

SINGER

17-22,17-23,17-25,17-31,17-33

USE ONLY **SINGER*** OILS and LUBRICANTS

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

The following are the correct lubricants for this machine:

TYPE B — MANUFACTURING MACHINE OIL, HEAVY
GRADE

When a stainless oil is desired, use:

TYPE D — MANUFACTURING MACHINE OIL, STAIN-
LESS, HEAVY GRADE

OTHER **SINGER** LUBRICANTS

TYPE E — STAINLESS THREAD LUBRICANT

For lubricating the needle thread of sewing machines for
stitching fabrics or leather where a stainless thread lubri-
cant 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 or in 55 gallon drums.

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.

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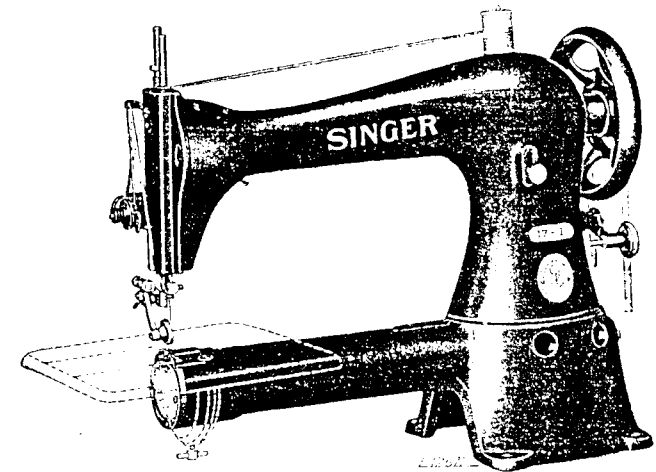
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INSTRUCTIONS

FOR USING

SINGER*

SEWING MACHINES



OF

CLASS 17

EXCEPT MACHINES 17-22, 17-23, 17-25, 17-31 AND 17-33

CYLINDER BED OSCILLATING LONG BEAK SHUTTLE

*A Trade Mark of

THE SINGER MANUFACTURING COMPANY

TO ALL WHOM IT MAY CONCERN:

The improper placing or renewal of the Trade Mark "SINGER" or any other of the Trade Marks of The Singer Manufacturing Company (all of which are duly Registered Trade Marks) 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 **SINGER*** PARTS AND NEEDLES IN **SINGER** MACHINES

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

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 17, described in this book, have a long beak shuttle and a cylinder bed and are successfully used in the manufacture of shoes and a large variety of articles made of leather, which are irregularly shaped, such as horse boots, saddles, suit cases, fine leather bags, portfolios, pocket books, music rolls, trusses, etc., all of which are conveniently handled on the cylinder bed.

Machine 17-1 is intended for stitching the quarter over the vamp of shoes, and is also used for stitching leather waist belts, music rolls, footballs, etc. It has a drop feed across the cylinder at the left of the needle. It is also fitted with a roller presser.

Machine 17-2 is used for shoe work, also for closing the seams of filled shot bags, sewing buckram on jean pants, etc. It has a drop feed across the cylinder at the right of the needle. It is also fitted with a roller presser.

Machine 17-5 is adapted for stitching felt shoes, horse boots, musical instrument cases, gun cases, etc., the cylinder being reduced in diameter for a short distance immediately at the right of the throat plate, to facilitate the stitching of irregularly shaped articles which would be difficult to stitch on any other machine. The stitching mechanism is located at the extreme outer end of the cylinder bed, and this enables operators to stitch close to the edge of the work. Work having a cup-shaped surface is easily handled. This machine has a drop feed across the cylinder on both sides of the needle.

Machine 17-8 is intended for general work in cloth or leather where the combined advantages of a cylinder bed, feed across the cylinder and alternating pressers are required. It is useful for stitching a wide range of articles of tubular or other shapes, and is adapted for binding sandals, slippers, shoe tongues, etc., the binders being furnished, on order, at an additional charge. A sample of the binding and material to be bound should accompany orders for binders.

