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Buying a Sewing Machine

The sewing machine you buy depends on how much sewing you have to do and how much money you want to pay for it. Before you buy become familiar with different types of machines and learn how they operate.

Look for easily adjusted tension and a balanced stitch. Machines designed for home sewing usually make the lock stitch. There are two threads; the upper one is fed from a spool, the lower one from a bobbin. To make such a stitch the upper and lower tensions must be properly balanced. If the tensions are not well adjusted, loops will form, or one of the threads will be flat on the surface of the cloth. The ease with which correct adjustment of the tension can be made is important. Some manufacturers claim an automatic upper tension for their machines. Practice shows that tension has to be regulated from time to time. A numbered tension regulator is helpful, as it simplifies this adjustment.



BOTH TENSIONS CORRECT



TIGHT UPPER TENSION



TIGHT LOWER TENSION

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544.3
.N9
A8
NO. 147

Prepared by:
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Extension Clothing Agent

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A8
NO. 147

EXTENSION SERVICE
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CIRCULAR

147

Remove the plate covering the bobbin of a fully threaded machine and see how the stitch is made and the type of bobbin that is used.

Determine if the machine is a:

Vibrator

The vibrator type has a long shuttle and a long bobbin, vibrating back and forth. This type of shuttle is difficult to counter-balance, and at higher speeds shakes or vibrates. It may be noisy. A vibrator machine is best operated by a foot treadle.

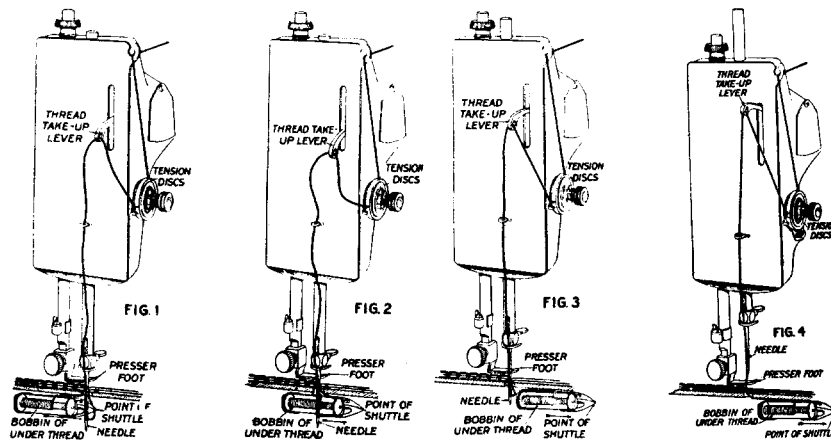


Fig.1 shows the first stage in stitch formation. The thread leading to the needle is loosened, because the thread take-up lever has begun its descent, the needle, after having descended to its lowest point, has been slightly raised and a loop of thread is thus formed which is immediately entered by the point of the shuttle.

Fig.2 shows the second stage. The shuttle containing the bobbin of under thread has fully entered the loop of needle thread, sufficient enlargement of the loop having been permitted by the descent of the thread take-up lever.

The shuttle travels to and fro in a carrier to which it is not fastened, but by which it is held in position. During the forward movement of the shuttle the loop of needle thread slips between the shuttle and the carrier, then passes out between the heel of the shuttle and the rear part of the carrier. The shuttle thread is thus enclosed in the loop of needle thread and both threads are then drawn up by the action of the thread take-up lever.

Fig.3 shows the third stage. The shuttle has passed through the loop of needle thread, the shuttle thread has been enclosed by the needle thread, and the thread take-up lever is being raised to tighten the stitch.

Fig.4 shows the stitch completed. The thread take-up lever has been raised to its highest point, drawing the needle thread, together with the shuttle thread, into the middle of the fabric, the two threads now being locked. The tension on the needle thread is regulated by the circular tension discs shown in the illustrations, and the tension on the under thread is regulated by a spring in the shuttle.

