

KNITTING NEEDLES



Submitted by

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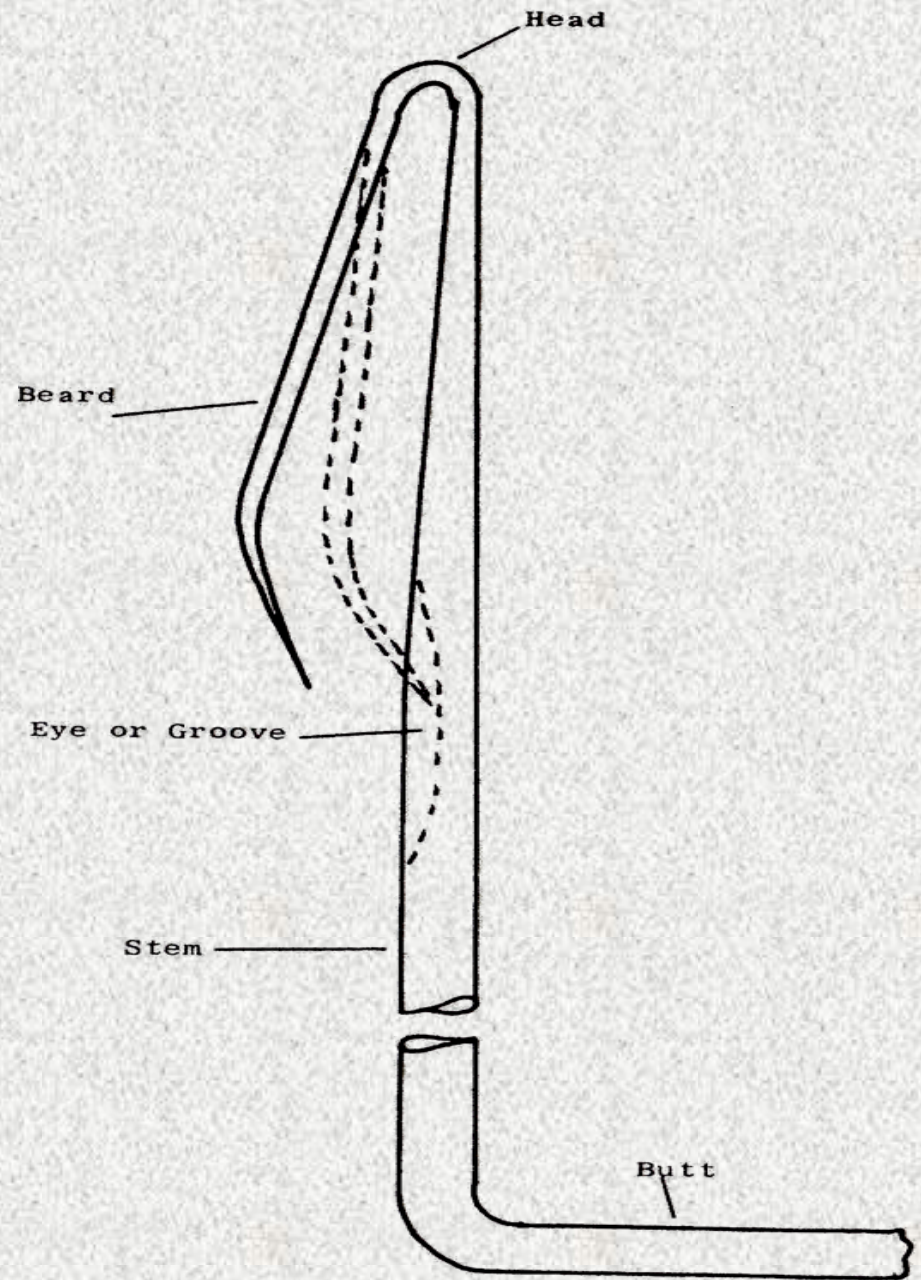
Clothing and Textiles Department

TYPES OF NEEDLES



1. **SPRING BEARD NEEDLE**
2. **LATCH NEEDLE**
3. **COMPOUND NEEDLE**

- **Spring Beard Needle**



Spring Beard Needle



This is the most commonly used needle on a **tricot warp knitting machine**.
Main parts of the Spring Beard Needle are :

The Head: The hooked portion of the stem of the needle to draw the new yarns from a loop of intermesh to old loop.

