SINGER
231-4

USE SINGER* OILS and LUBRICANTS

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

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The following is the correct lubricant for the 134w, 152 and 231 Machines:

TYPE D — MANUFACTURING MACHINE OIL, HEAVY GRADE

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.

18885

INSTRUCTIONS

FOR USING

SINGER*

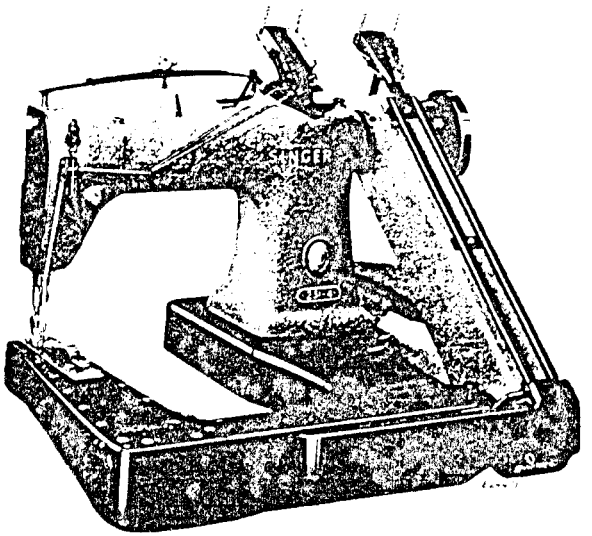
SEWING MACHINE

231-4

FEED - OFF - THE - ARM

TWO NEEDLES AND TWO LOOPERS

TWO-THREAD CHAIN STITCH



MACHINE 231-4

Special attention is called to the lubricating instructions on pages 3 and 4

THE SINGER MANUFACTURING COMPANY

*A Trademark of THE SINGER MANUFACTURING COMPANY

OILING THE MACHINE

For the lubrication of this machine, use "TYPE D" OIL, sold by Singer Sewing Machine Company. For description of this oil, see inside front cover of this book.

See "X-Ray" view of machine on **pages 6 and 7.**

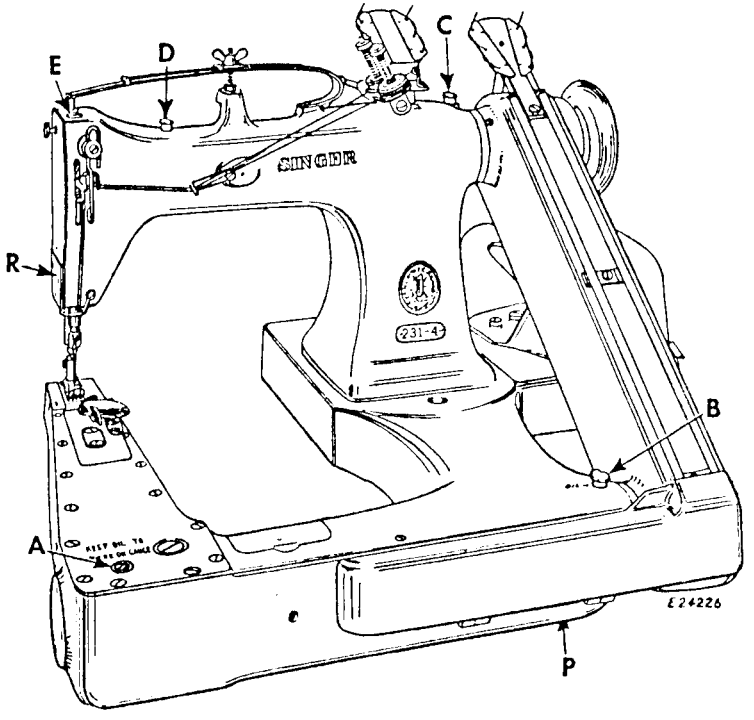


Fig. 2

All of the oil is drained from the cylinder arm reservoir before the machine is shipped from the factory, therefore it is absolutely necessary that the machine be thoroughly oiled according to the following instructions before it is started in operation:

1. After it is certain that the machine is set up so that its cylinder arm cover is level, lift out the gauge **A, Fig. 2** and fill the arm reservoir to the level of the mark on the gauge. Run the machine a few minutes, then wipe off the gauge and recheck the oil level. THIS RESERVOIR SHOULD BE FILLED ABOUT TWICE A WEEK OR OFTEN ENOUGH TO KEEP THE OIL LEVEL UP TO THE MARK ON THE GAUGE.

DESCRIPTION

FEED-OFF-THE-ARM MACHINE 231-4 has two needles and two loopers and makes the two-thread chain stitch for lap seam felling shirts, underwear, pajamas and similar tubular work in light and medium weight materials.

The machine is furnished in gauges from **3/32** to **3/8** inch, as ordered, in steps of **1/32** inch.