The oscillator is smoother acting than the vibrator, but it too, produces vibrations. Since the shuttle is smaller, and the distance travelled is less, the oscillator type is easier to counter-balance than in the vibrator.

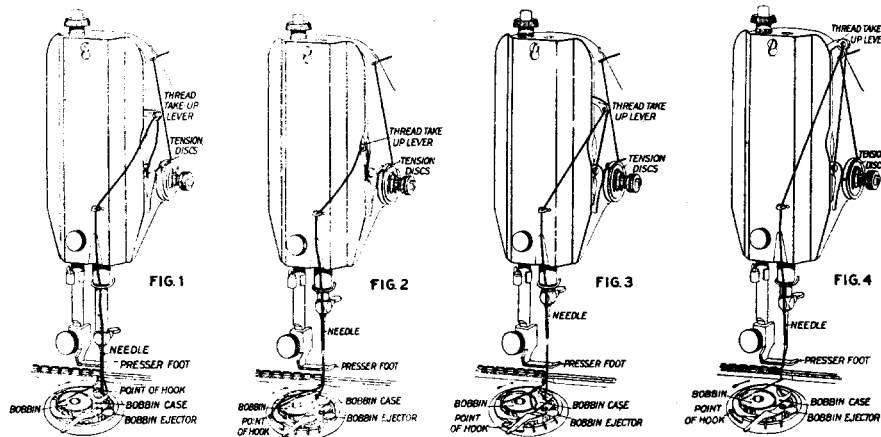


Fig.1 shows the first stage in stitch formation. The thread leading to the needle is loosened, because the thread take-up lever has begun its descent; the needle, after having descended to its lowest point, has been slightly raised and a loop of thread is thus formed which is immediately entered by the point of the hook.

This type of hook makes part of a revolution during the beginning of each stitch, the direction being indicated by the arrows in Figs. 1 and 2 and during the completion of the stitch the direction of the hook is reversed as shown by the arrows in Figs. 3 and 4. The hook oscillates around the bobbin case, which is held stationary.

Fig.2 shows the second stage. The loop of the needle thread has been taken by the point of the hook and is being passed around the bobbin case containing the bobbin of under thread, sufficient enlargement of the loop having been permitted by the descent of the thread take-up lever.

Fig.3 shows the third stage. The under thread has been enclosed by the needle thread and the thread take-up lever is being raised to tighten the stitch.

Fig.4 shows the stitch completed. The thread take-up lever has been raised to its highest point, drawing the needle thread, together with the under thread, into the middle of the fabric, the two threads now being locked. The tension of the needle thread is regulated by the circular tension discs shown in the illustrations, and the tension on the under thread is regulated by a spring on the bobbin case.

Rotary

The rotary makes a complete rotation with every stitch. It operates smoothly at all speeds. The shuttle and bobbin in the rotary and the oscillator machines may be in either the vertical or horizontal plane. The vertical position of the shuttle has mechanical advantage because it cuts out one change of direction in the driving mechanism. The horizontal position is more convenient because it is easier to insert the bobbin in the shuttle.

