IDEAL NEW «ZARIF» DOUBLE THREAD CHAIN STITCH TECHNOLOGY IS FOR MANUFACTURE OF IDEAL SEWING MACHINES

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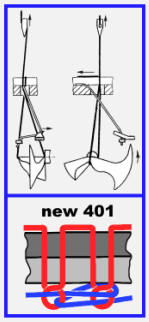
We in 2016 have invented the most perfect and ideal new «ZARIF» double thread chain stitch technology, which allows high-quality joining of different materials by using a new double thread chain stitch type 401, where the loop of the top thread and loop the bottom thread is rotated by 180 degrees.



Based on our ideal new «ZARIF» sewing technology, we have made the prototype of the ideal «ZARIF» double thread chain stitch sewing machine with a flat platform on the bottom feed of material and a needle bar stroke of 32 mm, which is able to high-quality joining various materials with thickness up to 8 mm without adjustment of a tension of threads and without adjustment of the mechanisms and working units of the sewing machine.

Our new «ZARIF» sewing technology makes it possible to replace the lockstitch type 301 on the new double thread chain stitch type 401 is a very larger scale, compared to existing double thread chain stitch technologies.

We invented our ideal new «ZARIF» double thread chain stitch technology by improving our «ZARIF» double thread chain stitch technology from 1994.

In 1994, we had the idea to obtaining a double thread chain stitch using a rotary looper and, in 1994 we filed a Patent Application, and in 2000 received a U.S. Patent No.6095069 (Patent US6095069: https://www.google.com/patents/US6095069).

The application of rotary looper has allowed us to obtain new double thread chain stitch type 401, where the loop of the top thread and loop the bottom thread is rotated 180 degrees, as the rotating looper wrapped around his body loops threads by turning them through 180 degrees.

As is known, a rotating looper was invented in 1857 by the American inventor James E. A. Gibbs (Patent US17427: https://www.google.com/patents/US17427) to obtain the single thread chain stitch type 101.

Also, in 2012, we invented the technology of automatic trimming threads for our new «ZARIF» double thread chain stitch technology.

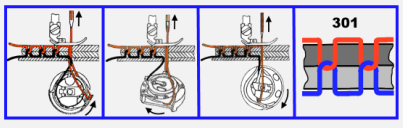
In future, we intend to patent our new «ZARIF» double thread chain stitch technology and technology of automatic trimming threads in many countries of the world.

The main features of our ideal new «ZARIF» double thread chain stitch technology:

1. It allows producing sewing machines with very simple design, as:
   - Of the six working units (needle, looper, pusher of the bottom thread, top thread take-up, bottom thread take-up, feed dog) the three working units (looper and take-ups the top and bottom threads) make a rotational movement.
   - Working units of the looper, pusher of the bottom thread and take-ups have a very simple design.
   - Is used the simple crank mechanism of the needle for reciprocating motion of the needle.
2. The reduction and tightening of threads occur smoothly by means of the rotating take-ups, as well as a smooth extension of the loop threads using a rotating looper, all this ensures sewing without breakage of threads, if threads without knots and thick places.
3. The looper consumes a small length of the top thread, which reduces the amount of repetitive movements of the top thread through the eye of a needle and the material, resulting in the upper thread less loses its mechanical strength during the sewing process at high speeds.
4. It allows to sew different materials with thickness up to 8 mm when the needle bar stroke of 32 mm, without adjustment of the mechanisms and working units, as well as without adjustment tension of the threads if before sewing to set the normal tension of threads.
5. It allows 100% guarantee sewing with no skip stitch, which is very important, as all chain seams are easily to unravel from a place of the skip of a stitch.
6. It allows dense and very dense to join different materials by using double thread chain stitch, and a very dense join of materials is sufficient to increase only the tension of the top thread.
7. It allows to very easily transition from a normal stitch to elastic stitch using the know-how, without adjusting tension the threads to improve the smoothness of the seam on lightweight materials and the elasticity of the seam on the stretch fabrics.
8. Is used the needle with one long groove for obtaining a double thread chain stitch, which is more resistant to bending than the needle with two long grooves, which is used in existing double thread chain stitch technology.
9. Needle bar is not adjusted when changing the thickness and hardness of the sewing material, since the height of lifting of a needle from the lowest position for formation the loop-overlap of the top thread, has constant value for all materials with thickness up to 8 mm.
10. It allows to transition from needle Nm.130/21 to needle Nm.60/8 without adjusting the looper relative to the needle, as the maximum allowable clearance between point of loper and needle is 0,5 mm.
11. The needle at movement downwards will not face with looper and a needle plate, this increases the service life of the needle, looper and the needle plate.
12. High reliability of stitch formation provided by using know-how and without the use of guards on the needle.
13. It allows reducing the length of the double thread chain stitch to 0,5 mm, and obtaining up to 5 stitches at the stitch length of 0 mm.
14. It allows sewing longer without cleaning dirt's from under the needle plate, because the rotating looper creates a strong air stream which discards all the dirt's away from the zone of formation of the stitch.
15. It allows obtaining new special non-raveling, high breaking strength and highly elastic double thread chain seams at high speed sewing, using sewing machine electronic feed material.

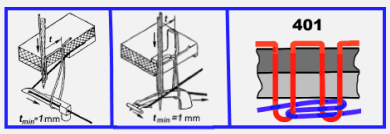
Please watch our full VIDEO paid only 1$ in our Website (WWW.ZARIF.UZ), where we use our prototype «ZARIF» double thread chain stitch sewing machine practically demonstrated all of the above features of our ideal new «ZARIF» double thread chain stitch technology.

Technologies of lockstitch type 301



The following disadvantages of lockstitch technologies do not allow producing the ideal lockstitch sewing machine: Feed the bottom thread through a small bobbin of hook that lead to frequent refilling of the bobbin; The complexity of the design of the hook (shuttle); It is necessary to adjust the tension on the threads when you change the thickness and hardness of the sewing material; Uneven (smooth) tightening of the top thread; The increase in the stroke of the needle for sewing heavy materials; It is necessary lubricate of hook, oil-free hooks limit the speed of the sewing machine to 4000 stitches/min.; It is impossible to guarantee on 100 % sewing without skipping stitch, without breakage of threads and without needle breakage; It is necessary frequent to clean dirt's under the needle plate.

Existing technologies of double thread chain stitch type 401



The following disadvantages of existing double thread chain stitch technologies do not allow producing the ideal double thread chain stitch sewing machine: Cannot dense join of materials with the help double thread chain stitch; The looper mechanisms have a complex structure; The use of guards on needle to increase the stability of the stitch formation; The use of a needle with two long grooves; Cannot reduce the stitch length to 0,5 mm; It is necessary to adjust the tension on the threads when you change the thickness and hardness of the sewing material; The increase in the stroke of the needle for sewing heavy materials; It is impossible to guarantee on 100 % sewing without skipping stitch, without breakage of threads and without needle breakage; The degree of tightening threads in the stitch changes with change the thickness and rigidity of the sewing material.

More information about our ideal new «ZARIF» sewing technology in our Website: WWW.ZARIF.UZ