

SINGER
19W

USE ONLY SINGER OILS and LUBRICANTS

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

“Singer Oil for High Speed Sewing Machines”

(Cloth and Leather)

For all manufacturing sewing machines except where a stainless oil is desired.

“Singer Stainless Oil for High Speed Sewing Machines”

For all manufacturing sewing machines where a stainless oil is desired.

“Singer Motor Oil”

For oil-lubricated motors, power tables, transmitters and machinery in general.

“Singer Stainless Thread Lubricant”

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

NOTE: All of the above oils are available in 1 quart, 2 quart, 1 gallon and 5 gallon cans or in 55 gallon drums, and can also be supplied in customer's containers.

“Singer Gear Lubricant”

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

“Singer Ball Bearing Lubricant”

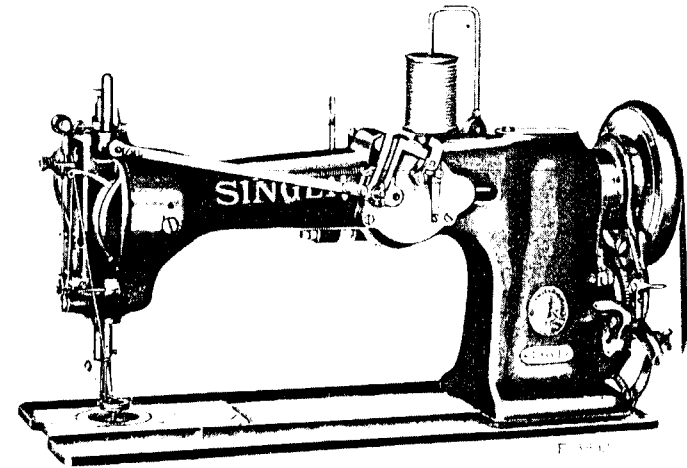
This pure grease is specially designed for the lubrication of ball bearings and ball thrust bearings of motors and electric transmitters, ball bearing hangers of power tables, etc.

NOTE: The above greases are furnished in ¼ lb. tubes and 1 lb. and 4 lb. tins.

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1596w

INSTRUCTIONS FOR USING SINGER SEWING MACHINES



Machine No. 19w1

OF
CLASS 19w

THE SINGER MANUFACTURING CO.

To all whom it may concern:

The placing or renewal of the name "Singer" (Reg. U. S. Pat. Off.) or any of the trade marks of The Singer Manufacturing Company on any machine that has been repaired, rebuilt, reconditioned, or altered in any way whatsoever outside a Singer factory or an authorized Singer agency is forbidden.

THE IMPORTANCE OF USING
GENUINE SINGER PARTS AND NEEDLES
IN SINGER MACHINES

The successful operation of Singer machines can only be assured if genuine Singer parts and needles are used. Supplies are available at all Singer Shops for the Manufacturing Trade and mail orders will receive prompt attention.

Genuine Singer Needles should be used
in Singer Machines.
These Needles and their Containers
are marked with the
Company's Trade Mark "SIMANCO." 1

Needles in Containers marked
"For Singer Machines"
are not Singer made needles. 2

DESCRIPTION

Machines of Class 19 w have one needle and a rotary hook and are designed for making eyelets in cloth or leather. They can be fitted to make eyelets having an inside diameter of $\frac{3}{32}$, $\frac{7}{64}$, $\frac{1}{8}$, $\frac{9}{64}$, $\frac{5}{32}$, $\frac{3}{16}$, $\frac{7}{32}$ or $\frac{1}{4}$ inch as desired. Unless otherwise ordered the machines will be fitted to make eyelets having an inside diameter of $\frac{9}{64}$ inch and extra spurs for $\frac{1}{8}$ and $\frac{5}{32}$ inch eyelets.

The machines are equipped with a rotating ball bearing feed and presser foot.

MACHINE NO. 19 w 1 makes one radial stitch at each movement of the rotating feed during the first revolution of the feed, then the radial stitches are locked at the desired distance from the center of the eyelet by an intersecting line of stitches as the feed makes its second revolution, after which the eyelet being finished the machine stops automatically.

When desired, this machine can be fitted for stitching over a cord or metal ring, adding considerable to the strength of the eyelet.

MACHINE NO. 19 w 2 makes two radial stitches from the center of the eyelet to the circumference and two stitches on the return to the center, until the rotating feed has made one revolution, after which the eyelet being finished the machine stops automatically.

