



## LOOPER MECHANISM OF THE SEWING MACHINE

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### KEY WORDS

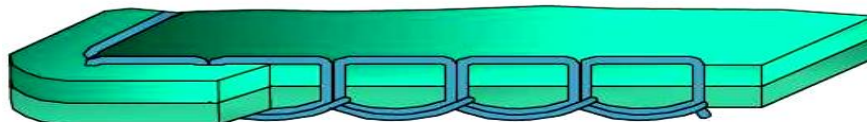
*Mechanism, looper, chain stitch, knitted sewing machines, rack, stitching.*

### ABSTRACT

*This article discusses the issues of looper mechanisms.*

Currently, there are more than 130 companies and machine-building enterprises producing sewing machines worldwide, which are specialized in various technological processes and products.

A single strand chain stitch is twice as elastic as a shuttle stitch and is resistant to stretching the stitch. The productivity of these machines is very high, the construction is simple, because they do not have a bobbin thread, a spinner and a bag cleaning device.

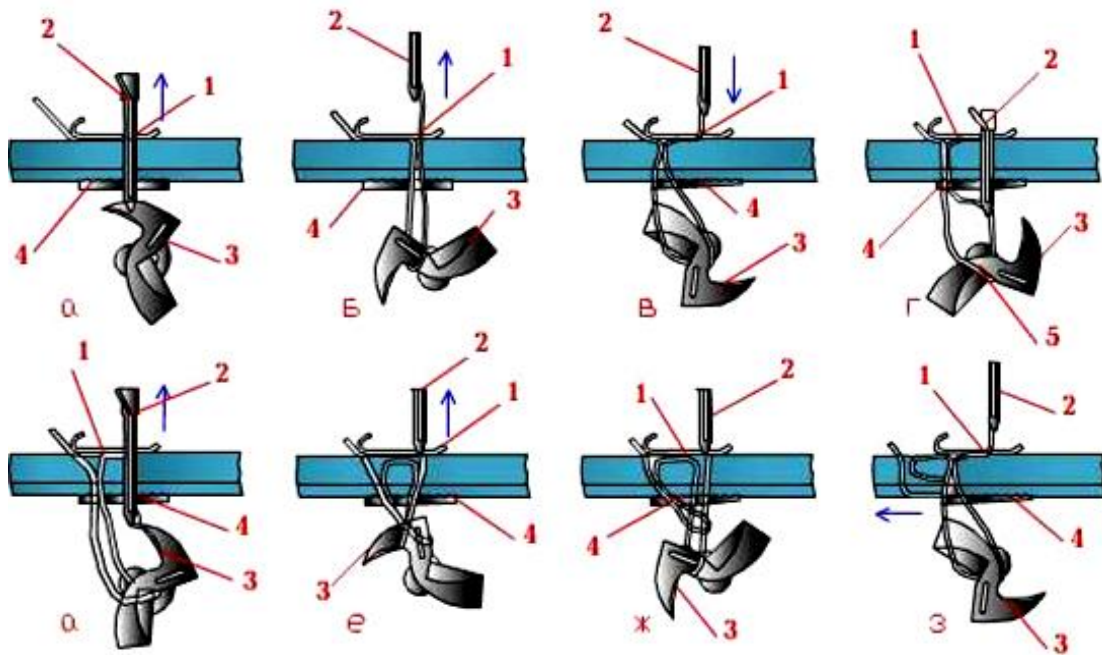


**Figure 1. Single strand chain linker**

The process of formation of a single-stranded chain bag. In the process of the formation of the baghgia, the needle 2 (Fig. 1.2), the needle 2, the needle 4, the needle 1 and the thread attached to the needle guide are involved.

