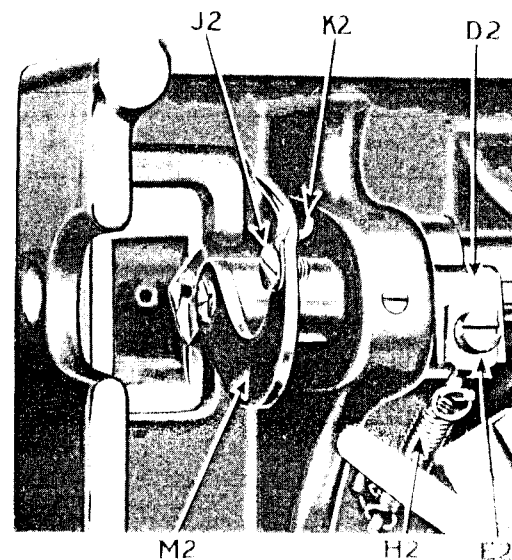


Fig. 11. Showing Needle Guide Turned Out for Accessibility (View from Underside of Machine Bed)

If it becomes necessary to remove and replace the thread finger (K2, Fig. 11 and 12) lay the machine back on its hinges as instructed on page 6, making certain that the lock slide (H, Fig. 4) drops down over the joint (J, Fig. 4) and holds it. Rotate the hand wheel until it stops; loosen the clamping screw (E2); turn the needle guide (M2) outward as shown in Fig. 11, then tighten the screw (E2) to prevent the spring (H2) from becoming detached from the hook which is fastened to the crank (D2). Remove the thread finger screw (J2) and the thread finger (K2).



Attach the replacement thread finger (K2) by means of the screw (J2), loosen screw (E2) and turn the needle guide (M2) in to its original position as shown in Fig. 12, with the thread finger (K2) up under the needle hole in the throat plate. Hold the needle guide (M2) up in this position and turn the hand wheel to bring the needle down between the thread finger (K2) and the projecting end of the thread finger screw (J2). Press the crank (D2) lightly against the cam (C3) and tighten the screw (E2). Make sure that the crank (D2) and the needle guide (M2) are against the ends of the bushing (F3), also make sure that the needle does not touch either the thread finger (K2) or the thread finger screw (J2).

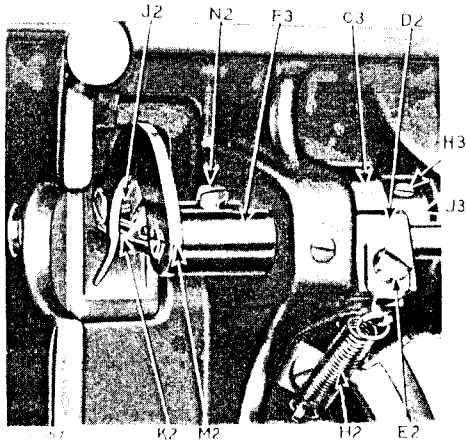


Fig. 12. Showing Thread Finger and Thread Finger Screw in Correct Relationship to the Needle  
(View from Underside of Machine Bed)

### To Adjust the Needle Guide

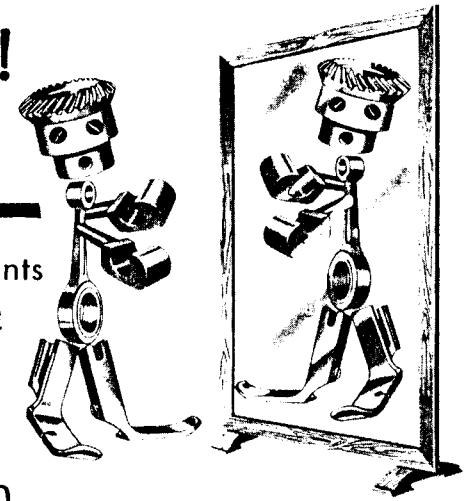
The needle guide (M2, Fig. 11) should start to move when needle bar is 1/2" from top of machine head on its upward stroke.

To adjust needle guide, lay machine back on its hinges as instructed on page 6, making certain that the lock slide (H, Fig. 4) drops down over joint (J, Fig. 4) and holds it. Loosen two screws (H3, Fig. 10), only one shown in illustration, and turn cam (J3, Fig. 11) until correct adjustment is made, then tighten screws (J3, Fig. 12).

NOTE: Cam should be against casting tight enough so hand wheel will turn freely without sidewise end play.

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