Description:

1. Stitch Regulator
2. Tacking Lever
3. Needle Plate
4. Slide Plate
5. Presser Foot
6. Needle Bar
7. Tension Regulator (upper thread)
8. Thread Take-up Lever
9. Pressure Regulator
10. Thread Guide
11. Spool Pin
12. Pin & Needle Holder
NEEDLE

Model 105 uses standard needles 16 x 257. (catalog 2270)

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 of the thread

Hold the thread as shown above. Twist it between the thumb and forefinger of your hands. If left twist, the strands will wind tighter, if right twist, the strands will unwind.
1. Turn the handwheel toward you until the needle (10) reaches its highest point

2. Lead the thread through the hole (2) of the spool pin and the three holes of the arm thread guide (Z), starting from the top hole.

3. Run the thread downward between and around the tension discs (3) from right to left.

4. Run the thread upward into the cock of the thread take-up spring (4) and down again under the slack thread regulator (5) from right to left.

5. Pull the thread up, running its end through the eye of the take-up lever (7) from right to left.

6. Pull the thread through the guard (6).

7. Now run the thread downward through the thread guides (g) (6).

8. Lead the thread through the needle bar thread guide (10).

9. Now run the end of the thread through the eye of the needle from left to right.

10. Pulling it out two or three inches.

FIG. 3

THREADING THE MACHINE
**WINDING THE BOBBIN**

1. Push the bobbin on the bobbin winder spindle (7) as far as it will go. (fig. 4)
2. Pass the thread from the bobbin and wind from below in clockwise direction several times around the bobbin.
3. Bring the thread toward the back of the bobbin, and wind it through the eye of the tension discs. (2)
4. Pull the thread from the bobbin case downward through the hole of the tension discs (3).
5. When the latch is held open, the bobbin will be retained in the bobbin case. Release of the latch and turning the bobbin case.
6. While the latch is held open, the bobbin will be retained in the bobbin case. Release of the latch and turning the bobbin case.

**REMOVING THE BOBBIN CASE**

1. Turn the handwheel toward you until the needle reaches its highest point.
2. Open the slide plate by pulling it to the rear.
3. With the left thumb and forefinger placed under the bed, open the hinged latch (L) (fig. 5) at the front of the bobbin case.
4. Grasp the latch and pull the bobbin case and the bobbin from the rotary hook.
5. While the latch is held open, the bobbin will be retained in the bobbin case. Release of the latch and turning the bobbin case.
6. If the thread does not wind evenly on the bobbin, adjust the position of the bobbin, which is wound on the bobbin.

**TENSION BRACKET BY MOVING IT TO THE RIGHT OR LEFT AFTER LOOSING THE SCREW**

7. Adjustment screw (6) can be turned in or out to increase or decrease the tension.
8. If the thread does not wind evenly on the bobbin, adjust the position of the bobbin, which is wound on the bobbin.
9. When the thread is wound on the bobbin, loosen the tension by turning the tension bracket by moving it to the right or left after loosening the screw.
THREADING THE BOBBIN CASE

1) Hold the bobbin between the thumb and forefinger of your right hand and pull out a length of two or three inches of thread.

2) Holding the bobbin case in your left hand, turn the open side up and place the threaded bobbin into it. (Fig. 5-1)

3) With the right hand guide the thread into the slot in the edge of the bobbin case. (Fig. 5-2)

4) Then pull the thread to the left, under the tension spring and into the delivery eye. (Fig. 5-3)

In order to keep the bobbin from dropping out of the case when it is turned with the open side down, always hold the hinged latch at the front of the bobbin case open.

INSERTING THE BOBBIN CASE

1) Take the thread bobbin case by the latch (L) and place it on the center stud (C) (Fig. 6) of the bobbin case holder.

2) Release the latch and press the bobbin case onto the center stud until the latch catches the undercut thereon with a click that can be heard.

3) Permit two to three inches of the bobbin thread to hang down freely. Be sure to push the slide plate to the right before starting to sew.
INSERTING A NEW NEEDLE

1) Turn the handwheel toward you until the needle bar reaches its highest point.

2) Loosen the set screw in the needle clamp at the bottom end of the needle bar remove old needle and push a new needle up into bar as far as it will go.

3) Tighten the needle set screw securely.

Long groove in the needle must face toward the left and the eye must be in line with the arm of the machine.

TO COMMENCE SEWING

1) Holding the loose end of the upper (needle) thread in your left hand, turn, the handwheel toward you with the right hand until the needle moves down and up again to its highest point, thus catching the lower (bobbin) thread.

2) Now pull the end of the upper thread you are holding and the bobbin thread will be brought up with it through the needle hole in the needle plate, as shown in Fig. 7.

3) Place both ends of the thread back under the presser foot.

4) Place the fabric to be sewn beneath the presser foot and lower the foot upon it.

5) Then start the machine.

TO REMOVE THE WORK

1) Raise the needle bar to its highest point, lift the presser foot and draw the fabric back and to the left.