MACHINE NO. 19 w 3 makes one radial stitch at each movement of the rotating feed, allowing the radial stitches after one revolution of the clamp, to overlap until the machine is stopped by the operator. This machine is used largely for making eyelets in shirts, shirt waists, underwear, etc.

Speed

The maximum speed recommended for Machines Nos. 19 w 1 and 19 w 2 is 1000 stitches per minute. The maximum speed for Machine No. 19 w 3 is 1200 stitches per minute. When the machines are in operation the balance wheel should always turn over toward the operator.

Needles

Needles for Machines of Class 19 w are of Class and Variety 126 X 1 and are made in sizes Nos. 8, 9, 10, 11, 12, 13, 14, 15, 16, 18, 20, 22, 23, 24 and 25.

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. Use smooth finished thread of the same size for the needle and the bobbin.

Orders for needles must specify the quantity required, the size, also the Class and Variety numbers separated by the letter X. In the Class and Variety of needle of which various styles of points are made, the order should also specify the style of point required.

The following are details of an intelligible order:

"100 No. 14, 126 X 1 Needles."

The best results will be obtained in using the needles furnished by the Singer Sewing Machine Company.

To Set the Needle

Turn the balance wheel over towards you until the needle bar moves up to its highest position; loosen the set screw (Q, Fig. 11) 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 toward the front of the machine and the eye of the needle directly in line across the bed of the machine, then tighten the set screw (Q).

Thread

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

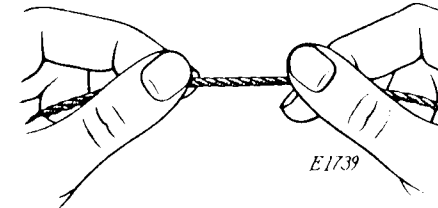


Fig. 2. How to Determine the Twist

Hold the thread as shown above. Turn the thread over toward you between the thumb and forefinger of the right hand; if left twist, the strands will wind tighter; if right twist, the strands will unwind.

Relative Sizes of Needles and Thread

Sizes of Needles	FOR LEATHER		FOR CLOTH	
	Cotton	Silk	Cotton	Silk
8		000	200	
9		00	150	
10	70	0	100-150	000-00
11	60	A	90-100	00
12	50	B	80-90	0
13	40	C	70-80	A
14	36	D	60-70	A
15	30	D	50-60	B
16	30	E	40-50	C
18	24	EE	30-40	C
20	20		24-30	D
22	16		20-24	E
23	12		16-20	EE
24	8		8-16	

To Remove the Bobbin

Have the thread take-up lever at its highest position; reach under the bed of the machine with the right hand, press the latch

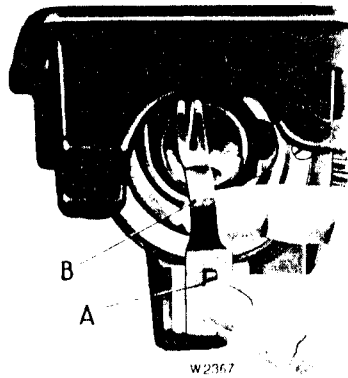


Fig. 3. Removing the Bobbin

(A, Fig. 3) with the thumb and lay back the fork (B, Fig. 3), then remove the bobbin case with the forefinger of the left hand as shown in Fig. 4. Turn the open side of the bobbin case downward and the bobbin will drop out.



Fig. 4. Removing the Bobbin

To Wind the Bobbin

(See Fig. 5)

Fasten the bobbin winder to the table with its driving pulley in front of the machine belt, so that the pulley will drop away from the belt when sufficient thread has been wound upon the bobbin.

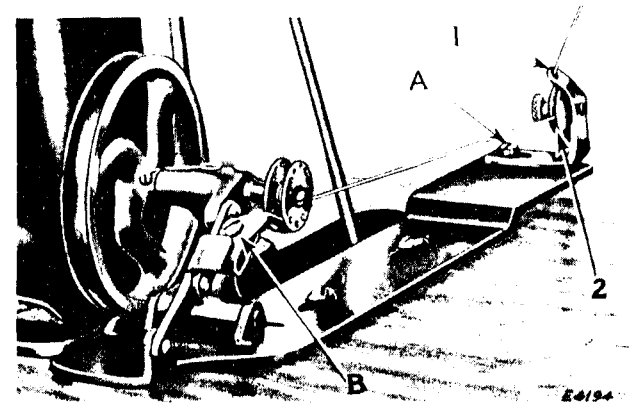


Fig. 5. Winding the Bobbin

Place the bobbin on the bobbin winder spindle and push it on as far as it will go.

