



STITCH TYPE

SECRETS

REVEALED

An understanding of the common stitch formations permits selection of the most appropriate for any particular purpose.

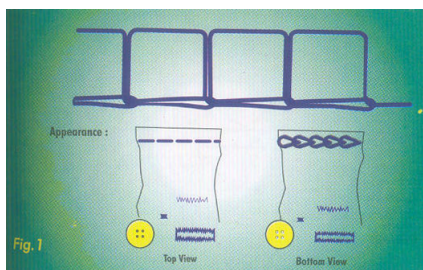
There are two basic stitch formations, lock stitch and chain stitch, with a number of variations in each type.

In all cases the stitch develops from the formation of a loop in the needle thread as the needle rises from its lowest point. This loop is either inter-looped with the preceding loop or inter-looped with other threads carried in loopers in chain stitch, or interlaced with an under thread in lockstitch.

Stitch Types can be divided into six main categories:

Class 100	- Single Threads Chain Stitch
200	- Hand Stitch
300	- Lock Stitch
400	- Multi-thread Chain Stitch
500	- Over-edge Chain Stitch
600	- Covering Chains Stitch

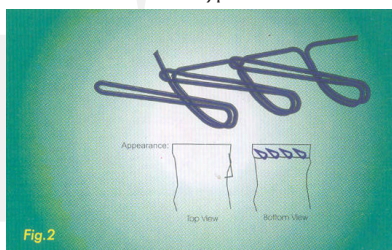
CLASS 100 SINGLE THREAD CHAIN STITCH Stitch Type 101



APPLICATION: Basting, Button Sewing, Bar Tacking, Spot Tacking, Bag Closing, Button Hole & Decorative Stitching.

Single thread chain stitch is used normally when easy withdrawal of the thread is required (e.g. Basting). Since the stitch can so easily come undone, it is essential to leave an adequate length of thread at the end of the stitch formation to prevent running back. This can happen very readily if a smooth extensible thread is used, such as a continuous filament or more so with a non filament.

Stitch Type 103

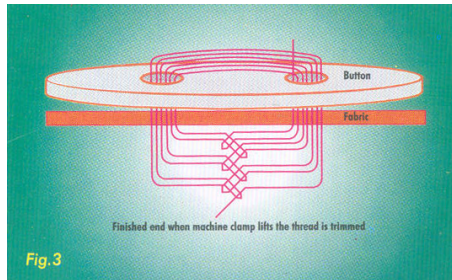


APPLICATION: Hemmings, Belt Loops, Padding Operations & Felling.

This stitch formation is commonly known as a single thread blind hemming or felling stitch. It is produced using a curved needle, which passes left to right through a single or double (hem) folded piece of material, entering and leaving from the same side of the fabric, carrying a needle thread which is intercepted by a blind looper as it exits the fabric on the right hand stroke. This thread is then carried right to left, back to the needle and interlooped prior to needle penetration.

While the needle fully penetrates the inside single or double hem, the other fabric is only partially for a portion of its thickness. As the term “blind hemming” implies, the opposing side to the penetrated seam should show no evidence of a stitching line.

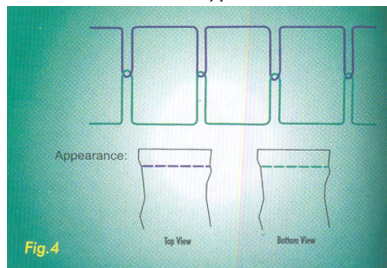
Stitch Type 104



APPLICATION: Button Sewing, Snap Fasteners & Trousers Cuff Tacks.

This stitch formation is widely used for attaching buttons, snap fasteners, trouser cuff tacks, etc. Normally these machines have a fixed cycle of stitches. A selection of 8, 16, or 32 stitches is most common, with 2 or 3 tying stitches at the end of the cycle to prevent unraveling of the stitch formation, the selected number dependant on the type and size of button (2 or 4 hole, flat or shank) and principally dependant on the type and weight of garment. While 16 stitches would be adequate for a shirt or blouse 18/ 20 ligne button, you would need 32 stitches to secure a 50 ligne button to a trench coat. (40 ligne = 25mm diameter approx).