Machine 17-11 is intended for use in the manufacture of leather mittens, razor strops, music rolls and various other leather articles where it is desired to stitch and trim the edge of the leather at one operation. The adjustable vertical edge trimmer can be readily adjusted to trim the work from $\frac{5}{128}$ to $\frac{3}{32}$ inch from the line of stitching, in steps of $\frac{1}{128}$ inch. It has a drop feed across the cylinder and is fitted with a roller presser.

Machine 17-12 is designed for stitching horse boots, musical instrument cases, gun cases, trusses, etc. This machine has no under feed, the movement of the material being effected by a special device used in place of the ordinary presser foot, which acts on the top surface of the work and sets up the stitch, giving the work a superior finish. The upper feed moves the work across the cylinder, and the machine can be furnished with presser feed points for either $\frac{1}{4}$, $\frac{1}{5}$, $\frac{1}{8}$, $\frac{1}{10}$ or $\frac{1}{12}$ inch "set" stitch as desired. Unless otherwise ordered, the machine will be sent out with presser feed point for $\frac{1}{8}$ inch "set" stitch.

Machine 17-24 is especially adapted for use in the manufacture of fine leather bags, bicycle saddles, bicycle tool cases, footballs, leather hat cases, leather mittens, trusses, suit cases, etc. This machine has no under feed, the movement of the material being effected by a special device used in place of the ordinary presser foot, which acts on the top surface of the work and sets up the stitch, giving the work a superior finish. The upper feed moves the work across the cylinder, and the machine can be furnished with presser feed points for either $\frac{1}{4}$, $\frac{1}{5}$, $\frac{1}{8}$, $\frac{1}{10}$ or $\frac{1}{12}$ inch "set" stitch as desired. Unless otherwise ordered, the machine will be sent out with the presser feed point for $\frac{1}{8}$ inch "set" stitch.

Machine 17-30 has a reversible drop feed across the cylinder and is fitted with a special throat plate and a narrow presser foot which particularly adapt it for stitching end pieces or gussets into leather hand bags, pocketbooks, etc.

Machine 17-32 is equipped with a disc balance wheel and a counterbalanced arm rotary shaft. It is designed for stitching edges and undertrimming linings of pumps, eyelet ties, blucher oxford shoes, etc., and other leather articles at one operation. The machine is fitted with a horizontal under-trimming attachment which automatically trims the lining from under the edge of the shoe upper while it is being stitched, the blade of the trimming knife being set at an angle so that none of the lining is visible underneath after trimming. The machine has a drop feed across the cylinder and is fitted with a roller presser.

Machine 17-41 has a drop feed across the cylinder and is fitted with a roller presser. It also has a reversible feeding mechanism which makes it possible to feed the work forward or backward, as desired, enabling the operator to tack the ends of seams, etc. It is designed for use in the manufacture of portfolios, pocket-books, caps and other irregularly shaped leather articles which cannot be conveniently stitched on a flat bed machine.

Speed

The following list gives the maximum speed recommended for the individual Machines of Class 17:

MACHINE	STITCHES PER MINUTE
17-1	1200
17-2	1200
17-5	800
17-8	1200
17-11	1200
17-12	800
17-24	800
17-30	1200
17-32	1800
17-41	1200

These machines should be run slower than the maximum speed until the parts which are in movable contact have become glazed by their action upon each other. When the machines are in operation, the balance wheel should always turn over toward the operator.

To Oil the Machine

When the machine is received from the factory, it should be thoroughly cleaned and oiled. Apply oil to all oil holes and all parts which are in movable contact. Use "TYPE B" or "TYPE D" OIL, sold only by Singer Sewing Machine Company. For description of these oils, see inside front cover. When the machine is in continuous use, it should be oiled at least twice each day.

There are oil holes in the arm as follows: Seven in the upper surface, three of them near the arm head, three near the spool pin and one near the balance wheel, one in back of arm head for oiling the take-up hinge and its cam and roller. There is a hole in the face plate through which the ends of the needle bar link can be oiled, but it is advisable to take off the face plate occasionally and to clean out the space inside and oil the parts with fresh oil. The round cover on the back of the arm should be turned up and parts inside lubricated.