Pass the thread down through the thread guide (1) in the tension bracket, around the back and between the tension discs (2). Then wind the end of the thread around the bobbin a few times, push the bobbin winder pulley over against the machine belt and start the machine.

When sufficient thread has been wound upon the bobbin, the bobbin winder will stop automatically.

If the thread does not wind evenly on the bobbin, loosen the screw (A) in the tension bracket and move the bracket to the right or left as may be required, then tighten the screw.

The amount of thread wound on the bobbin is regulated by the screw (B). To wind more thread on the bobbin, turn the screw (B) inwardly. To wind less thread on the bobbin, turn the screw outwardly.

Bobbins can be wound while the machine is stitching.

To Thread the Bobbin Case

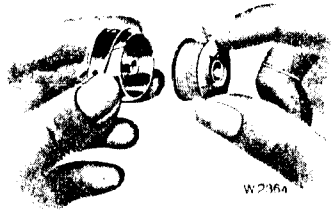


Fig. 6

With the left hand hold the bobbin case as illustrated (see Fig. 6); the slot in the edge being at the top, and place the bobbin into it.

Hold the bobbin in the right hand, the thread drawing on the top from the left toward the right.



Fig. 7

Then pull the thread into the slot in the edge of the bobbin case (see Fig. 7), draw the thread to the left under the tension spring and into the delivery eye at the end of the tension spring (see Fig. 8)



Fig. 8

To Replace the Bobbin Case

After threading, take the bobbin case between the thumb and forefinger of the left hand and place it on the center stud of the rotating hook. Close the bobbin case stop, making sure that the finger on the bobbin case is retained in the fork of the bobbin case stop. See that the bobbin case stop is held firmly by the spring latch.

To Thread the Needle

Place the spool of thread on the spool holder (1, Fig. 9) at the top of the machine, pass the thread through the hole (2), down

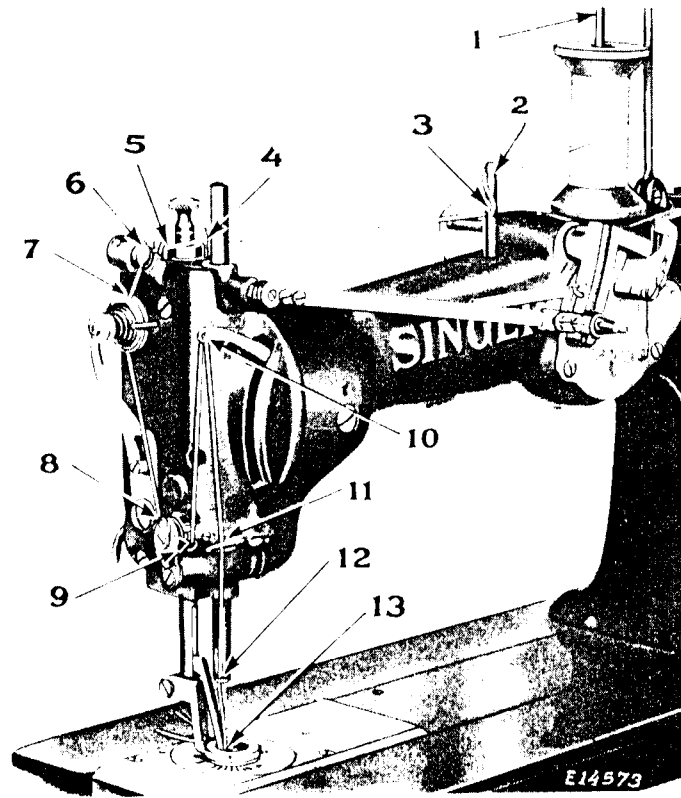


Fig. 9. Upper Threading

from right to left through hole (3), through pin hole (4), into the thread guide (5), over from right to left into the thread retainer (6), down around the back between the tension discs (7), under from back to front around the thread controller (8), under the thread controller spring (9), up and from back to front through the hole in the end of the thread take-up lever (10), down through the thread guide (11), through the thread guide (12) and 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 position, 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 foot.

Select the size spur plate according to the size eyelet required and place it in the machine. Then make the hole in the goods, using the corresponding size punching tube furnished for the purpose. In loosely woven or stretchy material the hole should be punched one or two sizes smaller than the size of the finished hole desired.

