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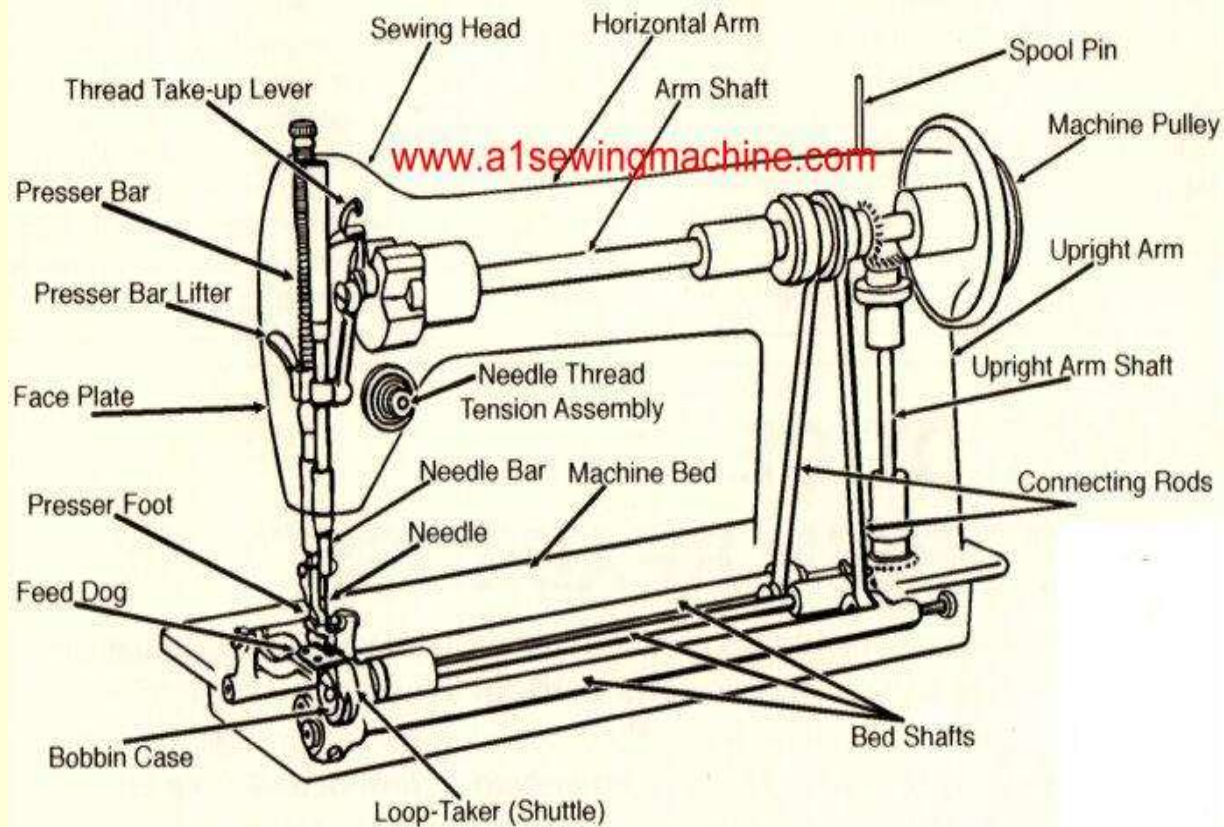


# PARTS OF A SEWING MACHINE



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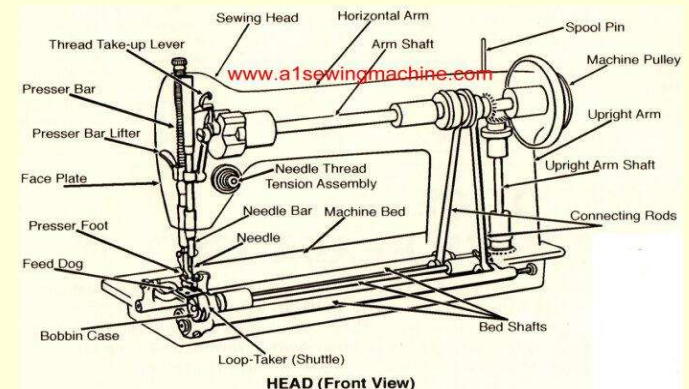


**HEAD (Front View)**

**Head-** The complete sewing machine without the box or stand is called Head.

Head of the machine has two main parts:

1. **Arm-** The upper part of the head which may be curved or straight that contains the mechanism for driving the needle and handling the upper thread is called Arm.
2. **Bed-** The flat part of the head under which the lower thread mechanism, shuttle and feed dog are mounted. It forms the base of the machine.



# The arm contains the following parts:

1. **Balance wheel:** It is a wheel with shining surface, at the right side of the head which is driven by handle or belt. The whole machine is made operational by the rotation of the balance wheel.



2. **Tension regulator:** This is a mechanism fixed to the face plate for controlling the tension on the upper thread. Two concave discs are put together with their convex sides facing each other. The upper thread is made to press through these discs and the pressure of the discs on the thread is adjusted with a spring which is tightened or loosened with the help of a screw.



3. **The thread take-up lever:** It is a lever located above the tension regulator which moves up and down as the balance wheel is rotated. The axle of the wheel brings lever into motion. At the outer end of the lever, there is a hole through which the upper thread coming from tension regulator passes. It pulls the required amount of thread from the tension regulator and feeds it to the needle as it moves down. Then it moves up to tighten the loop formed by the shuttle, to form a firm stick.