Length of stitch, **8** to **22** stitches to the inch.

A splash oiling system oils the feed and looper mechanism. The needle bar driving mechanism is oiled through a hollow shaft from an oil reservoir at the machine pulley end. See X-Ray View on **pages 6 and 7.**

CAUTION

After setting up, **do not start the machine,** not even to test the speed, **until it has been thoroughly oiled,** as instructed on **pages 3 and 4.**

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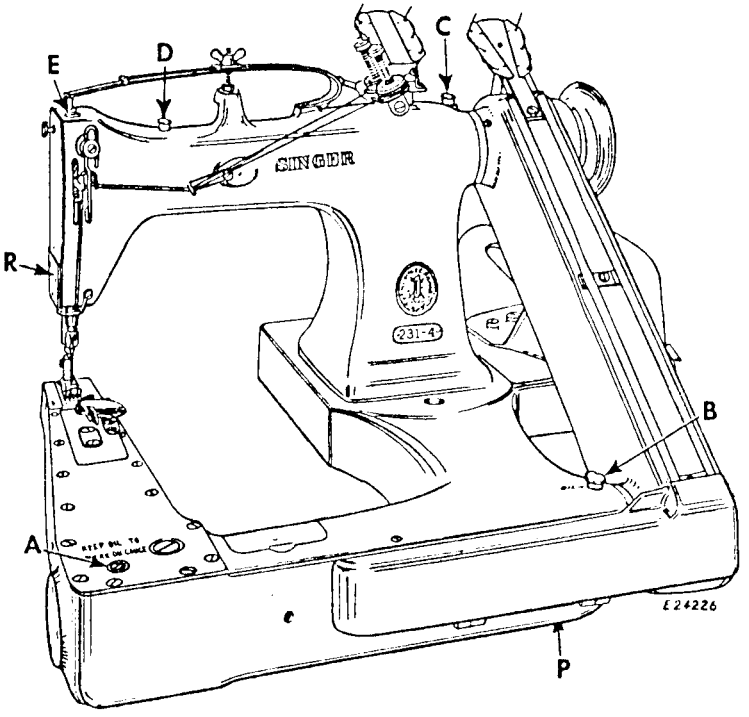

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2. Turn the machine pulley to bring the screw plug **F, Fig 3** to the top, remove this plug and fill the reservoir practically to the top. THE OIL LEVEL IN THIS RESERVOIR SHOULD NEVER BE ALLOWED TO GO BELOW THE HOLE **X, FIG. 3** AT THE CENTER OF THE ARM SHAFT. If the oil is down to the bottom of this hole, add oil before starting. Recheck the oil level, after running the machine a few minutes and add oil when necessary.

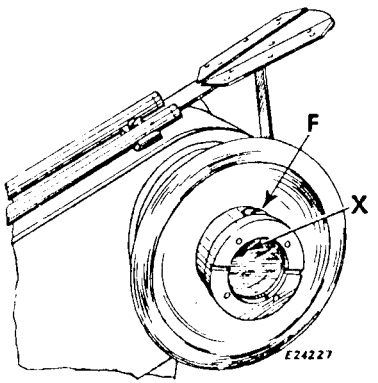

Fig. 3

3. Place about 5 drops of oil in each of the three cups **B, C and D, Fig. 2** which lubricate the ball bearings, and in the cup **G, Fig. 4** on the idler pulley underneath the machine pulley. DO THIS ABOUT ONCE A WEEK.

NOTICE: When the machine has stood idle for some time, put a few drops of oil in the top of the needle bar guide pin **E, Fig. 2** before starting the machine.

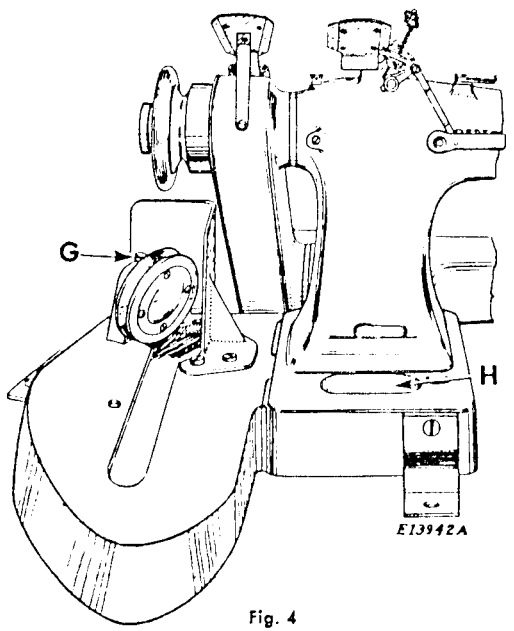

Fig. 4

OIL DRAIN. Surplus oil from the bearings drains into the wells at the rear of the base **H, Fig. 4** and behind the lower half of the face plate **R, Fig. 2,** at the head of the arm. These wells should be emptied by soaking out the oil with waste or similar material.