To Commence Sewing

Place the material beneath the presser foot so that the spur will enter one of the holes in the goods, then lower the presser foot and commence to sew, turning the balance wheel over toward you.

To Remove the Work

Let the thread take-up lever (10, Fig. 9) rest at its highest position, raise the presser foot and draw the fabric back and cut the threads close to the goods. Leave the ends of the threads under the presser foot.

To Regulate the Number of Stitches in the Eyelet

The number of stitches in the eyelet is regulated by the lever (K, Fig. 10). To increase the number of stitches in the eyelet loosen the wing nut (J) which holds the lever in position and move the lever (K) toward you. To decrease the number of stitches in the eyelet move the lever (K) away from you. When the number of stitches in the eyelet is increased the stitches will be placed closer together. When the number of stitches in the eyelet is decreased the stitches will be placed farther apart. Care should be taken to see that the wing nut (J) is securely tightened before starting the machine.

To Regulate the Width of Bight

The width of bight or throw of the needle is regulated by the sliding block in the slide at the front of the machine. To increase the width of bight loosen the wing nut (T, Fig. 11) which holds the sliding block in position and move the sliding block downward. To decrease the width of bight move the sliding block upward. When the desired width of bight is obtained, tighten the wing nut (T).

To Regulate the Tensions

The tension on the upper thread is regulated by the thumb nut (M, Fig. 11). To increase the tension turn the thumb nut (M) over toward you. To decrease the tension turn the thumb nut (M) over from you.

The tension on the under thread is regulated by the screw near the center of the tension spring on the outside of the bobbin case. To increase the tension turn the screw over to the right. To decrease the tension turn the screw over to the left.

To Regulate the Pressure on Material

The pressure on the material is regulated by the thumb screw (L, Fig. 11). To increase the pressure turn the thumb screw (L) over to the right. To decrease the pressure turn the thumb screw (L) over to the left.

To Oil the Machine

To insure easy running and prevent unnecessary wear of the machine, the parts which are in movable contact should be oiled.

Oil holes are provided for the bearings which cannot be directly reached. When the machine is in constant use it should be oiled at least once each day.

To reach the parts underneath the bed of the machine, for oiling, turn the machine back on its hinges and apply oil at the places designated by unlettered arrows, as shown in Fig. 12, 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.

Counting Stop Motion for 19w1 and 19w2 Machines

The counting stop motion is operated by pressing the foot on the foot treadle, (hold pressure for a few seconds then release

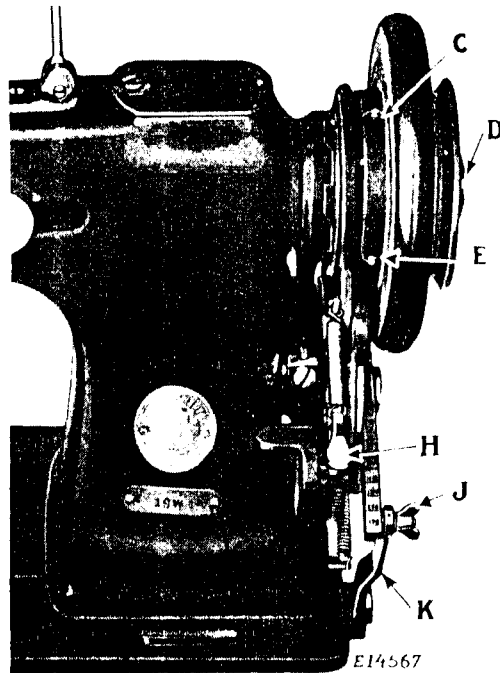


Fig. 10. Stop Motion Adjustments

the foot). The machine will automatically stop after making the predetermined number of stitches.

The machine may be stopped at any time during the operation of stitching by pressing down on the emergency stop handle (H, Fig.10).

INSTRUCTIONS FOR ADJUSTERS AND MACHINISTS

Thread Controller

The function of the thread controller spring (9, Fig. 11) is to hold back the slack of the upper thread until the eye of the needle reaches the goods in its descent.