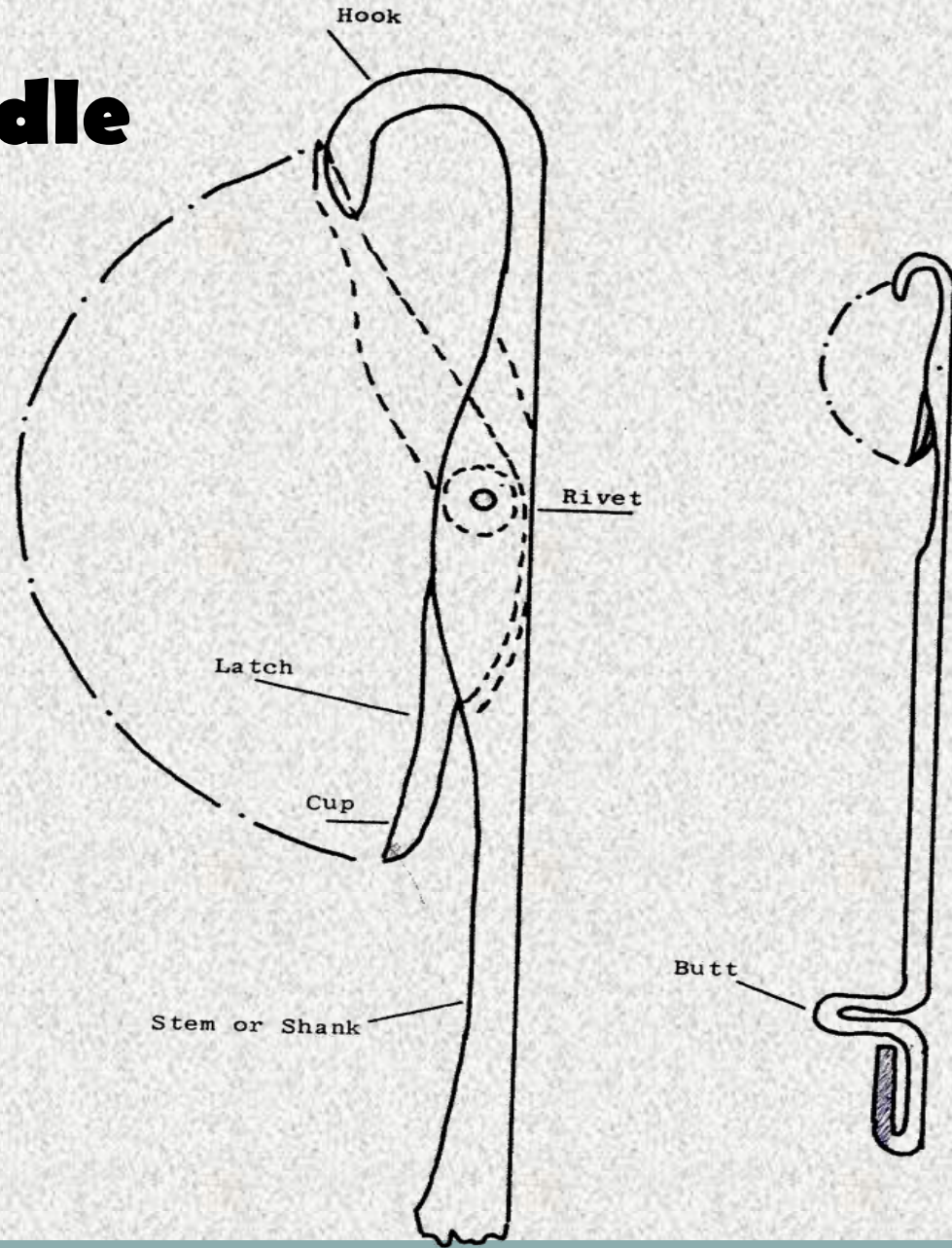
Beard : The continuation of the hooked portion which has a good springiness and shape of a beard of a chin.

Spring Beard Needle



- ***The Eye*** : A groove cut in the stem to receive the pointed tip of the beard when it is pressed in by the presser so that new loop is interact.
- ***The Stem*** : It is the needle around which the loop is formed and the fabric is held with the last loop on it.
- ***The Butt*** : The Butt is bent for location in the machine.