- **The needle bar:** It is an upright bar at the lower end of which the needle is attached. It also moves up and down as the machine operates and carries needle down to the shuttle through the fabric to make the loop of the thread and then brings it back

**5. The presser foot:** It is a detachable device which holds the fabric in place on the feed dog while stitching. This device is not used when other attachments for tucks, ruffles or embroidery are used.



Quelle: Deutsche Handwerker



**6. The presser foot lifter:** It is the lever attached to the presser bar to control the up and down moment of the presser foot. It must always be lifted to take out the material from the machine.

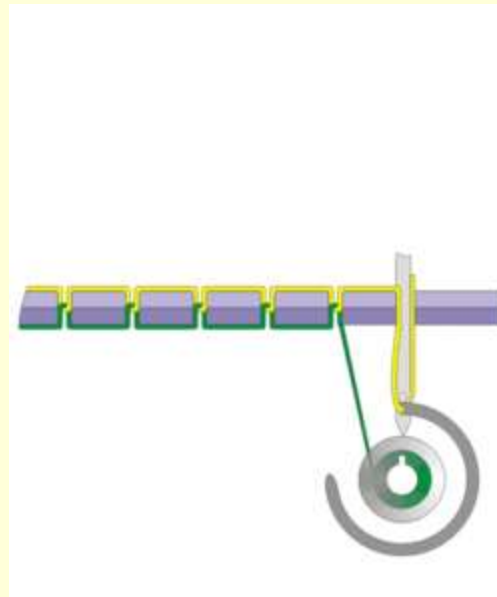


**7. Pressure regulating screw:** It is a screw above the presser bar which can be tightened to increase the pressure on the fabric while working with fine fabric and loosened to accommodate thick fabric.





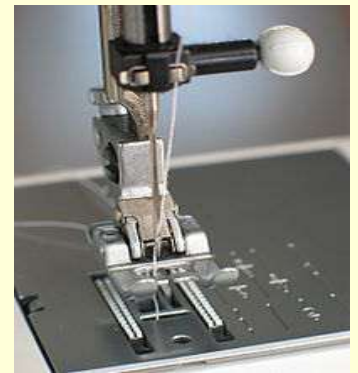
8. **The stitch regulator:** It is a lever attached to the screw that helps to regulate the length of the stitches according to the type of fabric to be sewn. The length of the stitch is determined by the markings indicated on its side.



9. **Bobbin winder:** It is a simple mechanism for winding thread on the bobbin and is located at the right side of the arm near the wheel.

10. **Bobbin winder tension angle:** It is a device situated near the bobbin winder which helps to wind the bobbin evenly.

11. **Rubber ring:** This is a ring on the bobbin winder which comes in contact with the nut of the balance wheel. This should never be allowed to become oily which will make it slippery and will not be able to make proper contact with the balance wheel.
12. **Stop motion screw:** It is located near the centre of the balance wheel. When it is loosened, the stitching mechanism becomes motionless. This is done during bobbin winding so that the needle does not move without fabric.
13. **Needle clamp:** It is a screw that is tightened to hold the needle in position.



**14. Spool pins:** These are the upright metal rods fitted on top of the arm to hold the thread spool.

**15. Handle driver:** It is attached to the handle attachment of the machine and helps to drive it with hand.

# Bed of the machine contains the following parts:

1. **Needle or throat plate:** This is a semi-circular disc with highly smooth and shining surface. It has a hole to allow the needle to pass through it. The plate provides a leveled surface for the cloth to move as it is being stitched and also protects the lower part of the machine from dirt.



2. **Hinged bed plate:** It flips up and down for inserting or removing the bobbin into the shuttle. In some machines, the bed plate slides down.
3. **Feed dog:** It is a small device with teeth which carries the material backward as it is being stitched. It moves upward as the machine is operated, the material advances as each stitch is made.



4. **Shuttle:** It holds the bobbin and moves to form the loop as the machine is operated. It is fitted below the feed dog or to its left side.



5. **Treadle drive:** It is a large wheel located under the board in the treadle machine. It is connected to the balance wheel with a leather belt. As it rotates, the power is transmitted to the balance wheel by the leather belt.
6. **Treadle:** It is the foot rest at the base of the treadle machine which is pressed with feet to operate the treadle machine.



# Special attachments or Accessories

A number of remarkable little steel attachments are available that can be quickly and easily snapped into place to perform a variety of jobs within minutes, which otherwise take a long time. The following accessories increase the machines versatility and efficiency.

1. **Stitch pattern cam:** This is a device inserted in the machine to produce various stitch patterns e.g. zig zag patterns. It may be inbuilt or inserted. The cam helps to move the needle side to side while the stitch width regulator decides the maximum width of the pattern. At the same time needle bar also moves up and down as usual to form lock stitches. There are special cams for making buttonholes also.





2. **Zipper foot:** It is used to stitch a seam in which there is more bulk on one side than the other e.g. zipper insertion, covering a cord, sewing bound buttonholes. It is so designed that the needle can sew very close to the zip teeth.



3. **Zigzag foot:** It is also called all-purpose foot. It is used primarily to plain zigzag stitching but can also be used for straight stitching.



4. **Embroidery foot:** It can be used for making decorative stitch patterns. The bottom of the foot is so designed that it permits the stitch stitches of embroidery to pass through the foot.



5. **Seam gauge:** It is attached to the machine bed and adjusted to maintain a specific distance between the edge and the needle.

6. **Blind hemming guide:** It is attached to the presser foot to old garment and hem edge in place.



7. Other presser foot attachment are pin tuck foot, buttonhole foot, button foot etc.