CLASS 300 LOCKSTITCH Stitch Type 301



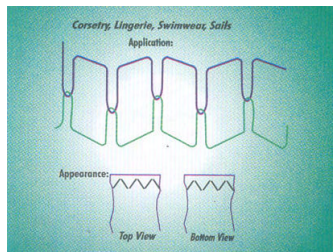
APPLICATION: Run Stitching & Top Stitching.

Lockstitch is formed by two threads - a needle thread and an under-thread which interlace between the plies of fabric being sewn.

This stitch is used if the same appearance is required on both sides of the fabric and if a very secure stitch is required. The sewing action involved is the most severe on the thread since it reciprocates a number of times through the needle eye as each stitch is formed. The number depends on the stitch rating selected. At 10 spi (12 stitches per 3 cm) for instance, any one spot on the thread passes through the needle eye some 38 times before being set in the fabric.

This stitch is produced by the needle thread loop formed on the underside of the fabric being enlarged by a hook and passed around the bobbin thread. The needle thread is then pulled tight by the thread take-up mechanism. The hook and base assembly can be mounted either horizontally or vertically.

Stitch Type 304

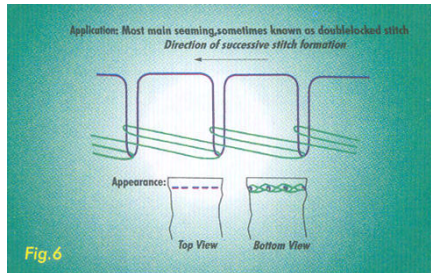


APPLICATION: Corsetry, Lingerie, Swimwear & Sails.

It is sometimes necessary to provide extensible seams using lockstitch and this variation in which successive single stitches form a symmetrical zigzag pattern, is used to achieve them.

Other variants provide a number of stitches in each direction to form two or three point zigzag stitches. The two point variant is Stitch Type 308. And the three point variant is Stitch Type 322.

CLASS 400 MULTI THREAD CHAINSTITCH Stitch Type 401



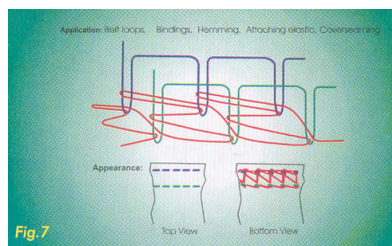
APPLICATION: Most main seaming, sometimes known as double locked stitch.

This two thread chain stitch formation is used for seams where elasticity, strength and continuous sewing are required, e.g. Jeans.

It is formed by two threads, one used in the needle and the other, an under thread carried in a looper. This stitch is formed by the needle thread being interlooped with the under thread. This stitch produces a very strong seam with some extensibility.

As in all chain stitch formations, two thread chain stitch construction seams should be secured at the seam end, via stitch condense, tacking or inclusion into another seam to eliminate the danger of running back or unraveling of the two threads.

Stitch Type 406

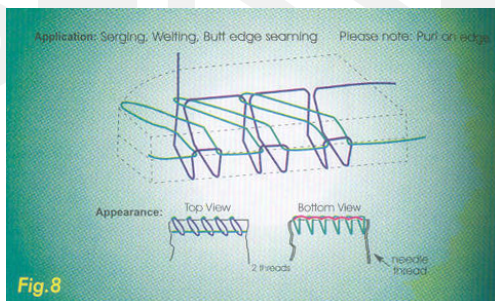


APPLICATION: Belt loops, bindings, hemming, attaching elastic & cover seaming.

This is one of the commonest of the multi-thread chain stitches constructions, used principally in sports wear, leisure wear, and interlock garments where a high degree of strength and extensibility is required. It is commonly referred to as “two needle bottom cover-stitch.” It involves two needle threads which are interlooped with one looper thread. Threads with good loop forming properties are essential for reliable continuous performance.

Stitch Type 407 is a variation of Stitch Type 406 and involves three needle threads and one looper thread. Referred to as “thread needle bottom cover-stitch.”

CLASS 500 COVER SEAMING STITCH Stitch Type 503

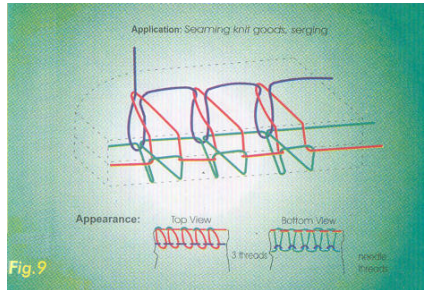


APPLICATION: Serging, Welting & Butt edge seaming.