● Latch Needle

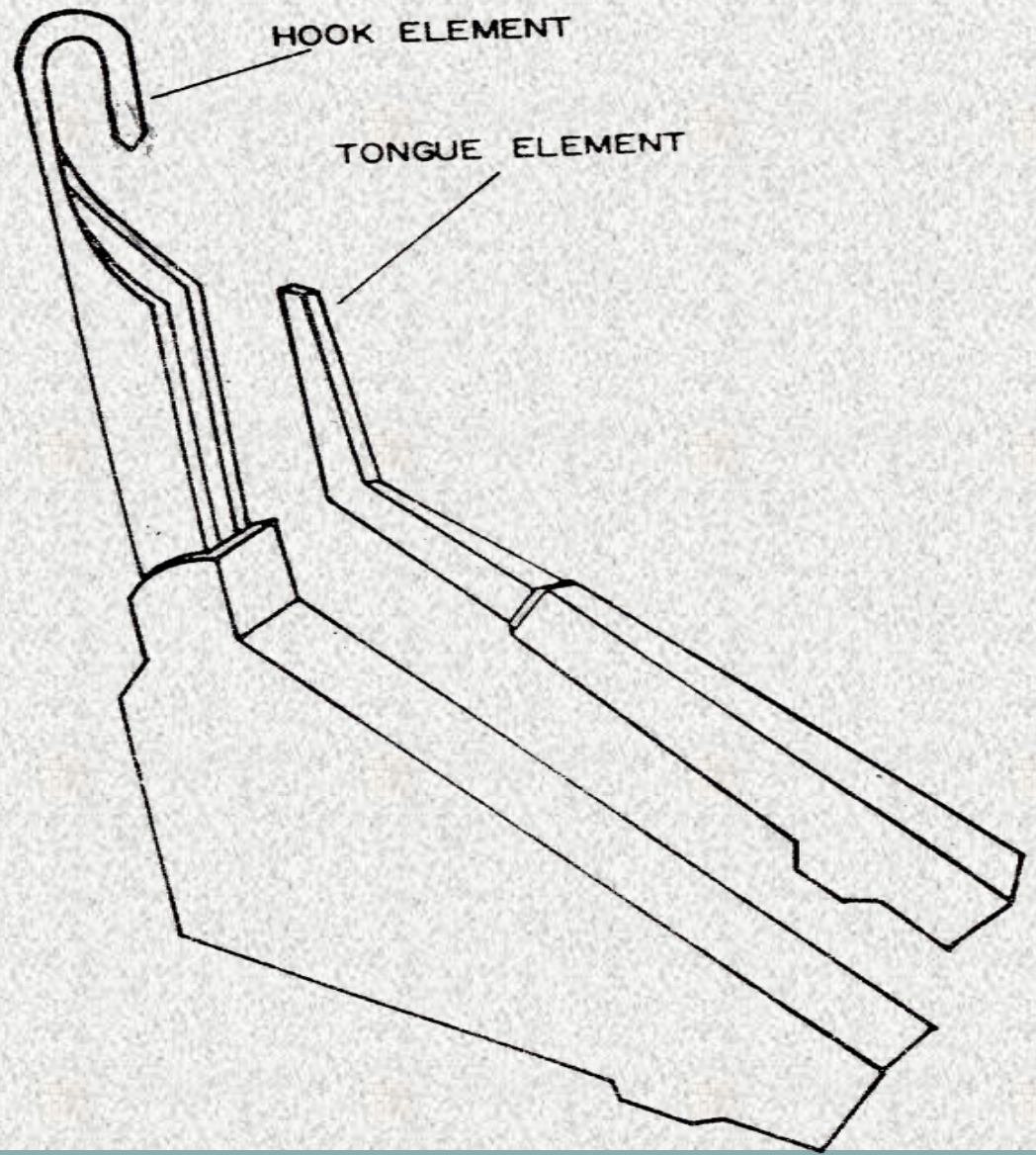


LATCH NEEDLE



- ***The Hook and the Latch-*** Consists of a hooked portion at the top with a latch or spoon riveted at a certain distance from the head of the needle. Latch needle forms a stitch with a simple up and down movement. These needles are given individual movements sliding in grooves called as the tricks of the cylinder. The latch can swing freely.
- ***The Stem or the Shank and the Butt-*** It is the straight portion of the needle with a protruding butt, some distance from the end of needle. The reciprocating movement of the needle in the vertical direction is given to this Butt part of the needle.

- **Compound Needle**



COMPOUND NEEDLE



- It consists of a hollow steel tube of finer gauge in which a hook consisting of a closing element which is also a steel tube of fine gauge is inserted. The upper end of this element covers a tip of the needle Hook when it is raised.

Advantages of Compound Needle



- A compound needle combines the advantages of both the Latch and Spring Beard needles.
- No strain on yarn during the loop formation
- Movement required to form a loop is about $\frac{1}{2}$ to that of other needles.
- Used primarily for Warp Knitting.
- Both pieces have a straight movement instead of a swinging movement.
- Knitting speed can be increased and a great production rate is possible by the rise of the compound needle.