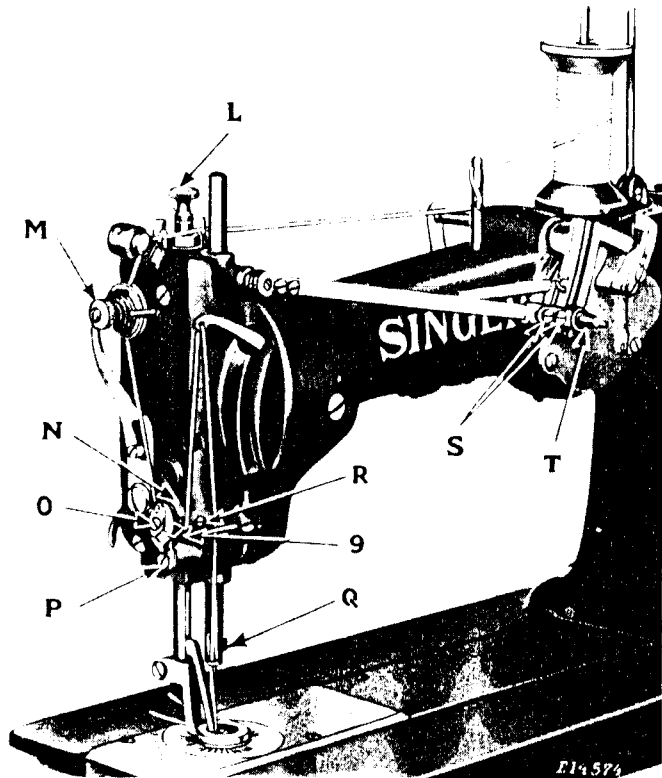


Fig. 11

The thread controller stop is in the form of a crescent (N); push on the upper end of the stop for less controller action and on the lower end for more controller action on the thread.

It may be found advisable to increase the tension of the spring (9) for coarse thread, or to lessen it for fine thread.

To vary the tension of the thread controller spring (9),

remove the face plate and loosen the set screw (R), which sets the thread controller stud, then from the inside turn the stud forward or backward as required, and retighten the set screw (R). In any case, when an unusually light tension is used, the tension on the spring (9) should be correspondingly light. The coils of the spring (9) should be oiled occasionally.

TO PLACE A NEW THREAD CONTROLLER IN POSITION. Remove the entire thread controller by taking out the screw (P) and release the spring (9) by removing the screw (O). (Be careful not to lose the small roller). Place the new spring, roller and screw (O) in their positions. Next put the entire thread controller on the face plate, taking care to slide the little tail, on the coil of the spring (9), into the notch in the stud over which the coil slides. Tighten screw (P). Oil the small roller occasionally.

To Position the Needle Bar

Loosen the wing nut (T, Fig. 11) and raise it to the top of the slot. When the wing nut (T) is in this position, the needle bar should not vibrate and the point of the needle should enter directly in the center of the slot in the needle plate. If the needle is at the right or left of the center, loosen the two screws (S) and move the needle bar to the right or left, until the needle is central in the slot, then securely tighten the two screws (S).

To Set the Needle Bar

The needle bar which is in the machine when shipped from the factory has upon it (about two inches from the bottom) two lines $1/8$ inch apart.

When the needle bar is at its lowest position, the upper mark should be just visible at the bottom of the needle bar frame.

TO SET A NEW NEEDLE BAR WHICH HAS NO MARK. Set the needle bar so that when it rises $1/8$ inch from its lowest position, the point of the hook will be at the center of the needle and about $3/32$ inch above the eye.

To Time the Hook

First - Move needle bar frame pitman connection slide wing nut (T, Fig. 11) up until there is no vibration of the needle bar.

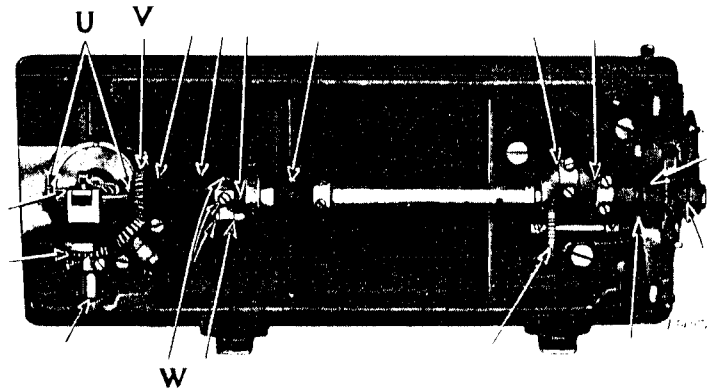


Fig. 12

Second - Tip the machine back and loosen the screws in hook driving shaft crank (W, Fig. 12) at the right of the hook so that the hook can be moved by turning hook driving bevel gear (V) with the fingers.