There is an oil hole near the left hand end of the cylinder bed for oiling the bearings of the oscillating shuttle shaft, and three large openings in the base through which to oil the bearings of the parts located inside.

Apply a drop of oil to the shuttle bearing in the shuttle race each time a bobbin is replaced.

Needles

Needles for Machines of Class 17- are of the following Class and Variety Nos.:

MACHINES	CLASS AND VARIETY NOS. OF NEEDLES	MACHINES	CLASS AND VARIETY NOS. OF NEEDLES
17-1	16 x 2	17-32	16 x 46
17-2	16 x 2	17-41	16 x 2
17-5	16 x 64		
17-8	16 x 1 or 16 x 2		
17-11	16 x 2 or 16 x 22		
17-12	16x64		
17-24	16 x 64		
17-30	16 x 2		

Description of Needles

CLASS AND VARIETY NOS. OF NEEDLES	STYLE OF POINT	SIZES
16 x 1	Cloth	7, 8, 9, 10, 11, 12, 13, 14, 16, 17, 18, 19, 21, 22, 23, 24, 25
16 x 2	Leather	7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 21, 22, 23, 24, 25
16 x 22	Leather	19, 21, 22, 23, 24, 25
16 x 46	Leather	9, 10, 11, 12, 13, 14, 16, 17, 18, 19, 21, 22, 23, 24
16 x 64	Leather	9, 11, 12, 13, 14, 16, 17, 18, 19, 21, 22, 23, 24, 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. If rough or uneven thread is used, the successful operation of the machine will be interfered with.

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

The following is an example of an intelligible order:

“100 No. 14, 16 x 2 Needles” (if for leather.)

“100 No. 14, 16 x 1 Needles” (if for cloth.)

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

Relative Sizes of Needles and Thread

ROUND POINT NEEDLES, FOR CLOTH	WEDGE AND TWIST POINT NEEDLES FOR LEATHER WORK
11..... { 80 to 100 Cotton OO and O Silk	9..... OOO and O Silk
14..... { 60 to 80 Cotton A Silk	11..... A and B Silk
16..... { 40 to 60 Cotton B and C Silk	14..... C and D Silk
18..... { 20 to 40 Cotton D and E Silk	16..... { 40 to 60 Cotton D and E Silk
19..... { 60 to 80 Linen 20 to 24 Cotton	18..... { 40 to 60 Linen EE Silk
21..... { 40 to 60 Linen or very coarse Cotton	19..... 35 to 40 Linen
22..... 24 to 40 Linen	21..... 24 to 35 Linen

Thread

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

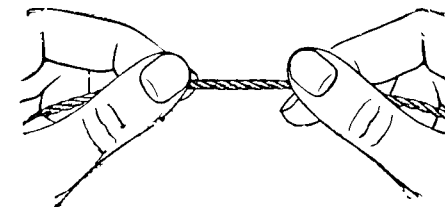


FIG. 2. HOW TO DETERMINE THE TWIST

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.

To Remove the Bobbin

Slightly raise the back edge of the cap at the end of the cylinder bed so that it can be slipped over the head of the screw, then let

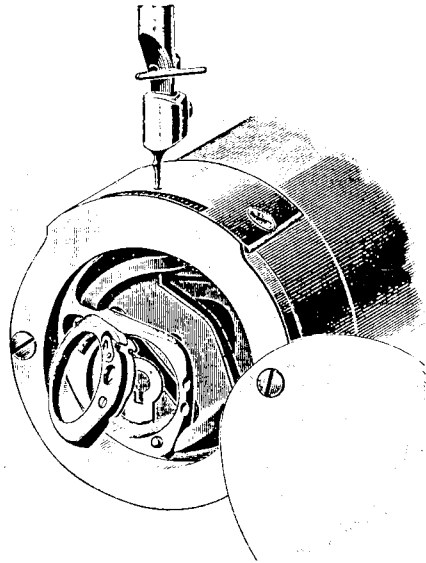


FIG. 3. BOBBIN REMOVED FROM MACHINE

the cap hang by the hinge screw, as shown in Fig. 3. Turn the balance wheel over toward you until the needle bar is at its lowest point. Pull out the hinged portion of the shuttle and remove the bobbin.