Oil which accumulates in the front of the arm under the rotary shaft should be drained out occasionally by removing the screw plug at **P, Fig. 2** in the bottom of the arm, to prevent oil from getting on the looper thread take-up.

NEEDLES

Needles for Machine 231-4 are of Class and Variety 149 X 1 in sizes 11, 14, 16, 17, 18 and 19.

The size of the needles to be used should be determined by the size of the thread, which must pass freely through the eyes of the needles. If rough or uneven thread is used, or if it passes with difficulty through the eyes of the needles, the machine cannot stitch perfectly.

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. 17, 149 x 1 Needles"

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

TO SET THE NEEDLES

Turn machine pulley over toward you until needle bar moves up to its highest point, and loosen the two set screws in the needle clamp. Place needles up into needle clamp as far as they will go, with the single continuous groove in each needle toward you, then tighten the two set screws.

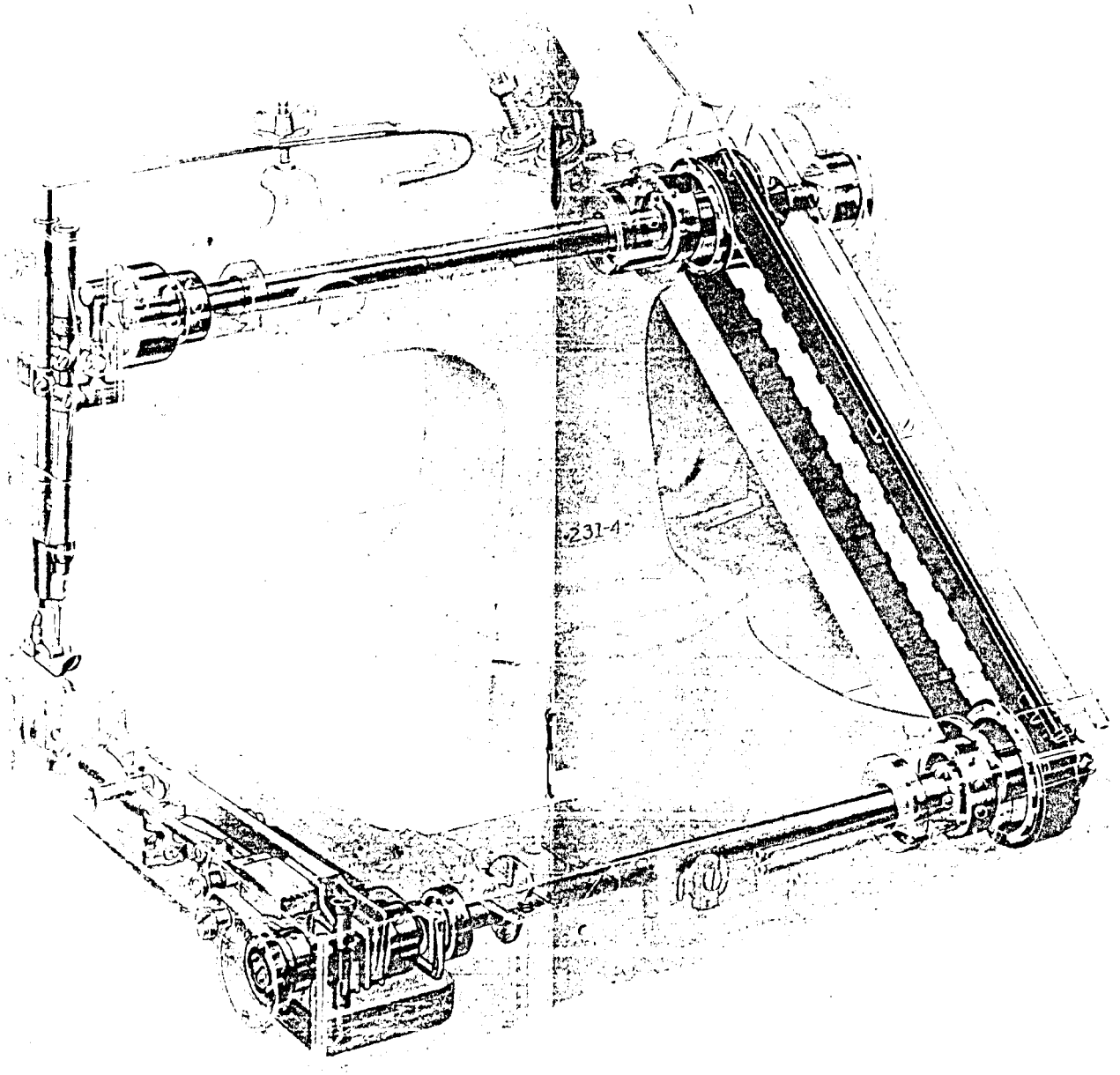

Fig. 5
"X-Ray" View of
SINGER Machine 231-4

TO THREAD THE REAR LOOPER, bring thread from spool **C1**, Fig. 6 on unwinder, down through hole **C2** in the thread guide bar,