Over-edges as the name implies involves one or more threads passed around the edge of the material being sewn to neaten it and prevent it from fraying.

This stitch type utilizes one needle thread and one looper thread which are interlooped at the point of needle insertion and on the fabric edge- the needle thread loop being extended across to achieve this. This stitch is used mainly for over edging single ply panels of fabric (serging) before they are joined together. It is not suitable for seaming.

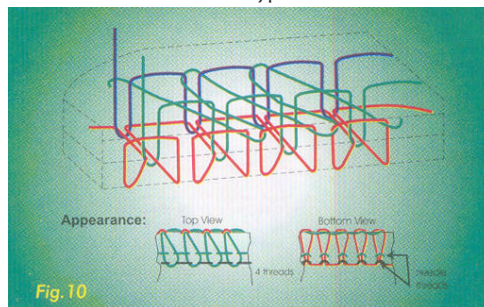
Stitch Type 504



APPLICATION: Seaming knit goods & Serging.

In this case one needle thread and two looper threads are involved. The needle thread interloops with both looper threads which themselves interloop with each other at the fabric edge. This stitch provides a strong but highly extensible joining and is thus commonly used for knitted and woven fabrics.

Stitch Type 514



APPLICATION: Seaming stitch (produces strong seams on woven or knits).

Similar to Stitch Type 504 with the addition of a second needle thread. The second needle penetrates between the first needle stitching line and the fabric edge. The second needle interloops with both looper threads reinforcing the first needle stitching line for greater seam strength on knitted and woven materials.

This stitch is used more frequently to join up low stretch fabrics and in tailoring, sometimes referred to as “seam and serge.” Perhaps more correctly that name should be applied to Stitch Type 515 which can be used as a means of achieving similar effect at a lower cost (one thread fewer)

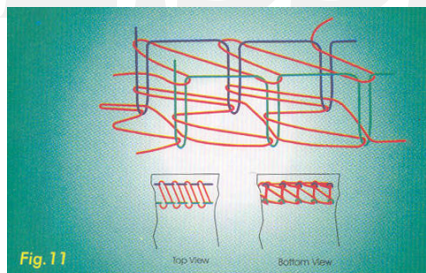
Stitch Type 516

APPLICATION: Safety stitch.

This stitch consists of a row of Stitch Type 401 double lock chain stitch coupled with Stitch Type 504 three thread overlock produced simultaneously.

CLASS 600 COVER SEAMING STITCH

Stitch Type 602



APPLICATION: Binding & Attaching Elastic.

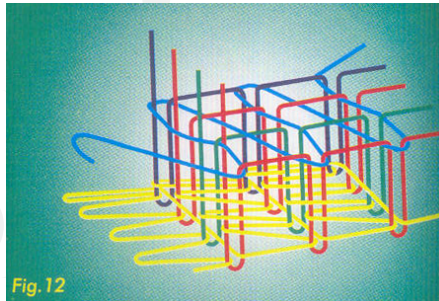
Stitch Type 602 is a development of Stitch Type 406, where an additional thread is interlaced between the two needles, providing a top cover stitch on the surface of the fabric. It is commonly referred to as “two needle top and bottom cover stitch”.

Stitch Type 605

APPLICATION: Binding & Attaching Elastic & for decorative purposes.

Stitch Type 605 is again a development of Stitch Type 407 where an additional thread is interlaced across all three needles providing a top cover on the surface of the fabric. It's often referred to as "three needle top and bottom cover stitch".

Stitch Type 607



APPLICATION: Interlock Garments, Underwear, Swimwear & Ladies Briefs.

This flat seam or flat locking stitch is a four needle chain stitch cover stitch. Whilst other variants exist with additional top cover threads and minor variations to the top cover pattern, Stitch Type 607 is used.

It consists of four needle threads, one looper thread and one top cover thread. It is commonly used in interlock garments, underwear, swimwear etc where a flat butt seam (edge to edge), or overlapping the fabric within the width of the outside needles, is required.

This produces a strong extensible seam, almost invisible through outer garments, which makes this seam construction ideal for ladies underwear. Normally used with left and right hand fabric trimmers to guarantee accuracy of the butt seam or overlap joint.