Third - Turn the balance wheel toward you until the needle bar has passed its lowest position and risen so that the lower mark on it is even with the needle bar frame.

Fourth - With your fingers turn hook driving bevel gear (V, Fig. 12) in its regular direction until the point of the hook passes the needle about 1/4 inch, then carefully and slowly push the hook backwards until the point of the hook is at the center of the needle and 3/32 inch above its eye and securely fasten the screws (W) in the crank, provided neither the needle bar nor hook has moved since stationed as directed, as there must be no lost motion between the heel of the hook and the hook driver when the machine is correctly timed.

The point of the hook should run as close to the needle on its widest throw, without touching it, as careful adjustment will permit.

To Remove the Hook from the Machine

Remove the hook race cap spring screw and spring (U, Fig. 12) from each side of the hook bracket, then remove the hook race cap and hook.

To Set the Hook so that the Point will Run Closer to the Needle on Zigzag Machines

Tip the machine back and remove the bobbin case. Turn the balance wheel and look through the hook for three hook bracket

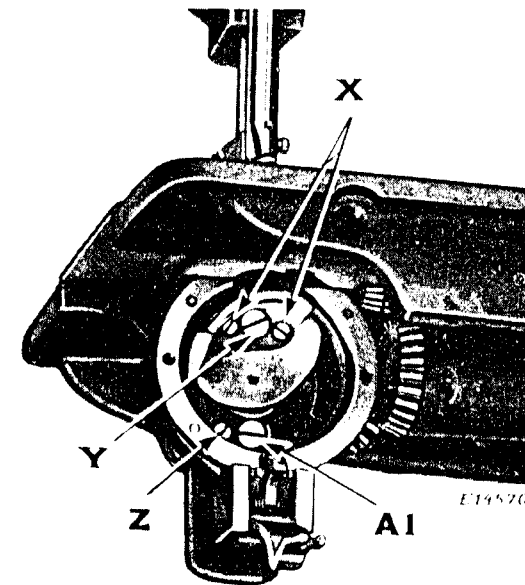


Fig. 13 Hook Bracket Adjustments
Hook and Bobbin Case removed

adjusting screws (X and Y, Fig. 13) near the top of the hook bracket and two (Z and A1) near the bottom; slightly loosen the lower and upper screws (A1 and Y), then carefully tighten the two screws (X), drawing the hook as close to the needle as desired and tighten both screws (A1 and Y) firmly. Be careful that the hook bracket is moved out squarely so that the hook will be as close to the needle when entering the inside loop as it is when entering the outside loop; if it is not, loosen one of the screws (X) and tighten the other to bring the hook bracket out squarely.

To Set the Point of the Hook Farther from the Needle

Loosen the screws (X and A1, Fig. 13) then turn the screw (Y) slightly inward until the point of the hook is the desired distance from the needle and tighten the screws (X and A1).

Hook Openings

To increase the openings between the hook driver and the hook to allow the thread to pass easily between them, slightly loosen the screws (A1 and Y, Fig. 13), turn inwardly the screw (Z) and tighten both the screws (A1 and Y). To reduce the openings, turn outwardly the screw (Z) and tighten the screws (A1 and Y). Verify the correctness of the timing before commencing to sew.

To Remove the Arm Shaft

Through the oil hole near the needle bar, loosen the set screw and remove the check and position screws from the take-up cam, remove the arm shaft bushing (front) position screw from the back of the arm, remove the set screws from the needle bar frame driving cam and detach the arm shaft connections, remove screw (D, Fig. 10), take out check screw at (C), loosen the position screw at (C), (exposed by the removal of check screw), loosen position screw (E), remove the balance wheel, the needle and presser bars; insert a light flexible rod through the large hole over the arm shaft connections, drive out the front bushing and draw out the arm shaft. When replacing the bushing, see that the oil hole for oiling the shaft is in line with the oil hole on the arm, and return the bushing position screw to its place. When a new bushing is used, drill the oil hole through into the shaft hole after the bushing is set in the arm. When setting the take-up cam, be sure to replace the position screw in the hole nearest to the presser bar when the screw holes are uppermost and tighten the position screw firmly down into the shaft, and replace the check screw over it. The end play of the arm shaft is taken up by means of the screw (D) in the end of the shaft at the balance wheel.

BALANCE WHEEL. In attaching the balance wheel to the shaft, the position screw should enter the groove in the shaft, otherwise the wheel will be out of balance and cause the machine to shake. Replace the check screw over the position screw at (C) and tighten screws (D and E).