To Wind the Bobbin

Place the spool of thread on the spool pin and wind the end of the thread around the bobbin a few times. Then place the bobbin

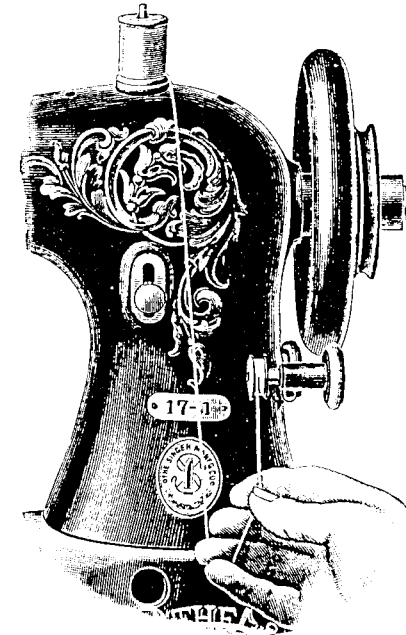


FIG. 4. WINDING THE BOBBIN

on the bobbin winder spindle and push the bobbin winder up until its rubber ring presses against the rim of the balance wheel. Raise the roller presser or presser foot and run the machine the same as when sewing, at the same time guiding the thread with the finger as shown in Fig. 4, so as to wind the thread evenly on the bobbin. When sufficient thread has been wound upon the bobbin, push the bobbin winder away from the balance wheel.

To Wind the Bobbin on Machine 17-32

Attach the bobbin winder to the table in front of the machine driving belt so that the pulley will engage the belt when the bobbins are to be wound.

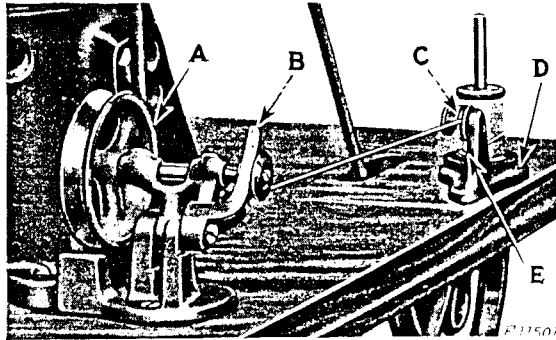


FIG. 5. WINDING THE BOBBIN

The bracket (D) with the spool pin and tension discs should be attached to the rear side of the table so that the tension discs (C) are in line with the bobbin when the bobbin is pushed as far as it will go onto its spindle on the bobbin winder.

The above illustration shows the complete bobbin winder properly attached to the table in connection with Machine 17-32.

Push the bobbin as far as it will go onto the bobbin winder spindle. Place the spool of thread on the spool pin and pass the thread through the guide (E), then back, up and between the tension discs (C), and forward to the bobbin. Wind the end of the thread around the bobbin a few times. Push the bobbin winder pulley (A) against the machine driving belt by lifting up and pushing the latch (B) against the bobbin until the pulley is held in place against the belt. Operate the machine and when the bobbin is fully wound the pulley will be automatically disengaged from the machine driving belt, thus stopping the winding of the bobbin.