Knitting Action of Latch Needle



RUNNING

CLEARING

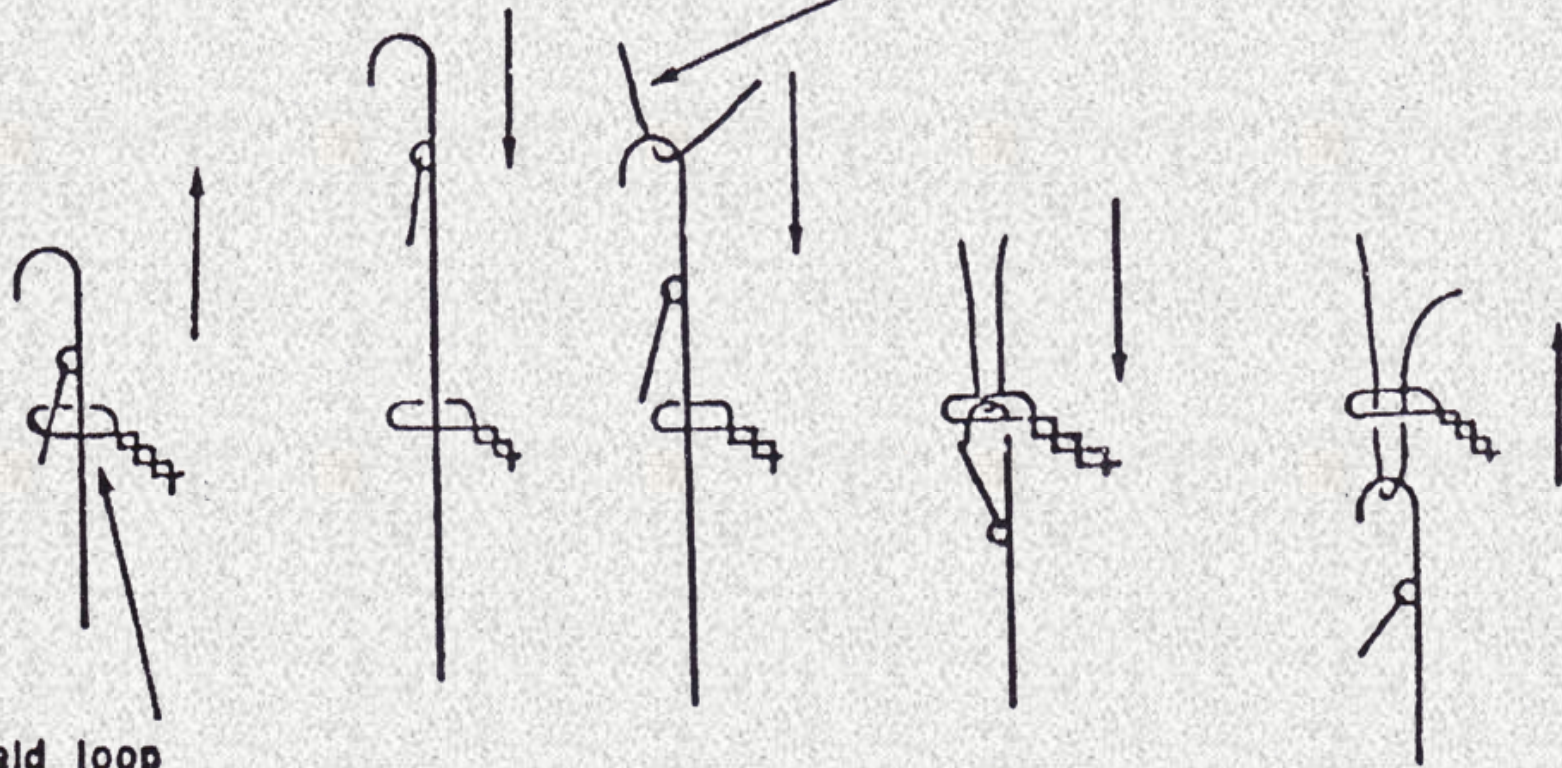
FEEDING

KNOCKOVER

LOOP PULLING

new yarn

held loop



Knitting Action of Spring Beard Needle

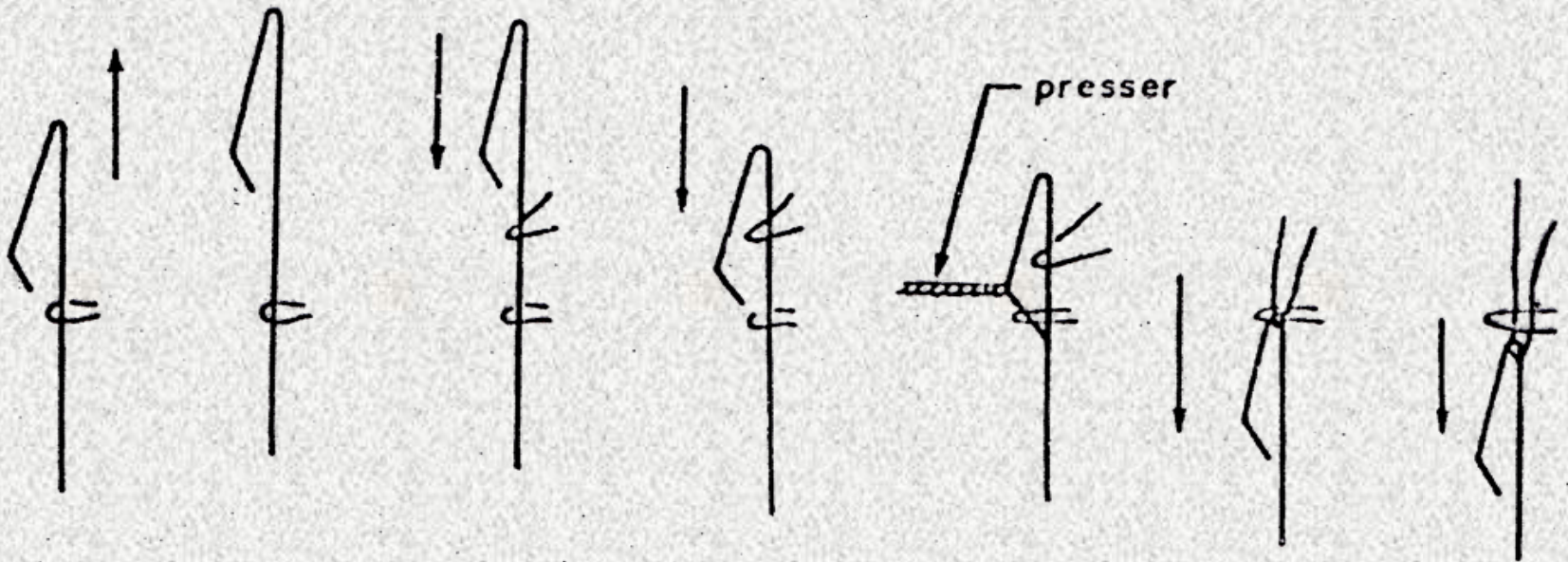
RUNNING

FEEDING

LANDING

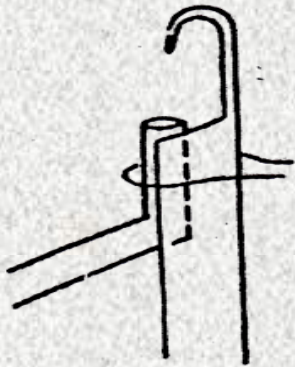