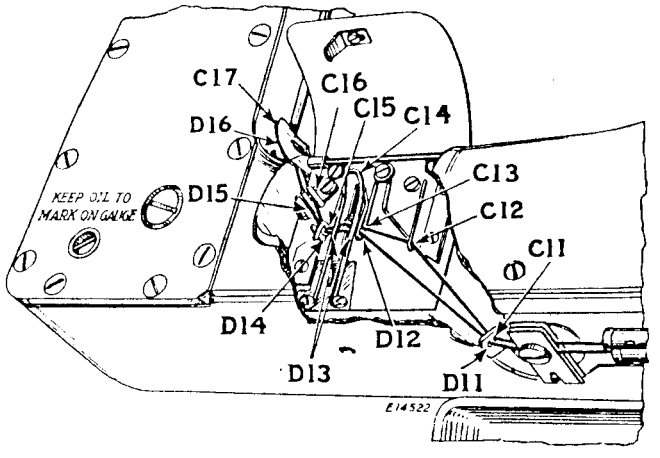

Fig. 11

then downward through each of the eyelets **C3, C4 and C5** in thread straightener, as shown in **Fig. 9**. Pass thread through ferrule at end of thread tube **C6**, out through hole at **C7**, then through hole at **C8** and through ferrule at lower end of thread tube, as shown in **Fig. 10**, allowing thread to slip through spiral slot into thread tube. In the same way, pass thread through upper horizontal tube **C9**, between second and third tension plates **C10**, back through rear eyelet **C11**, through hole in casting into wire guides **C12 and C13**, under take-up stripper **C14**, into guide **C15**, into rear slot **C16** and under wire guard, down behind the thread retaining plate **C17**, through thread tube **C19**, through rear hole **C20** in looper thread guide, through hole **C21** in heel of rear looper and from front to back through eye **C22** of looper.

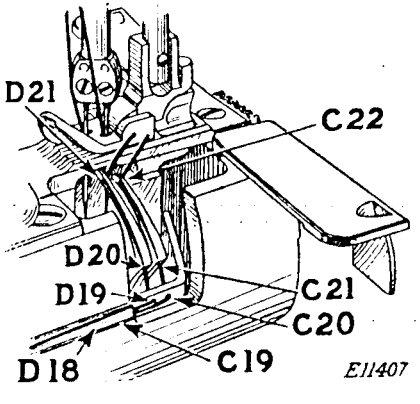

Fig. 12

Draw about two inches of thread through eye of each looper with which to commence sewing.

TO REGULATE THE PRESSURE ON THE MATERIAL

The pressure of the presser foot on the material should be just enough to strip the material from the needle, as the needle rises. Too great a pressure will interfere with the feeding. To increase the pressure, turn the wing nut **Q** downward. To decrease the pressure, turn the wing nut **Q** upward.

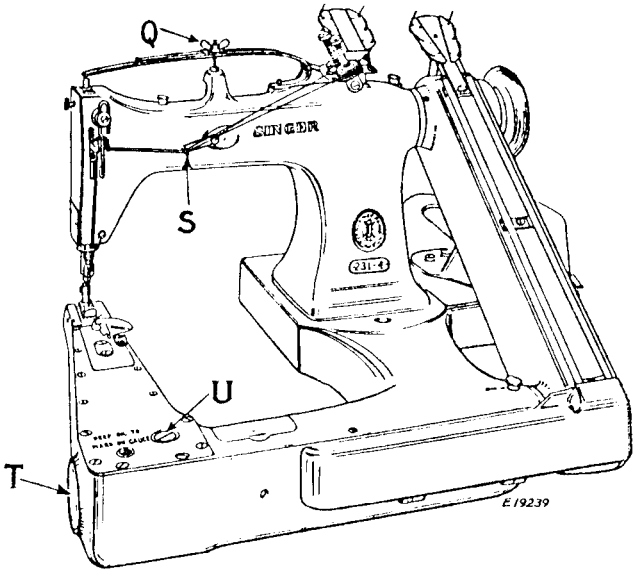

Fig. 13

Always use the **lightest** pressure possible to permit higher working speeds.

TO REGULATE THE TENSIONS

The tension on the needle threads is regulated by the thumb nuts above the tension discs at the top of the machine. The needle threads require sufficient tension to set the stitch properly in the goods.

The tension on the looper threads is regulated by turning the screw at the front of the looper thread tension plates **D10, Fig. 10** to the right for more tension or to the left for less tension. The looper threads should have only enough tension to control the thread.