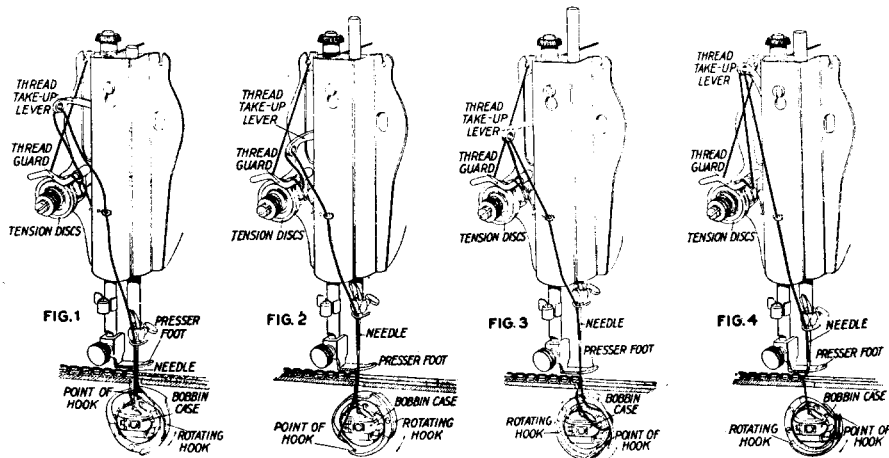


Fig.1 shows the first stage in stitch formation. The thread leading to the needle is loosened, because the thread take-up lever has begun its descent; the needle, after having descended to its lowest point, has been slightly raised and a loop of thread is thus formed which is immediately entered by the point of the hook, which rotates in one direction around the stationary bobbin case.

Fig.2 shows the second stage. The loop of needle thread has been taken by the point of the hook and is being passed around the bobbin case containing the bobbin of under thread, sufficient enlargement of the loop having been permitted by the descent of the thread take-up lever.

Fig.3 shows the third stage. The loop of needle thread has been cast off from the hook, the under thread has been enclosed by the needle thread, and the thread take-up lever is being raised to tighten the stitch.

Fig.4 shows the stitch completed. The thread take-up lever has been raised to its highest point, drawing the needle thread, together with the under thread, into the middle of the fabric, the two threads now being locked. The tension on the needle thread is regulated by the circular tension discs shown in the illustrations, and the tension on the under thread is regulated by a spring in the bobbin case.

TREADLE OR ELECTRIC

Sewing machines are either treadle or electrically operated. Treadle machines are \$20 to \$40 cheaper than electric ones. For occasional use and where electricity is not available, the treadle machine is satisfactory. The electric machine saves you energy. You can also sew faster with electricity.

See How The Electric Motor Is Coupled To The Machine

1. **Direct drive** - A gear on the motor shaft drives another gear located on one of the main shafts in the machine.
2. **Belt drive** - A belt runs between a pulley on the motor shaft and the main drive shaft of the machine.
3. **Friction drive** - A flat, rubber-faced, pulley mounted in the motor is held against the outside rim of the hand wheel, on the machine shaft.
4. **Another friction drive** - This friction drive uses a cone-shaped, rubber-faced, pulley on the motor shaft, to drive the hand wheel.

A direct drive or built-in motor is best. On belt driven machines, belt tension is adjusted by changing the position of the motor. On direct friction drive machines, a spring-loaded motor mount holds the driving wheel against the hand wheel at all times. The cone-shaped wheel drive is least desirable, because it is hard to adjust.

Machines operate with either knee or foot control. Either type, if well made will give good service. The foot control should be safely insulated. Test electrical connections to see if there is radio interference.

PORTABLE OR CABINET

The choice depends on living space. A portable machine takes little room, but cabinet machines are ready for use any time.

Portable machines are easier to handle and carry, if they are light. Machines in cabinets are not so easily handled too, if their design is such as to keep the weight at a minimum. A heavy machine in a light weight cabinet can be hard to handle.

Make sure the cabinet is well built with strong, well attached hinges. Drop leaves should rest on strong supporting arms or doors. Legs must be firm.

Notice The Finish

Look at the machine head finish. Machine heads come in smooth or crinkly finish. Smooth finish is best because it is easier to keep clean.

Is There A Lamp?

A lamp is desirable. It should be conveniently located so that it presents no hazard to you in using the machine. There should be a separate switch for the light so that you can turn it off and on as you need it.

Does It Have A Reverse Mechanism?

If you plan to back-tack or darn with your machine you'll need a reverse mechanism.

CHOOSE YOUR SEWING MACHINE CAREFULLY

A sewing machine is an investment. It will be used for a long time. If well cared for, it can last a life-time and be passed on to the next generation. It is poor business to buy one of inferior or questionable make, merely to save a few dollars.

It is important to buy from a well known, reliable sewing machine dealer. Also know what company makes the machine. Always keep your book of instructions and use it often to understand your machine. If your machine needs repairs, know where to send for them. Know all the standard makes of sewing machines and how they operate. Then buy the one that will serve you best.