KNOCKOVER

LOOP PULLING

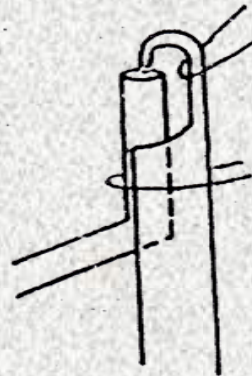
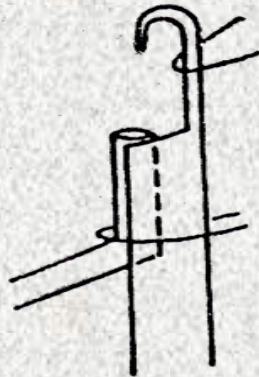


Knitting Action of Compound Needle

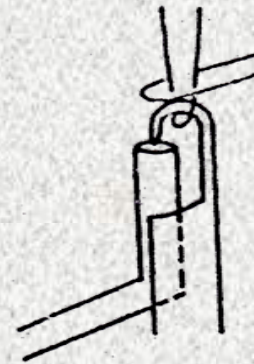
RUNNING



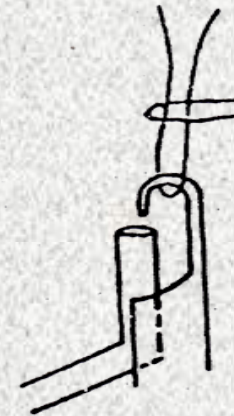
FEEDING



KNOCKOVER



LOOP PULLING



Thank
you