2) Cut the ends of the threads a few inches long from the needle.
Thus:

If tension on the lower thread is greater than on the upper thread, the lower thread will lie straight along the underside of the fabric.

Thus:

On the upper thread is greater than on the lower thread, it will lie straight along the upper surface of the fabric.

Thus:

If the tension on either thread is stronger than on the other, imperfect stitching will be the result. If the tension is equal at the center of the fabric, the tension on the upper and lower threads should be equal so as to lock both threads in place.

REGULATING THE TENSION
Regulating the Pressure of the Presser Foot

The pressure of the presser foot should be adjusted according to the type of material to be sewn. The heavier the material, the heavier the pressure; the lighter the material, the lower the pressure. The pressure is regulated by the presser foot on the material to be sewn.

Increase the pressure if more pressure is required to feed the material properly. Do not employ more foot pressure than is required to feed the material.

![Diagram of presser foot adjustment]

A. Tension of the upper (needle) thread
B. Tension of the lower (bobbin) thread
C. Screws
D. Screw
E. Tension spring (see Fig. 9). Use the small driver to tighten the screw slightly to increase the tension or loosen it to slacken the tension.

1. Turn the tension screw (N) (Fig. 8) on the tension device to the right to increase or to the left if you desire to decrease it. Be certain that the presser foot is let down and not in lifted position.
2. Turn the tension stud (S) to the right to make the check spring (C) more taut and to the left if you desire to slacken the tension. If you desire to have the tension adjusted before sewing, the machine is correctly adjusted before leaving the factory to make a perfect stitch.

Fig. 9
Fig. 10
Fig. 8

Increase
To retain spare needles or pins, the pin and needle holder (H) (Fig. 11) contains a magnet. It is convenient for storage.

**PIN AND NEEDLE HOLDER**

4. To do tacking for the purpose of locking the ends of seams, rapidly depress the lever (T) slightly as the dial (D) is being turned clockwise.

3. When shortening the stitch length, it will be found of advantage to move in upward direction. Length is decreased. It can be noticed that the tacking lever (T) slowly turns the ideal counter clockwise will gradually decrease the stitch length until the maximum is reached when number „S“ is on top. As the stitch length is increased by the turning dial (D) at the front on the machine (Fig. 11).

1. When number „0“ on the dial appears uppermost, the machine does not feed.

**HOW TO ADJUST THE LENGTH OF STITCH AND TO DO TACKING**
3) After adjustment, tighten screw (A) and
the height of the presser bar.

2) Remove cover (A) from the face plate.

1) Loosen the regulator screw (R) (Fig. 13-1) until the pressure of the spring is
completely released.

To accomplish this:

When the height of the presser bar needs to

ADJUSTING THE HEIGHT OF THE PRESSER BAR

Fig. 13-1

Fig. 12

1. Loosen the screw (S) and adjust the needle bar to its lowest point by turning the hand wheel.

2. Loosen the screw (S) (Fig. 12) and adjust the needle bar so that the upper presser foot sitting is aligned with the face plate lever. Lower the presser bar to the face plate level by loosening the face plate screws and raise the needle bar to the proper height for perfect sewing performance.

ADJUSTING THE HEIGHT OF THE NEEDLE BAR
MOUNTING AND REMOVING THE HOOK

1) Remove the needle plate, bobbin case and needle.
2) Remove the hook retainer (2) by loosening the screw (1).
3) Loosen set screws (3).
4) Raise the feed bar (4) to its highest position by turning the hand wheel.
5) Turn the hook to place it in the position as shown in Fig. 14.
6) Pull out the hook, turning it back and forth until it becomes free from its shaft.
7) To assemble the hook to the machine follow the above steps in reverse order.
TIMING THE HOOK

1) Remove the face plate, needle plate, feed dog and slide plate.

2) Insert new needle.

3) Turn the handwheel towards you until the needle reaches the lowest point of its travel. Continue until on its rise the lower one of the timing marks on the needle bar reaches the bottom end (E) of the needle bar bushing. (Fig. 15)

4) When the needle bar is in this position, point (P) of the rotating hook (Fig. 16) should be at the center of the needle.

In case the hook should not be timed accurately, loosen its set screws (3) (Fig. 14), adjust until the point of the hook is at the center of the needle. Be sure to tighten the three set screws. Furthermore, the hook should be set as close as possible to the needle, but must never touch it. Clearance between the hook point and the needle should be equal to the thickness of a postal card.
TO OIL THE MACHINE

1) To assure smooth operation and durability make sure of cleaning and oiling the main parts of the machine.

2) Use sewing machine oil only.

3) The parts to be oiled are marked with the arrows as shown in Fig. 17. In the arm of the machine part needs not to be oiled because of a centralized lubricating system.
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Use only exact parts number for ordering. Be sure indicate all digits and letters as indicated in listing.
Do not use position number from illustration for ordering.