To Replace the Bobbin and Thread the Shuttle

With the needle at its lowest point, open the shuttle cap, hold the bobbin in the right hand, the thread drawing on the bottom

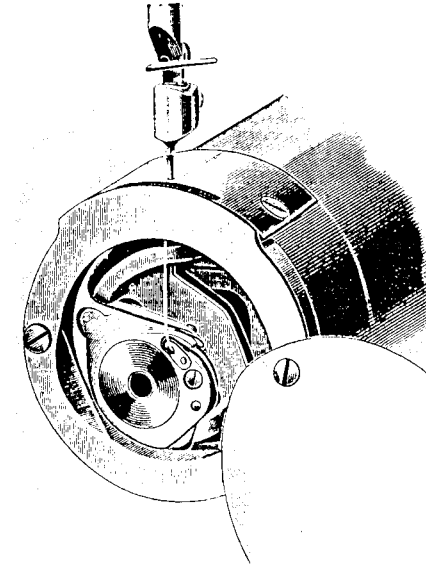


FIG. 6. BOBBIN REPLACED AND SHUTTLE THREADED

from the left toward the right and place the bobbin in the shuttle cap, then close the cap. Draw the thread into the slot in the edge of the cap and into the delivery eye, as shown in Fig. 6. Allow about three inches of thread to hang free from the shuttle.

To Set the Needle

Turn the balance wheel over toward you until the needle bar moves up to its highest point. Loosen the screw in the needle clamp and put the needle up into the clamp as far as it will go, with the long groove toward the left and the eye of the needle directly in line with the cylinder bed, then securely tighten the needle clamp screw.

To Thread the Needle

Place the spool of thread on the spool pin at the top of the machine, or if a thread unwinder is used, pass the thread through

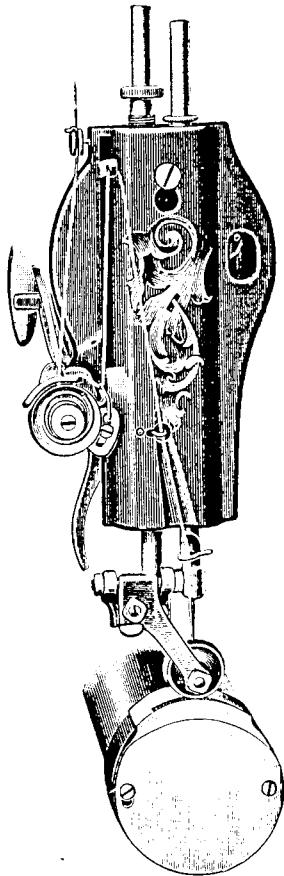


FIG. 7 THREADING THE NEEDLE

the hole near the upper end of the spool pin, through the thread retainer at the back of the upper part of the machine, down and under from back to front between the tension discs, over the wire guide above the tension discs, into the hook of the thread take-up spring, up and from back to front through the hole in the thread take-up lever, down through the wire thread guide at the front of the face plate, into the thread guide at the lower end of the needle bar and from left to right through the eye of the needle. Draw about two 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 foot or roller presser.

To Commence Sewing

Place the material beneath the roller presser or presser foot, lower the presser bar and commence to sew, turning the balance wheel over toward you.

To Remove the Work

Let the take-up lever rest at its highest point, raise the presser bar, draw the work back and cut the threads close to the goods, leaving about three inches of thread with which to re-commence sewing.

Tensions

The needle and bobbin threads should be locked in the centre of the thickness of the material, thus:



FIG. 8. PERFECT STITCH

If the tension on the needle thread is too tight, or if that on the bobbin thread is too loose, the needle thread will lie straight along the upper surface of the material, thus:



FIG. 9. TIGHT NEEDLE THREAD TENSION

If the tension on the bobbin thread is too tight, or if that on the needle thread is too loose, the bobbin thread will lie straight along the under side of the material, thus:



FIG. 10. LOOSE NEEDLE THREAD TENSION

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 face plate. To increase the tension, turn this thumb nut over toward you. To decrease the tension, turn this thumb nut over from you.

The tension on the bobbin thread is regulated by the screw near the delivery eye on the outside of the shuttle. To increase the tension, turn this screw over toward you. To decrease the tension, turn this screw over from you.

When the tension on the bobbin thread has been once properly adjusted, it is seldom necessary to change it as a correct stitch can usually be obtained by varying the tension on the needle thread.