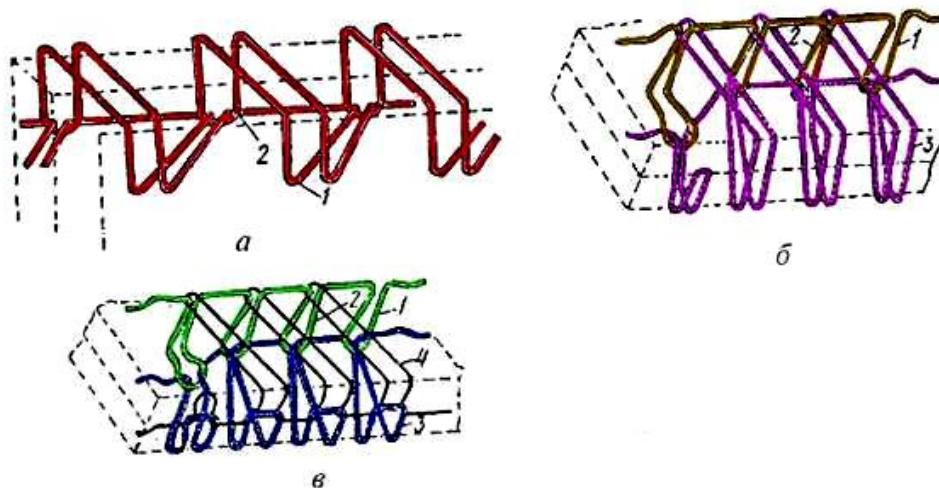
The process of formation of bachia can be divided into the following characteristic stages:

- the needle 2 pierces the gauze and falls to the lowest edge position, then when it rises 2-2.5 mm, it forms a loop in the thread, which is caught by the end of the switch 3;
- the shifter 3 extends the loop, the needle 2 comes out of the threads, the toothed rack 4 rises and pushes the threads one way;
- at the end of the threading, the ring deviates and takes a convenient position for the needle 2 to enter it, at the same time, the inclined surface of the switch 3 moves the short (left) part of the ring forward so that it does not get wrapped around the steering wheel of the switch 3;



**Figure 2. The process of formation of a single-stranded chain**

Since the single-threaded chain-feeder is easy to wear out, it is always used in closed seams. Since two- and especially three-threaded chain-stitch stitchers are difficult to tear, they are used in sewing and knitting to prevent chafing of detail cuts. By changing the tension of the threads of the upper thread, the threads can be cut between the cuts of the material ("beading" or left to the right side of the material).

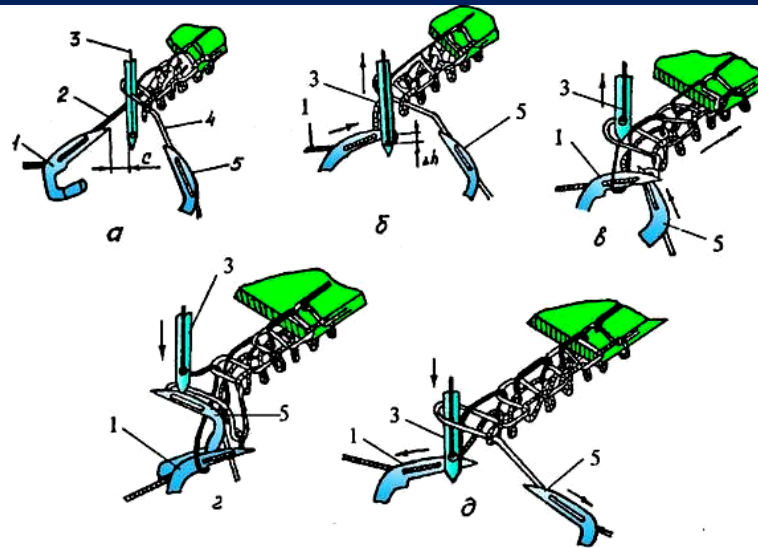


**Figure 3. Types of chain stitch**

*The formation of a three-stranded chain-shaped braid. To create such a bahia, instead of an expander, a right-hand threader 3 is used, on which a third thread is worn (Fig. 4).*

Needle 1 (Fig. 4, a) goes to the lowest position, the left switch 2 is on the left, the right switch 3 is on the right. Needle 1 (Fig. 4, b) forms a loop when it rises 2.5-3 mm from the lowest position. Left shifter 2 moves from left to right and enters this loop.

The right switch 3 (Fig. 4, c) enters the ring of the left switch 2 coming from the opposite side. The needle 1 comes out of the material, the rail rises and pushes the material one distance.



**Figure 4. The formation of a three-stranded chain-like chain**

The right shifter 3 (Fig. 4, g) rises to the top of the needle plate, passes the loop of the left shifter 2 behind the line of its initial movement and aligns its loop with the line of movement of the needle 1

Needle 1 (Fig. 4, d) enters the ring of the right shifter 3. It penetrates the material and goes down. At this time, the left switch 2 moves to the left, and the right switch 3 moves to the right. Then the process is repeated.

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