To Regulate the Length of Stitch

(EXCEPT ON MACHINE 17-30 AND 17-41)

The length of stitch is regulated by the thumb screw in the slot on the front of the upright part of the arm. To lengthen the stitch, loosen this thumb screw and move it downwardly. To shorten the stitch, loosen the thumb screw and move it upwardly. When the desired length of stitch is obtained, tighten the thumb screw.

To Regulate the Pressure on the Material

The pressure on the material is regulated by the thumb screw on the top of the machine. To increase the pressure, turn this 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.

To Engage and Disengage the Trimmer on Machine 17-32

(SEE FIG. 11)

To engage the trimmer, swing the lever (E) to the right and raise its end so that the pin (D) can enter the slot in the lever as shown in Fig. 11.

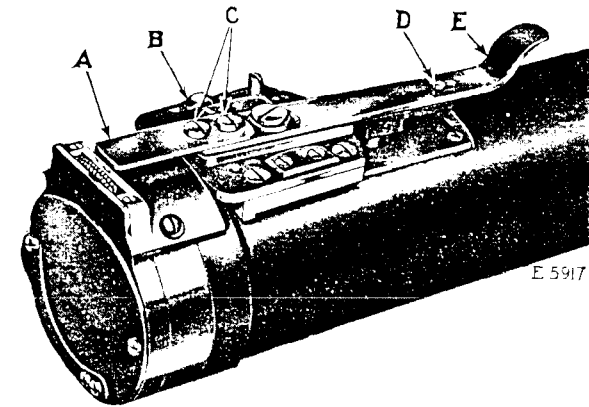


FIG. 11. ADJUSTMENTS ON TRIMMER

To disengage the trimmer, raise the end of the lever (E) and swing it toward the left until the trimmer is locked out of action by the spring (B).

To Adjust the Trimmer on Machine 17-32

(SEE FIG. 11)

The knife (A) should be adjusted so that its cutting edge bears lightly against the side of the throat plate. The sidewise adjustment of the knife is obtained by loosening the two screws (C) and moving the knife to the right or left, as may be required, after which securely tighten the two screws (C).

To Reverse the Direction of Feed in Machines 17-30 and 17-41

Machines 17-30 and 17-41 can be adjusted to feed the work forward or backward, as desired, by loosening the thumb screw (H, Fig. 12) and moving the lever (G, Fig. 12) up or down in the bracket at the front of the machine.

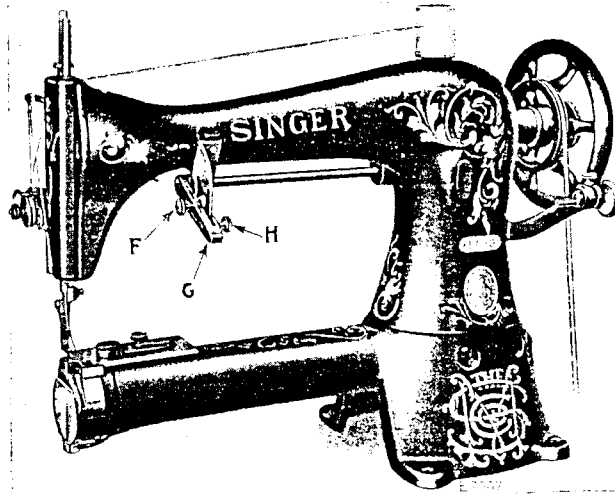


FIG. 12. MACHINE 17-30

Machine 17-30: To feed the work away from you, raise the lever (G) to its highest point. To feed the work toward you, move the lever (G) down to its lowest point. When the lever is set in the desired position, securely tighten the thumb screw (H).

Machine 17-41: Move the lever (G) down to its lowest point to feed the work away from you, or move the lever (G) up to its highest point to feed the work toward you. When the lever (G) is set in the desired position, securely tighten thumb screw (H).

To Regulate the Length of Stitch on Machines 17-30 and 17-41

Loosen the thumb screw (F, Fig. 12) in the slotted lever (G, Fig. 12) and move it forward or backward until the desired length of stitch is obtained, then securely tighten the thumb screw (F).

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